

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: HALO

Report Number: P1214542

Luminaire Tested: HFL4001S/HFL4002S-935

Issue Date: 12/2/2025

Test Information

Test Method: LM-79-2019
Report Number: P1214542
Test Lab: THIRD PARTY NVLAP LAB
Issue Date: 12/2/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: HFL4001S/HFL4002S-935
Description: HALO FLEX LINEAR 400LM/FT 90 CRI COLOR SELECTABLE FIXTURE (ONE FOOT)
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

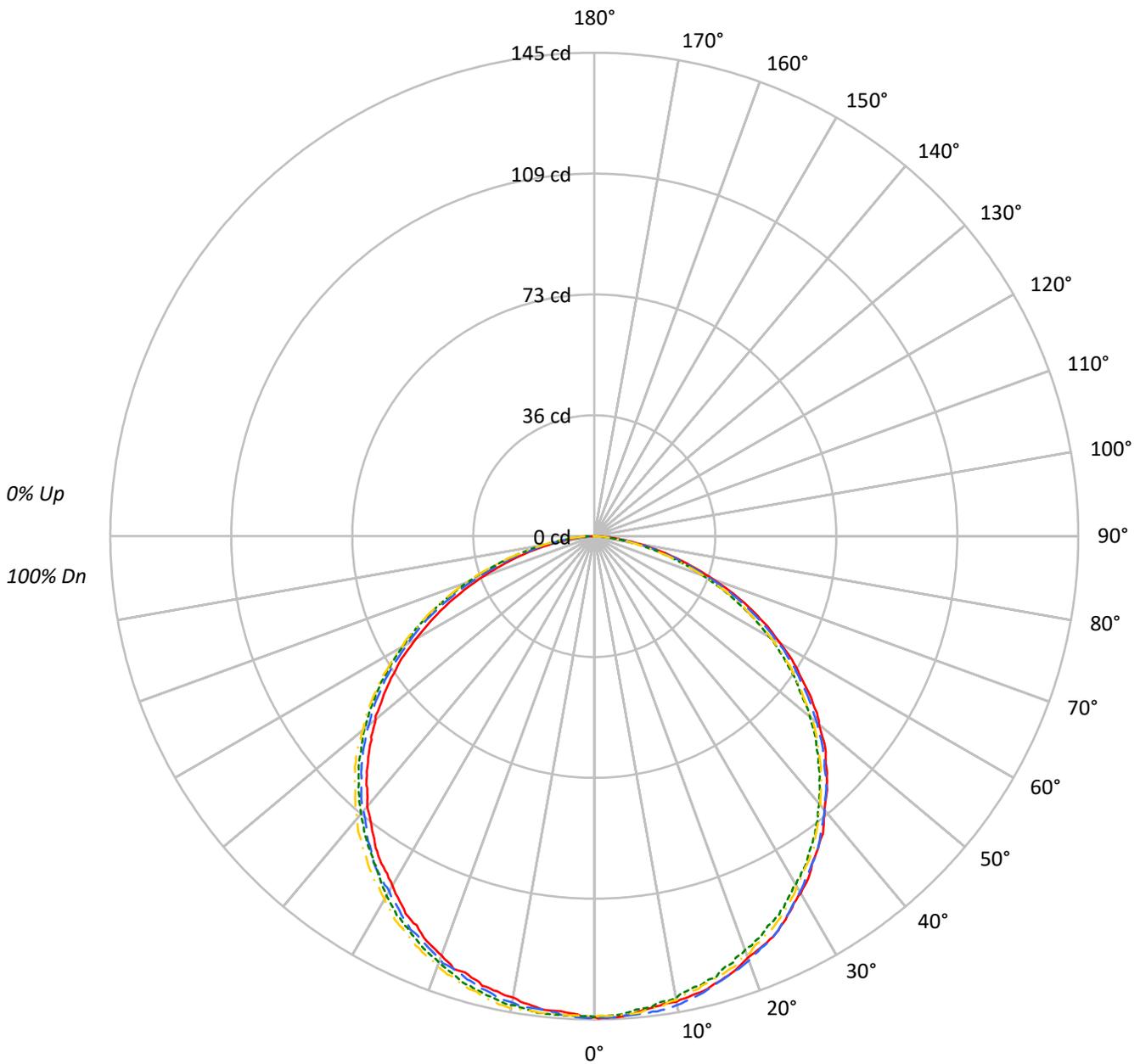
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 411.4 lumens
Efficiency: N/A
Efficacy: 93.5 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.26 / 1.39
Luminous Opening: Rectangular (W 0.03' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 4.4
Input Voltage (V): 24
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT

TEST NUMBER: P1214542
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Luminous Intensity Polar Plot



— 0°-180° - - 45°-225° - · - · 90°-270° - · - · 135°-315°



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				
RC	80				70				50				30				10			0	
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84	84	84	84
2	99	91	84	78	96	89	83	77	85	80	76	82	78	74	79	76	72	70	70	70	70
3	90	80	72	65	88	78	71	65	75	69	63	72	67	62	70	65	61	59	59	59	59
4	83	71	62	55	80	69	61	55	67	60	54	64	58	53	62	57	53	50	50	50	50
5	76	63	54	47	74	62	54	47	60	52	47	58	51	46	56	50	46	44	44	44	44
6	70	57	48	41	68	56	47	41	54	46	41	52	46	40	51	45	40	38	38	38	38
7	65	51	43	37	63	51	42	36	49	42	36	48	41	36	46	40	36	34	34	34	34
8	60	47	38	33	59	46	38	32	45	37	32	44	37	32	42	36	32	30	30	30	30
9	56	43	35	29	55	42	35	29	41	34	29	40	34	29	39	33	29	27	27	27	27
10	53	40	32	26	52	39	32	26	38	31	26	37	31	26	36	30	26	24	24	24	24

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	51739	51739	51739	51739
5°	51684	51360	51468	51864
10°	51662	51298	51189	52027
15°	51669	51001	51149	52115
20°	51394	50439	51088	51966
25°	51663	50357	50713	51782
30°	51249	50048	50131	51581
35°	50809	49670	50021	50984
40°	50257	49133	49554	50913
45°	49930	48205	48610	50589
50°	49065	47111	47725	50070
55°	47854	45665	46478	49043
60°	46213	43558	44276	47505
65°	43977	40412	41346	45591
70°	39864	36402	37346	42382
75°	35073	31191	32023	38123
80°	28721	23968	25208	32646
85°	20995	15644	14820	26347

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 315°
 Vertical Angle: 89.5°
 Luminance: 65785 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	13.7	3.3
10°-20°	39.3	9.6
20°-30°	59.8	14.5
30°-40°	72.5	17.6
40°-50°	75.5	18.4
50°-60°	67.9	16.5
60°-70°	50.2	12.2
70°-80°	26.4	6.4
80°-90°	6.0	1.5
90°-100°	0.1	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	112.8	27.4
0°-40°	185.2	45.0
0°-60°	328.6	79.9
0°-90°	411.3	100.0
90°-120°	0.1	0.0
90°-150°	0.1	0.0
90°-180°	0.0	0.0
0°-180°	411.4	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	144	144	144	144	144	
5°	144	143	143	144	144	14
15°	139	137	138	140	139	39
25°	130	127	128	131	130	60
35°	116	113	114	116	116	73
45°	98	95	96	100	98	76
55°	76	73	74	78	76	69
65°	52	48	49	54	52	51
75°	25	22	23	28	25	27
85°	5	4	4	6	5	6
90°	0	0	0	1	0	0
95°	0	0	0	0	0	0
105°	0	0	0	0	0	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	144.2	144.2	144.2	144.2	144.2	144.2	144.2	144.2	144.2	144.2	144.2
0.5°	144.7	144.1	144.5	144.4	144.0	144.2	143.9	143.6	144.6	144.1	144.6
1°	144.6	144.1	144.5	144.4	144.0	144.2	143.9	143.3	144.5	144.1	144.6
1.5°	144.6	144.1	144.5	144.5	143.9	144.3	144.0	143.3	144.1	144.1	144.5
2°	144.5	144.1	144.5	144.6	143.9	144.3	144.0	143.3	143.6	144.2	144.4
2.5°	144.5	144.1	144.5	144.5	143.8	144.1	144.0	143.2	143.4	144.2	144.4
3°	144.4	144.1	144.2	144.5	143.8	144.1	143.8	143.2	143.3	144.0	144.0
3.5°	144.2	144.1	144.1	144.5	143.5	143.1	143.9	143.2	143.1	144.0	144.0
4°	144.1	144.1	144.1	144.3	143.3	143.1	143.8	143.2	142.9	144.0	143.9
4.5°	143.9	144.1	144.1	144.3	143.0	143.1	143.7	143.2	142.9	144.0	143.4
5°	143.5	144.1	144.0	144.2	142.6	143.1	143.6	143.2	142.9	143.9	143.3
5.5°	143.2	144.2	144.0	144.2	142.5	143.0	143.6	143.2	142.9	143.7	143.1
6°	142.9	144.2	143.8	144.0	142.4	143.0	143.1	143.1	142.9	143.3	142.9
6.5°	142.7	143.9	143.9	143.9	142.4	143.0	142.9	142.9	142.7	143.2	142.9
7°	142.5	143.8	143.7	143.7	142.2	142.8	142.8	142.5	142.4	143.0	142.8
7.5°	142.3	143.6	143.8	143.7	141.5	142.8	142.5	142.5	142.1	142.9	142.8
8°	142.2	143.4	143.6	143.4	141.2	142.7	142.6	142.2	141.8	142.7	142.8
8.5°	141.8	143.1	143.5	143.1	141.1	142.7	142.2	142.1	141.6	142.8	142.8
9°	141.8	143.0	143.3	142.9	141.2	142.3	141.6	142.0	141.4	142.7	142.7
9.5°	141.8	142.9	143.1	142.8	141.0	141.8	141.4	142.0	140.8	142.2	142.3
10°	141.8	142.6	142.8	142.4	140.8	141.5	141.3	142.0	140.5	141.7	142.0
10.5°	141.4	142.2	142.6	142.3	139.9	141.3	140.9	141.9	140.4	141.5	141.9
11°	141.3	142.0	142.2	142.3	139.5	140.7	140.3	141.5	140.3	141.3	141.8
11.5°	141.1	141.6	142.0	141.8	139.2	140.3	139.9	141.1	140.0	141.0	141.4
12°	140.8	141.3	141.6	141.4	138.9	140.0	139.6	140.9	139.6	140.7	141.2
12.5°	140.6	141.0	141.3	141.1	138.5	139.7	139.5	140.5	139.6	140.3	140.7
13°	140.5	140.7	141.0	140.6	138.5	139.1	139.3	140.3	139.2	140.0	140.3
13.5°	140.3	140.3	140.7	140.3	138.3	138.8	138.6	139.8	139.0	140.0	140.0
14°	140.0	139.9	140.2	139.9	137.7	138.8	138.4	139.5	139.0	139.6	139.9
14.5°	139.5	139.6	139.8	139.7	137.3	138.9	138.2	139.1	138.1	139.4	139.3
15°	139.1	139.5	139.4	139.2	137.3	138.4	137.7	138.6	137.7	139.1	138.9
15.5°	138.8	139.1	138.9	138.8	137.1	137.8	137.2	138.0	137.5	138.9	138.5
16°	138.5	138.7	138.6	138.6	136.0	137.6	137.0	137.6	136.9	138.7	138.3
16.5°	138.0	138.4	138.2	138.2	135.5	137.4	136.8	137.1	136.5	138.5	137.7
17°	137.8	138.0	137.8	137.8	134.9	137.3	136.3	136.9	136.5	137.7	137.2
17.5°	137.3	137.5	137.4	137.4	134.8	136.3	135.9	136.9	136.5	137.3	137.1
18°	136.9	137.1	137.0	136.9	134.5	136.1	135.8	135.8	136.5	136.6	136.5
18.5°	136.3	136.8	136.8	136.2	133.4	135.1	135.3	135.2	135.5	136.2	136.2
19°	135.7	136.3	136.3	135.6	133.0	134.7	134.4	134.9	135.0	136.1	136.0
19.5°	135.1	135.8	135.9	135.1	132.8	134.5	133.8	134.1	134.5	135.3	136.0
20°	134.6	135.3	135.5	134.7	132.1	133.6	133.8	133.6	133.8	134.7	134.9
20.5°	134.2	134.9	134.9	134.2	131.7	133.3	133.4	133.1	133.4	134.3	134.5
21°	133.9	134.4	134.3	133.7	131.6	133.0	132.5	132.6	132.8	133.6	134.0
21.5°	133.5	133.8	133.9	133.2	130.8	132.3	131.8	132.4	132.4	133.1	133.5
22°	133.1	133.3	133.3	132.8	130.4	131.9	131.5	131.8	131.9	132.4	133.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	132.8	132.8	133.0	132.3	130.2	131.3	131.1	131.2	131.4	131.9	132.4
23°	132.4	132.4	132.6	131.8	129.3	130.7	130.3	130.8	130.8	131.6	131.9
23.5°	131.9	131.9	132.2	131.4	128.7	130.2	129.9	130.1	129.9	130.9	131.3
24°	131.6	131.3	131.6	130.6	127.9	129.4	129.6	129.7	129.2	130.3	130.8
24.5°	131.0	130.6	131.0	130.2	127.7	129.3	129.1	129.2	128.2	129.7	130.5
25°	130.5	130.1	130.4	129.5	127.2	128.4	128.5	128.6	128.1	129.2	130.3
25.5°	129.6	129.3	129.6	128.8	126.6	127.9	127.8	128.1	127.6	128.6	129.4
26°	129.1	128.8	128.8	128.2	126.3	127.0	127.3	127.3	127.0	128.0	128.7
26.5°	128.5	128.0	128.2	127.9	125.3	126.5	126.5	126.7	126.6	127.7	128.1
27°	127.6	127.3	127.5	127.1	125.0	125.8	125.9	125.8	125.6	127.2	127.4
27.5°	127.0	126.8	126.8	126.5	124.1	125.1	125.1	125.1	124.8	126.5	126.5
28°	126.3	126.1	126.0	125.8	123.3	124.7	124.6	124.6	124.1	125.8	125.8
28.5°	125.3	125.6	125.2	125.1	122.6	123.7	123.7	124.2	123.3	125.1	125.1
29°	124.8	125.2	124.7	124.6	122.0	123.1	123.1	123.6	122.7	124.4	124.6
29.5°	124.1	124.7	123.8	123.8	121.0	122.4	122.3	123.0	121.8	123.6	123.8
30°	123.7	124.1	123.2	123.0	120.8	121.9	121.2	122.0	121.0	122.6	122.9
30.5°	122.9	123.3	122.5	122.2	119.8	121.0	120.8	121.1	120.2	121.9	122.3
31°	122.3	122.7	121.8	121.5	119.6	120.2	120.0	120.4	119.7	121.2	122.0
31.5°	121.7	121.9	120.9	120.8	118.6	119.6	119.3	119.5	118.7	120.6	121.3
32°	121.0	121.0	120.2	120.1	118.0	118.9	118.5	118.7	118.3	120.0	120.6
32.5°	120.1	120.2	119.6	119.3	117.5	118.3	117.7	117.8	117.6	119.5	120.0
33°	119.2	119.3	118.8	118.6	116.8	117.1	117.2	117.2	117.1	118.7	119.6
33.5°	118.1	118.3	118.0	117.9	115.8	116.6	116.5	116.6	116.4	118.0	118.9
34°	117.3	117.4	117.5	117.1	114.8	115.6	115.8	115.8	115.7	116.9	118.1
34.5°	116.7	116.6	116.8	116.4	114.1	114.6	115.4	115.2	114.8	115.7	117.1
35°	116.0	115.9	115.9	115.6	113.4	114.2	114.7	114.8	114.2	114.8	116.2
35.5°	115.3	115.5	115.3	114.7	112.7	113.2	113.6	113.8	113.2	114.2	115.3
36°	114.5	114.8	114.4	113.9	111.8	112.6	112.4	113.0	112.2	113.6	114.5
36.5°	113.7	113.8	113.5	112.8	111.2	111.4	111.5	112.0	111.4	113.0	113.9
37°	113.0	112.7	112.5	112.0	110.1	110.6	110.6	110.8	110.6	112.7	113.0
37.5°	112.5	111.8	111.6	111.2	109.2	109.6	109.7	109.7	109.6	111.9	112.0
38°	111.4	110.9	110.7	110.3	108.6	108.8	108.9	108.8	108.8	110.9	110.9
38.5°	110.4	110.0	109.9	109.4	107.6	107.9	107.9	107.8	107.9	110.0	110.0
39°	109.3	109.2	109.0	108.4	106.5	107.1	107.0	107.1	107.2	108.9	109.1
39.5°	108.4	108.3	108.2	107.7	105.6	106.3	106.1	106.4	106.6	107.9	108.3
40°	107.3	107.6	107.3	107.0	104.9	105.2	105.3	105.7	105.8	106.7	107.6
40.5°	106.4	106.8	106.3	105.8	103.7	104.6	104.2	104.6	104.7	106.1	107.0
41°	105.6	105.8	105.3	105.0	102.9	103.4	103.3	103.5	103.6	105.2	106.2
41.5°	104.8	104.9	104.5	104.2	102.0	102.5	102.4	102.7	102.6	104.4	105.3
42°	104.0	104.1	103.7	103.3	100.9	101.5	101.5	101.7	101.7	103.3	104.3
42.5°	103.2	103.1	102.9	102.3	99.8	100.9	100.7	100.9	101.1	102.2	103.3
43°	102.1	102.1	101.9	101.6	99.0	99.7	99.6	100.0	100.1	101.3	102.3
43.5°	101.3	101.0	101.0	100.6	98.2	98.6	98.6	99.3	98.9	100.2	101.4
44°	100.3	100.1	99.8	99.5	96.9	97.8	97.7	98.2	98.1	99.1	100.4
44.5°	99.5	99.1	98.6	98.6	95.7	96.9	96.8	97.0	96.9	98.2	99.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	98.4	98.0	97.5	97.5	95.0	95.7	95.6	95.9	95.8	97.4	98.6
45.5°	97.2	97.1	96.7	96.4	94.3	94.8	94.6	94.9	95.0	96.4	97.8
46°	96.4	96.2	95.8	95.4	92.8	93.4	93.4	93.9	93.9	95.3	96.6
46.5°	95.6	95.3	94.5	94.4	91.7	92.5	92.4	93.0	92.9	94.2	95.5
47°	94.8	94.4	93.7	93.2	90.9	91.3	91.7	91.8	91.9	93.1	94.8
47.5°	93.8	93.4	92.6	92.1	90.0	90.2	90.4	90.5	90.5	92.3	93.7
48°	92.7	92.4	91.5	91.0	88.9	89.0	89.6	89.5	90.0	91.1	92.5
48.5°	91.4	91.1	90.3	89.8	87.7	88.3	88.5	88.6	88.7	90.2	91.5
49°	90.2	90.0	89.0	88.7	86.6	86.9	87.5	87.5	87.7	89.2	90.6
49.5°	89.1	88.7	88.1	87.6	85.2	85.9	86.3	86.3	86.5	87.9	89.5
50°	87.9	87.7	87.1	86.6	84.4	84.8	85.0	85.2	85.5	86.7	88.2
50.5°	87.2	86.5	85.9	85.6	83.5	83.6	83.6	84.0	85.0	85.8	87.1
51°	86.1	85.5	84.6	84.4	82.2	82.7	82.6	82.7	83.4	84.6	86.1
51.5°	85.3	84.3	83.6	83.1	80.8	81.6	81.5	81.2	82.1	83.6	85.1
52°	83.8	82.9	82.5	81.7	79.5	80.5	80.0	80.2	81.0	82.8	84.0
52.5°	82.6	81.9	81.4	80.5	78.3	79.2	78.8	79.3	79.9	81.6	83.0
53°	81.6	80.8	80.2	79.3	77.0	78.0	77.9	78.1	79.0	80.2	81.8
53.5°	80.5	79.7	79.0	78.1	76.2	76.7	76.7	76.8	77.8	79.0	80.5
54°	79.1	78.5	77.8	76.8	75.1	75.6	75.6	75.6	76.6	77.6	79.3
54.5°	77.8	77.3	76.5	75.8	74.0	74.7	74.2	74.3	75.4	76.5	78.1
55°	76.5	76.2	75.3	74.8	73.0	73.8	73.1	73.3	74.3	75.3	77.1
55.5°	75.4	75.0	74.4	73.5	71.5	72.4	72.0	72.1	72.9	74.2	76.0
56°	74.2	73.7	73.2	72.5	70.3	71.1	71.3	71.3	71.7	73.0	74.6
56.5°	73.1	72.5	72.2	71.2	69.1	69.7	70.1	70.0	70.8	71.8	73.4
57°	72.0	71.4	70.9	70.0	68.1	68.6	68.6	68.8	69.6	70.9	72.2
57.5°	70.9	70.1	69.5	68.6	67.0	67.1	67.4	67.6	68.5	69.5	71.0
58°	69.8	69.0	68.4	67.4	65.5	65.8	66.3	66.2	67.0	68.3	69.6
58.5°	68.5	67.9	67.3	66.3	64.6	64.5	65.0	64.7	65.6	66.9	68.4
59°	67.1	66.7	66.2	65.0	63.3	63.4	63.6	63.4	64.2	65.6	67.2
59.5°	65.7	65.5	64.8	63.9	62.1	62.5	62.4	62.3	63.1	64.4	65.8
60°	64.4	64.0	63.4	62.5	60.7	61.4	61.1	61.1	61.7	63.0	64.5
60.5°	63.2	62.6	62.1	61.3	59.3	59.8	59.9	59.8	60.4	61.8	63.5
61°	61.9	61.4	60.9	59.9	58.0	58.6	58.6	58.5	59.1	60.6	62.2
61.5°	60.7	60.3	59.6	58.4	57.0	57.4	57.2	56.8	57.8	59.4	61.0
62°	59.5	59.0	58.3	57.3	55.5	56.2	56.1	55.6	56.5	58.2	59.7
62.5°	58.4	57.6	56.8	56.0	54.3	54.7	54.6	54.3	55.3	56.8	58.4
63°	57.0	56.3	55.6	54.7	53.0	53.3	53.3	53.1	54.1	55.5	57.2
63.5°	55.6	55.0	54.4	53.5	51.6	52.1	51.9	51.8	52.6	54.4	56.1
64°	54.4	53.6	53.0	52.2	50.3	50.7	50.7	50.6	51.4	53.1	54.5
64.5°	53.1	52.2	51.8	50.8	49.0	49.4	49.7	49.7	49.9	51.7	53.3
65°	51.8	50.9	50.5	49.5	47.6	48.0	48.2	48.1	48.7	50.4	51.8
65.5°	50.4	49.6	49.1	48.3	46.3	46.7	46.9	46.7	47.5	49.1	50.5
66°	49.3	48.3	47.9	46.9	45.0	45.2	45.6	45.5	46.0	47.8	49.3
66.5°	47.8	47.0	46.6	45.6	43.7	44.0	44.3	44.2	44.5	46.4	47.8
67°	46.4	45.7	45.0	44.3	42.5	42.6	42.9	42.9	43.4	44.9	46.3



TEST NUMBER: P1214542

CATALOG NUMBER: HFL4001S/HFL4002S-935

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	45.1	44.3	43.9	43.1	41.1	41.4	41.5	41.5	42.2	43.6	45.0
68°	43.6	42.9	42.4	41.8	39.9	39.9	40.2	40.2	40.7	42.4	43.7
68.5°	42.3	41.7	41.0	40.5	38.6	38.6	38.9	39.0	39.3	40.9	42.3
69°	40.8	40.4	39.6	39.1	37.2	37.3	37.7	37.6	38.1	39.2	41.1
69.5°	39.3	39.1	38.3	37.9	36.0	35.9	36.1	36.4	36.8	38.2	39.5
70°	38.0	37.9	36.9	36.6	34.7	34.6	34.8	35.2	35.6	36.7	38.2
70.5°	36.7	36.5	35.7	35.1	33.4	33.3	33.4	34.0	34.3	35.5	37.0
71°	35.4	35.1	34.4	33.8	32.2	32.0	32.2	32.5	32.9	33.8	35.6
71.5°	34.0	33.8	33.0	32.5	30.9	30.8	30.8	31.3	31.5	33.0	34.3
72°	32.7	32.4	31.6	31.3	29.9	29.5	29.6	29.9	30.5	31.6	32.9
72.5°	31.4	31.2	30.3	29.9	28.5	28.2	28.3	28.7	29.0	30.3	31.6
73°	30.1	29.9	29.1	28.8	27.4	27.2	27.3	27.8	27.9	29.1	30.4
73.5°	29.1	28.9	28.0	27.5	26.1	26.2	26.1	26.3	26.7	28.0	29.2
74°	27.8	27.7	26.8	26.3	24.9	25.0	24.7	25.1	25.5	26.9	28.1
74.5°	26.6	26.4	25.6	25.1	23.7	23.7	23.7	23.9	24.3	25.6	26.9
75°	25.3	25.2	24.3	23.8	22.5	22.4	22.5	22.7	23.1	24.3	25.7
75.5°	24.1	23.9	23.2	22.6	21.3	21.1	21.3	21.5	22.1	23.2	24.5
76°	23.0	22.7	22.0	21.4	20.3	20.0	20.2	20.2	20.9	22.1	23.2
76.5°	21.9	21.5	20.8	20.4	19.4	18.8	18.9	19.2	19.8	20.9	21.9
77°	20.7	20.3	19.5	19.1	18.0	17.7	17.7	18.2	18.6	19.6	20.5
77.5°	19.4	19.3	18.4	18.0	16.8	16.8	17.0	16.9	17.5	18.4	19.2
78°	18.3	18.0	17.3	16.8	15.8	15.6	15.6	15.9	16.3	17.4	18.0
78.5°	17.2	16.9	16.2	15.7	14.7	14.4	14.6	14.7	15.4	16.2	16.9
79°	16.2	15.9	15.1	14.7	14.0	13.3	13.8	13.9	14.2	15.3	15.8
79.5°	15.2	14.8	14.1	13.6	12.7	12.7	12.9	12.7	13.2	14.1	14.8
80°	13.9	13.7	13.1	12.6	11.6	11.5	11.8	11.8	12.2	13.1	13.8
80.5°	13.0	12.6	12.1	11.6	10.6	10.4	10.7	10.8	11.3	12.1	12.9
81°	11.9	11.5	11.1	10.7	9.9	9.7	9.9	10.1	10.3	11.4	12.1
81.5°	11.0	10.6	10.1	9.8	8.8	8.9	8.8	9.0	9.3	10.3	11.4
82°	10.1	9.6	9.1	8.8	8.0	7.8	8.0	8.2	8.8	9.4	10.3
82.5°	9.3	8.6	8.3	7.9	7.2	7.2	7.3	7.4	7.6	8.6	9.4
83°	8.3	7.8	7.3	7.1	6.2	6.2	6.4	6.5	6.6	7.6	8.8
83.5°	7.4	6.9	6.5	6.2	5.4	5.4	5.8	6.3	6.4	6.8	7.8
84°	6.6	6.2	5.7	5.4	4.6	4.9	4.8	5.0	5.0	6.3	6.9
84.5°	5.8	5.4	4.9	4.7	3.8	4.0	4.2	4.2	4.2	5.0	6.2
85°	5.1	4.7	4.2	3.8	3.8	3.7	3.4	3.5	3.6	4.2	5.2
85.5°	4.4	4.1	3.4	3.1	2.6	2.7	3.0	2.8	3.0	3.5	4.5
86°	3.8	3.5	2.9	2.6	2.2	2.4	2.3	2.1	2.1	2.8	3.7
86.5°	3.1	3.0	2.3	2.0	1.7	2.1	2.0	1.8	2.0	2.2	3.2
87°	2.6	2.5	1.9	1.6	1.1	1.3	1.4	1.1	1.1	1.6	2.5
87.5°	2.2	1.9	1.5	1.3	0.8	0.8	1.0	0.9	0.6	1.1	2.0
88°	1.7	1.6	1.1	1.0	0.8	0.8	0.9	0.7	0.3	0.9	1.3
88.5°	1.3	1.2	0.8	0.8	0.2	0.6	0.8	0.1	0.0	0.3	0.8
89°	0.9	0.9	0.5	0.6	0.0	0.2	0.2	0.0	0.0	0.0	0.7
89.5°	0.7	0.6	0.3	0.3	0.1	0.0	0.3	0.0	0.0	0.0	0.2



TEST NUMBER: P1214542
 CATALOG NUMBER: HFL4001S/HFL4002S-935

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.4	0.3	0.3	0.3	0.0	0.0	0.2	0.0	0.0	0.0	0.2
90.5°	0.2	0.3	0.3	0.3	0.0	0.0	0.2	0.0	0.0	0.0	0.0
91°	0.0	0.3	0.2	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0
91.5°	0.0	0.0	0.1	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0
92°	0.0	0.0	0.1	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0
92.5°	0.0	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93°	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
93.5°	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
94°	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
94.5°	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
96°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
96.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97°	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
98°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
98.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
99°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
99.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
101°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
101.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
103°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
103.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
104°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
104.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
106°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
106.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
108°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
108.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
109°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
109.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
111°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
111.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
112°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1214542
 CATALOG NUMBER: HFL4001S/HFL4002S-935

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
113°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
113.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
114°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
114.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
116°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
116.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
118°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
118.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
119°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
119.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
121°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
121.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
123°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
123.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
124°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
124.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
126°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
126.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
128°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
128.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
129°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
129.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
131°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
131.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
133°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
133.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
134°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
134.5°	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1214542
 CATALOG NUMBER: HFL4001S/HFL4002S-935

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
135°	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
135.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
136°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
136.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
138°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
138.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
139°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
139.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
141°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
141.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
143°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
143.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
144°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
144.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
146°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
146.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
148°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
148.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
149°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
149.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
151°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
151.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
153°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
153.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
154°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
154.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
156°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
156.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1214542

CATALOG NUMBER: HFL4001S/HFL4002S-935

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
158°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
158.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
159°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
159.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
161°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
161.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
163°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
163.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
164°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
164.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
166°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
166.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
168°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
168.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
169°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
169.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
171°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
171.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
173°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
173.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
174°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
174.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
176°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
176.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
178°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
178.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
179°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
179.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1214542
CATALOG NUMBER: HFL4001S/HFL4002S-935

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1214542

CATALOG NUMBER: HFL4001S/HFL4002S-935

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	144.2	144.2	144.2	144.2	144.2	144.2
0.5°	144.3	144.0	144.2	143.9	143.7	144.7
1°	144.3	144.0	144.2	143.9	144.0	144.6
1.5°	144.3	144.0	144.2	143.9	143.9	144.6
2°	144.3	144.0	144.2	143.9	144.1	144.5
2.5°	144.3	144.0	144.2	143.9	144.5	144.5
3°	144.3	144.0	144.2	143.9	144.5	144.4
3.5°	144.3	144.0	144.2	143.9	144.5	144.2
4°	144.3	144.0	144.2	143.9	144.5	144.1
4.5°	144.3	144.0	144.3	143.9	144.7	143.9
5°	144.3	144.0	144.2	143.9	144.6	143.5
5.5°	144.3	144.0	144.4	143.9	144.6	143.2
6°	143.8	144.1	144.4	143.9	144.6	142.9
6.5°	143.2	143.9	144.2	143.9	144.6	142.7
7°	143.0	144.0	144.0	143.7	144.7	142.5
7.5°	143.0	143.7	144.0	143.7	144.7	142.3
8°	143.0	143.4	143.7	143.7	144.5	142.2
8.5°	142.9	143.2	143.7	143.7	144.2	141.8
9°	143.0	143.1	143.6	143.7	143.7	141.8
9.5°	143.0	142.8	143.6	143.8	143.5	141.8
10°	142.6	142.8	143.6	143.8	143.2	141.8
10.5°	142.0	142.9	143.3	143.6	143.0	141.4
11°	141.7	142.6	143.2	143.4	142.9	141.3
11.5°	141.6	142.3	142.9	143.4	142.5	141.1
12°	141.3	142.0	142.4	142.9	142.4	140.8
12.5°	140.8	141.6	142.2	142.6	142.1	140.6
13°	140.5	141.5	141.8	142.4	141.7	140.5
13.5°	140.3	141.3	141.6	142.1	141.4	140.3
14°	140.2	140.8	141.3	141.7	140.9	140.0
14.5°	140.2	140.6	141.0	141.1	140.3	139.5
15°	140.0	140.3	140.7	141.0	140.0	139.1
15.5°	139.5	139.8	140.2	140.9	139.6	138.8
16°	139.1	139.8	139.9	140.4	139.2	138.5
16.5°	139.1	139.5	139.7	139.9	139.0	138.0
17°	138.7	138.9	139.2	139.7	138.8	137.8
17.5°	138.1	138.3	138.9	139.2	138.5	137.3
18°	137.5	137.8	138.6	138.7	138.5	136.9
18.5°	137.4	137.5	138.5	138.7	138.1	136.3
19°	136.8	137.0	138.2	138.1	137.8	135.7
19.5°	136.3	136.6	138.0	137.8	137.5	135.1
20°	136.4	136.1	137.4	137.3	137.2	134.6
20.5°	135.2	135.5	137.0	136.7	136.5	134.2
21°	134.8	135.2	136.3	136.1	135.9	133.9
21.5°	134.6	134.7	135.7	135.8	135.3	133.5
22°	133.9	134.2	135.2	135.4	134.8	133.1



TEST NUMBER: P1214542

CATALOG NUMBER: HFL4001S/HFL4002S-935

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	133.4	133.8	134.6	135.0	134.6	132.8
23°	133.0	133.2	133.8	134.2	134.0	132.4
23.5°	132.2	132.5	133.2	134.0	133.3	131.9
24°	132.0	131.9	132.4	133.3	132.5	131.6
24.5°	131.2	131.5	131.9	132.7	132.0	131.0
25°	130.6	130.8	131.4	132.1	131.6	130.5
25.5°	130.1	130.1	130.6	131.6	130.9	129.6
26°	129.6	129.8	130.6	130.9	130.3	129.1
26.5°	129.3	129.1	129.9	130.6	129.7	128.5
27°	128.4	128.5	129.5	130.0	129.0	127.6
27.5°	127.9	128.2	128.8	129.6	128.4	127.0
28°	127.0	127.3	128.1	128.5	127.6	126.3
28.5°	126.5	126.6	127.5	127.9	126.9	125.3
29°	125.5	125.9	127.0	127.2	126.1	124.8
29.5°	124.7	125.2	126.2	126.7	125.4	124.1
30°	124.1	124.5	125.1	125.7	124.7	123.7
30.5°	123.7	123.6	124.5	125.1	124.1	122.9
31°	122.7	122.9	123.8	124.3	123.6	122.3
31.5°	122.3	122.1	123.3	123.5	122.9	121.7
32°	121.6	121.1	122.5	122.9	122.2	121.0
32.5°	120.9	120.4	121.9	122.5	121.8	120.1
33°	120.0	119.4	121.2	121.7	121.2	119.2
33.5°	119.5	118.6	120.5	121.0	120.4	118.1
34°	118.7	118.1	119.8	120.4	119.7	117.3
34.5°	117.9	117.1	119.2	119.6	119.0	116.7
35°	117.0	116.4	118.5	118.7	118.2	116.0
35.5°	116.2	115.8	117.7	117.8	117.5	115.3
36°	115.6	115.1	116.9	117.1	116.7	114.5
36.5°	114.8	114.3	116.0	116.5	116.0	113.7
37°	114.3	113.5	115.5	115.8	115.1	113.0
37.5°	113.3	112.9	114.5	114.8	114.1	112.5
38°	112.4	112.1	113.7	114.2	113.2	111.4
38.5°	111.6	110.9	112.8	113.5	112.1	110.4
39°	110.7	110.3	111.9	112.6	111.2	109.3
39.5°	110.1	109.6	111.1	111.5	110.4	108.4
40°	109.0	108.7	110.1	110.6	109.6	107.3
40.5°	108.0	107.9	109.2	109.7	108.8	106.4
41°	107.1	107.0	108.2	108.9	107.8	105.6
41.5°	106.5	106.3	107.1	108.0	107.0	104.8
42°	106.0	105.2	106.0	107.0	106.2	104.0
42.5°	104.7	104.4	105.2	106.1	105.3	103.2
43°	103.6	103.7	104.1	105.0	104.5	102.1
43.5°	102.8	102.5	103.4	104.1	103.4	101.3
44°	101.9	101.7	102.3	103.3	102.4	100.3
44.5°	100.9	100.7	101.5	102.3	101.6	99.5



TEST NUMBER: P1214542

CATALOG NUMBER: HFL4001S/HFL4002S-935

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	100.2	99.7	100.5	101.5	100.7	98.4
45.5°	99.4	99.0	99.6	100.5	99.6	97.2
46°	98.4	98.1	98.8	99.7	98.6	96.4
46.5°	97.2	97.0	97.7	98.5	97.7	95.6
47°	96.1	95.8	96.4	97.7	96.5	94.8
47.5°	95.4	94.7	95.5	96.6	95.3	93.8
48°	93.8	94.0	94.5	95.4	94.2	92.7
48.5°	92.7	92.8	93.4	94.2	93.0	91.4
49°	91.5	91.8	92.4	92.8	91.9	90.2
49.5°	90.4	90.9	91.5	91.8	90.9	89.1
50°	89.5	89.7	90.7	90.4	89.7	87.9
50.5°	88.5	88.7	89.5	89.5	88.7	87.2
51°	87.4	87.5	88.2	88.5	87.7	86.1
51.5°	86.3	86.4	87.4	87.4	86.6	85.3
52°	85.2	85.5	86.3	86.5	85.5	83.8
52.5°	83.9	84.2	85.4	85.3	84.3	82.6
53°	82.5	83.1	83.8	84.0	82.9	81.6
53.5°	81.3	81.9	82.7	82.9	81.7	80.5
54°	80.2	80.9	81.5	81.9	80.4	79.1
54.5°	79.1	79.7	80.2	80.5	79.1	77.8
55°	77.8	78.4	79.1	79.4	78.2	76.5
55.5°	76.7	77.6	78.1	78.3	77.4	75.4
56°	75.5	76.1	76.7	77.2	76.3	74.2
56.5°	74.4	74.9	75.3	76.1	75.0	73.1
57°	73.2	73.7	74.1	74.4	73.6	72.0
57.5°	72.1	72.5	72.8	73.2	72.4	70.9
58°	71.2	71.2	71.9	71.9	71.1	69.8
58.5°	69.8	70.1	70.6	70.9	69.8	68.5
59°	68.5	68.9	69.3	69.6	68.5	67.1
59.5°	67.2	67.6	68.2	68.3	67.2	65.7
60°	65.9	66.2	66.9	66.8	65.8	64.4
60.5°	64.4	65.0	65.7	65.6	64.6	63.2
61°	63.2	63.8	64.8	64.7	63.4	61.9
61.5°	61.8	62.5	63.6	63.4	62.1	60.7
62°	60.7	61.3	62.2	61.9	60.9	59.5
62.5°	59.4	60.3	61.0	60.6	59.7	58.4
63°	58.2	58.9	59.6	59.2	58.4	57.0
63.5°	57.1	57.6	58.4	57.9	57.2	55.6
64°	55.9	56.3	57.0	56.7	55.9	54.4
64.5°	54.6	55.0	55.7	55.5	54.4	53.1
65°	53.3	53.7	54.4	54.3	53.0	51.8
65.5°	51.8	52.4	53.1	52.8	51.8	50.4
66°	50.4	51.1	51.7	51.4	50.4	49.3
66.5°	49.1	49.7	50.4	50.2	49.0	47.8
67°	47.4	48.4	48.9	48.9	47.5	46.4



TEST NUMBER: P1214542

CATALOG NUMBER: HFL4001S/HFL4002S-935

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	46.0	47.0	47.7	47.5	45.8	45.1
68°	44.6	45.7	46.3	46.2	44.6	43.6
68.5°	43.3	44.2	44.9	45.0	43.3	42.3
69°	42.1	43.0	43.6	43.7	41.9	40.8
69.5°	41.0	41.8	42.3	42.4	40.6	39.3
70°	39.5	40.4	40.8	41.1	39.2	38.0
70.5°	38.3	39.0	39.4	39.7	37.9	36.7
71°	37.0	37.9	38.1	38.5	36.5	35.4
71.5°	35.7	36.4	36.9	36.9	35.3	34.0
72°	34.5	35.1	35.5	35.7	34.0	32.7
72.5°	33.1	33.7	34.2	34.3	32.7	31.4
73°	31.8	32.5	32.8	32.9	31.5	30.1
73.5°	30.4	31.0	31.5	31.4	30.2	29.1
74°	29.2	29.8	30.2	30.2	29.2	27.8
74.5°	28.0	28.7	29.1	29.0	27.9	26.6
75°	26.7	27.5	27.9	27.7	26.7	25.3
75.5°	25.5	26.3	26.6	26.5	25.5	24.1
76°	24.3	24.9	25.2	25.3	24.4	23.0
76.5°	23.1	23.8	24.0	24.1	23.1	21.9
77°	21.9	22.6	22.8	22.8	22.0	20.7
77.5°	20.8	21.5	21.6	21.7	20.8	19.4
78°	19.7	20.3	20.5	20.5	19.7	18.3
78.5°	18.4	19.2	19.2	19.3	18.6	17.2
79°	17.2	17.9	18.1	18.3	17.5	16.2
79.5°	16.2	16.9	17.1	17.1	16.3	15.2
80°	15.2	15.8	16.0	16.0	15.3	13.9
80.5°	14.1	14.7	15.0	15.0	14.2	13.0
81°	13.0	13.7	14.0	13.9	13.2	11.9
81.5°	12.0	12.7	13.1	13.0	12.1	11.0
82°	11.0	11.6	12.0	12.1	11.2	10.1
82.5°	10.2	10.8	11.2	11.2	10.2	9.3
83°	9.2	9.7	10.2	10.2	9.4	8.3
83.5°	8.5	8.9	9.4	9.3	8.5	7.4
84°	7.4	8.1	8.5	8.4	7.6	6.6
84.5°	6.6	7.2	7.6	7.7	7.0	5.8
85°	6.3	6.4	6.9	7.1	6.1	5.1
85.5°	5.2	5.8	6.2	6.1	5.3	4.4
86°	4.7	5.0	5.5	5.4	4.6	3.8
86.5°	3.8	4.3	4.7	4.7	4.0	3.1
87°	3.2	3.6	4.1	4.0	3.4	2.6
87.5°	2.4	3.0	3.5	3.5	2.9	2.2
88°	2.0	2.5	2.9	2.8	2.4	1.7
88.5°	1.2	2.0	2.3	2.4	2.0	1.3
89°	1.1	1.5	1.9	1.9	1.5	0.9
89.5°	0.6	1.2	1.5	1.6	1.1	0.7



TEST NUMBER: P1214542
 CATALOG NUMBER: HFL4001S/HFL4002S-935

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.1	1.0	1.2	1.2	0.8	0.4
90.5°	0.1	0.8	0.8	0.9	0.6	0.2
91°	0.0	0.6	0.6	0.6	0.4	0.0
91.5°	0.0	0.3	0.5	0.3	0.3	0.0
92°	0.0	0.3	0.4	0.3	0.2	0.0
92.5°	0.0	0.3	0.3	0.3	0.2	0.0
93°	0.0	0.3	0.2	0.1	0.0	0.0
93.5°	0.0	0.1	0.2	0.1	0.0	0.0
94°	0.0	0.1	0.1	0.1	0.1	0.0
94.5°	0.0	0.1	0.1	0.0	0.0	0.0
95°	0.0	0.1	0.1	0.0	0.0	0.0
95.5°	0.0	0.0	0.1	0.0	0.0	0.0
96°	0.0	0.0	0.1	0.0	0.0	0.0
96.5°	0.0	0.0	0.1	0.0	0.0	0.0
97°	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	0.0	0.0	0.0	0.0	0.0	0.0
98°	0.0	0.0	0.0	0.0	0.0	0.0
98.5°	0.0	0.0	0.0	0.0	0.0	0.0
99°	0.0	0.0	0.0	0.0	0.0	0.0
99.5°	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.1	0.0	0.0	0.0
100.5°	0.0	0.0	0.1	0.0	0.0	0.0
101°	0.0	0.0	0.0	0.0	0.0	0.0
101.5°	0.0	0.0	0.0	0.0	0.0	0.0
102°	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	0.0	0.0	0.0	0.0	0.0	0.0
103°	0.0	0.0	0.0	0.0	0.0	0.0
103.5°	0.0	0.0	0.0	0.0	0.0	0.0
104°	0.0	0.0	0.0	0.0	0.0	0.0
104.5°	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0
105.5°	0.0	0.0	0.0	0.0	0.0	0.0
106°	0.0	0.0	0.0	0.0	0.0	0.0
106.5°	0.0	0.0	0.0	0.0	0.0	0.0
107°	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0
108°	0.0	0.0	0.0	0.0	0.0	0.0
108.5°	0.0	0.0	0.0	0.0	0.0	0.0
109°	0.0	0.0	0.0	0.0	0.0	0.0
109.5°	0.0	0.0	0.0	0.0	0.0	0.0
110°	0.0	0.0	0.0	0.0	0.0	0.0
110.5°	0.0	0.0	0.0	0.0	0.0	0.0
111°	0.0	0.0	0.0	0.0	0.0	0.0
111.5°	0.0	0.0	0.0	0.0	0.0	0.0
112°	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1214542
CATALOG NUMBER: HFL4001S/HFL4002S-935

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	0.0	0.0	0.0	0.0	0.0	0.0
113°	0.0	0.0	0.0	0.0	0.0	0.0
113.5°	0.0	0.0	0.0	0.0	0.0	0.0
114°	0.0	0.0	0.0	0.0	0.0	0.0
114.5°	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0
115.5°	0.0	0.0	0.0	0.0	0.0	0.0
116°	0.0	0.0	0.0	0.0	0.0	0.0
116.5°	0.0	0.0	0.0	0.0	0.0	0.0
117°	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0
118°	0.0	0.0	0.0	0.0	0.0	0.0
118.5°	0.0	0.0	0.0	0.0	0.0	0.0
119°	0.0	0.0	0.0	0.0	0.0	0.0
119.5°	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0
120.5°	0.0	0.0	0.0	0.0	0.0	0.0
121°	0.0	0.0	0.0	0.0	0.0	0.0
121.5°	0.0	0.0	0.0	0.0	0.0	0.0
122°	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0
123°	0.0	0.0	0.0	0.0	0.0	0.0
123.5°	0.0	0.0	0.0	0.0	0.0	0.0
124°	0.0	0.0	0.0	0.0	0.0	0.0
124.5°	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0
125.5°	0.0	0.0	0.0	0.0	0.0	0.0
126°	0.0	0.0	0.0	0.0	0.0	0.0
126.5°	0.0	0.0	0.0	0.0	0.0	0.0
127°	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0
128°	0.0	0.0	0.0	0.0	0.0	0.0
128.5°	0.0	0.0	0.0	0.0	0.0	0.0
129°	0.0	0.0	0.0	0.0	0.0	0.0
129.5°	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0
130.5°	0.0	0.0	0.0	0.0	0.0	0.0
131°	0.0	0.0	0.0	0.0	0.0	0.0
131.5°	0.0	0.0	0.0	0.0	0.0	0.0
132°	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0
133°	0.0	0.0	0.0	0.0	0.0	0.0
133.5°	0.0	0.0	0.0	0.0	0.0	0.0
134°	0.0	0.0	0.0	0.0	0.0	0.0
134.5°	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1214542
CATALOG NUMBER: HFL4001S/HFL4002S-935

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
135°	0.0	0.0	0.0	0.0	0.0	0.0
135.5°	0.0	0.0	0.0	0.0	0.0	0.0
136°	0.0	0.0	0.0	0.0	0.0	0.0
136.5°	0.0	0.0	0.0	0.0	0.0	0.0
137°	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0
138°	0.0	0.0	0.0	0.0	0.0	0.0
138.5°	0.0	0.0	0.0	0.0	0.0	0.0
139°	0.0	0.0	0.0	0.0	0.0	0.0
139.5°	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0
140.5°	0.0	0.0	0.0	0.0	0.0	0.0
141°	0.0	0.0	0.0	0.0	0.0	0.0
141.5°	0.0	0.0	0.0	0.0	0.0	0.0
142°	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0
143°	0.0	0.0	0.0	0.0	0.0	0.0
143.5°	0.0	0.0	0.0	0.0	0.0	0.0
144°	0.0	0.0	0.0	0.0	0.0	0.0
144.5°	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0
145.5°	0.0	0.0	0.0	0.0	0.0	0.0
146°	0.0	0.0	0.0	0.0	0.0	0.0
146.5°	0.0	0.0	0.0	0.0	0.0	0.0
147°	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0
148°	0.0	0.0	0.0	0.0	0.0	0.0
148.5°	0.0	0.0	0.0	0.0	0.0	0.0
149°	0.0	0.0	0.0	0.0	0.0	0.0
149.5°	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0
150.5°	0.0	0.0	0.0	0.0	0.0	0.0
151°	0.0	0.0	0.0	0.0	0.0	0.0
151.5°	0.0	0.0	0.0	0.0	0.0	0.0
152°	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0
153°	0.0	0.0	0.0	0.0	0.0	0.0
153.5°	0.0	0.0	0.0	0.0	0.0	0.0
154°	0.0	0.0	0.0	0.0	0.0	0.0
154.5°	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0
155.5°	0.0	0.0	0.0	0.0	0.0	0.0
156°	0.0	0.0	0.0	0.0	0.0	0.0
156.5°	0.0	0.0	0.0	0.0	0.0	0.0
157°	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1214542
CATALOG NUMBER: HFL4001S/HFL4002S-935

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
157.5°	0.0	0.0	0.0	0.0	0.0	0.0
158°	0.0	0.0	0.0	0.0	0.0	0.0
158.5°	0.0	0.0	0.0	0.0	0.0	0.0
159°	0.0	0.0	0.0	0.0	0.0	0.0
159.5°	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0
160.5°	0.0	0.0	0.0	0.0	0.0	0.0
161°	0.0	0.0	0.0	0.0	0.0	0.0
161.5°	0.0	0.0	0.0	0.0	0.0	0.0
162°	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0
163°	0.0	0.0	0.0	0.0	0.0	0.0
163.5°	0.0	0.0	0.0	0.0	0.0	0.0
164°	0.0	0.0	0.0	0.0	0.0	0.0
164.5°	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0
165.5°	0.0	0.0	0.0	0.0	0.0	0.0
166°	0.0	0.0	0.0	0.0	0.0	0.0
166.5°	0.0	0.0	0.0	0.0	0.0	0.0
167°	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0
168°	0.0	0.0	0.0	0.0	0.0	0.0
168.5°	0.0	0.0	0.0	0.0	0.0	0.0
169°	0.0	0.0	0.0	0.0	0.0	0.0
169.5°	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0
170.5°	0.0	0.0	0.0	0.0	0.0	0.0
171°	0.0	0.0	0.0	0.0	0.0	0.0
171.5°	0.0	0.0	0.0	0.0	0.0	0.0
172°	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0
173°	0.0	0.0	0.0	0.0	0.0	0.0
173.5°	0.0	0.0	0.0	0.0	0.0	0.0
174°	0.0	0.0	0.0	0.0	0.0	0.0
174.5°	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0
175.5°	0.0	0.0	0.0	0.0	0.0	0.0
176°	0.0	0.0	0.0	0.0	0.0	0.0
176.5°	0.0	0.0	0.0	0.0	0.0	0.0
177°	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0
178°	0.0	0.0	0.0	0.0	0.0	0.0
178.5°	0.0	0.0	0.0	0.0	0.0	0.0
179°	0.0	0.0	0.0	0.0	0.0	0.0
179.5°	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1214542
CATALOG NUMBER: HFL4001S/HFL4002S-935

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
180°	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1214542
 CATALOG NUMBER: HFL4001S/HFL4002S-935

CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room Dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	25.8	27.4	26.1	27.7	28.0	25.4	27.0	25.8	27.3	27.7
	3H	27.4	28.9	27.8	29.2	29.6	27.0	28.5	27.4	28.8	29.2
	4H	28.0	29.4	28.4	29.7	30.1	27.5	28.9	27.9	29.3	29.6
	6H	28.4	29.7	28.8	30.0	30.4	27.8	29.1	28.2	29.5	29.9
	8H	28.5	29.7	28.9	30.1	30.5	27.9	29.1	28.3	29.5	29.9
	12H	28.5	29.7	29.0	30.1	30.5	27.9	29.1	28.4	29.5	29.9
4H	2H	26.4	27.8	26.8	28.1	28.5	26.0	27.4	26.4	27.7	28.1
	3H	28.3	29.4	28.7	29.8	30.2	27.8	29.0	28.2	29.4	29.8
	4H	29.0	30.0	29.4	30.4	30.9	28.4	29.5	28.9	29.9	30.3
	6H	29.5	30.4	29.9	30.8	31.3	28.9	29.8	29.3	30.2	30.7
	8H	29.6	30.4	30.0	30.9	31.4	28.9	29.8	29.4	30.2	30.7
	12H	29.7	30.4	30.2	30.9	31.4	29.0	29.8	29.5	30.2	30.7
8H	4H	29.2	30.1	29.7	30.5	31.0	28.7	29.5	29.2	30.0	30.5
	6H	29.8	30.5	30.3	31.0	31.5	29.2	29.9	29.7	30.4	30.9
	8H	30.0	30.7	30.5	31.2	31.6	29.3	30.0	29.8	30.5	31.0
	12H	30.2	30.7	30.7	31.2	31.8	29.4	30.0	29.9	30.5	31.0
12H	4H	29.3	30.0	29.7	30.5	31.0	28.7	29.5	29.2	30.0	30.4
	6H	29.9	30.5	30.4	31.0	31.5	29.2	29.9	29.7	30.3	30.9
	8H	30.1	30.7	30.6	31.2	31.7	29.4	30.0	29.9	30.4	31.0

LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

Halo Track & Surface

Report Number: SP1-2509-560-3

Test Date: 10/10/2025

Luminaire Tested: HFLESD4-HFL4001S-HFLP60A-935

Data in this report applies to families of products including HFLESD4-HFL4001S-HFLP60A*

The results of this test have not been influenced by sources from within Eaton or from external interests.

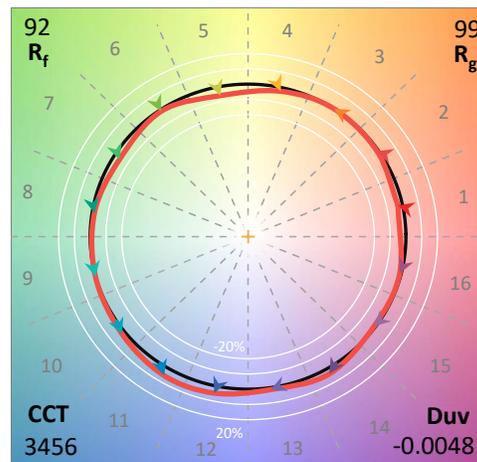
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2509-560-3
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 10/20/2025
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: Halo Track & Surface
 Catalog Number: **HFLESD4-HFL4001S-HFLP60A-935**
 Description: HALO FLEX LINEAR 4 SURFACE MOUNT DEEP 400LM/FT 60W UNV

Spectral Parameters

CCT (K): 3456
 CIE u': 0.2391
 CIE v': 0.5057
 Duv: -0.0048
 CIE x: 0.4027
 CIE y: 0.3786
 CIE z: 0.2187
 Peak Wavelength (nm): 618
 Dominant Wavelength (nm): 583
 Purity: 34.5
 R_f: 91.6
 R_g: 98.9

CRI (Ra):	95.3		
R1:	98.1	R9:	82.9
R2:	97.1	R10:	96.0
R3:	96.9	R11:	97.8
R4:	96.3	R12:	79.3
R5:	97.1	R13:	98.1
R6:	93.6	R14:	99.4
R7:	92.5	R15:	97.5
R8:	90.5		



Test Conditions

Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 25.3

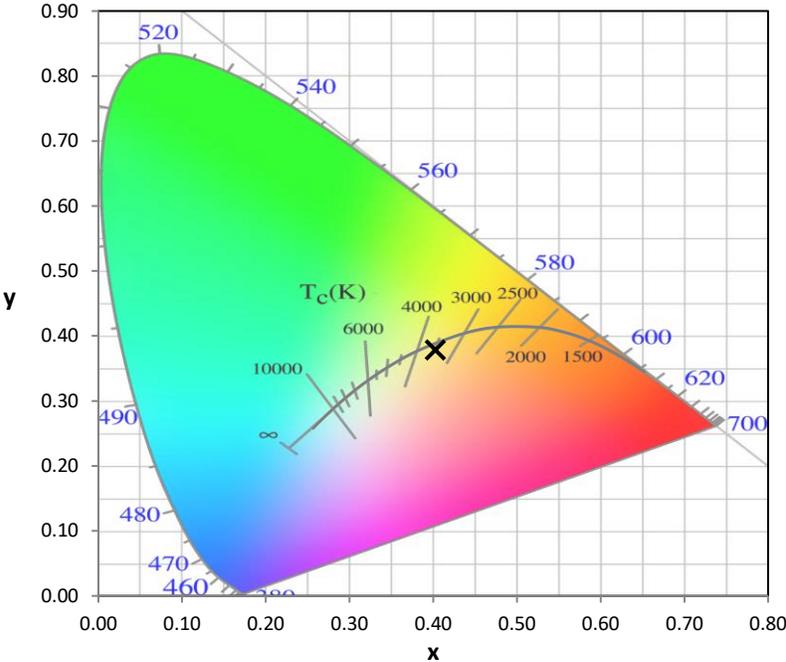
REPORT NUMBER: SP1-2509-560-3

Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	6/16/2025	12/16/2025
Power Meter	XITRON INXT2011004	1/21/2025	1/21/2026
AC Power Source	CHROMA 61603 IN0063	10/22/2024	10/22/2025
DC Power Source	AGILENT E3634A IN0208	10/22/2024	10/22/2025
Sphere Thermometer	ONSET IN0085	10/22/2024	10/22/2025
Room Thermometer	ONSET IN0046	10/22/2024	10/22/2025

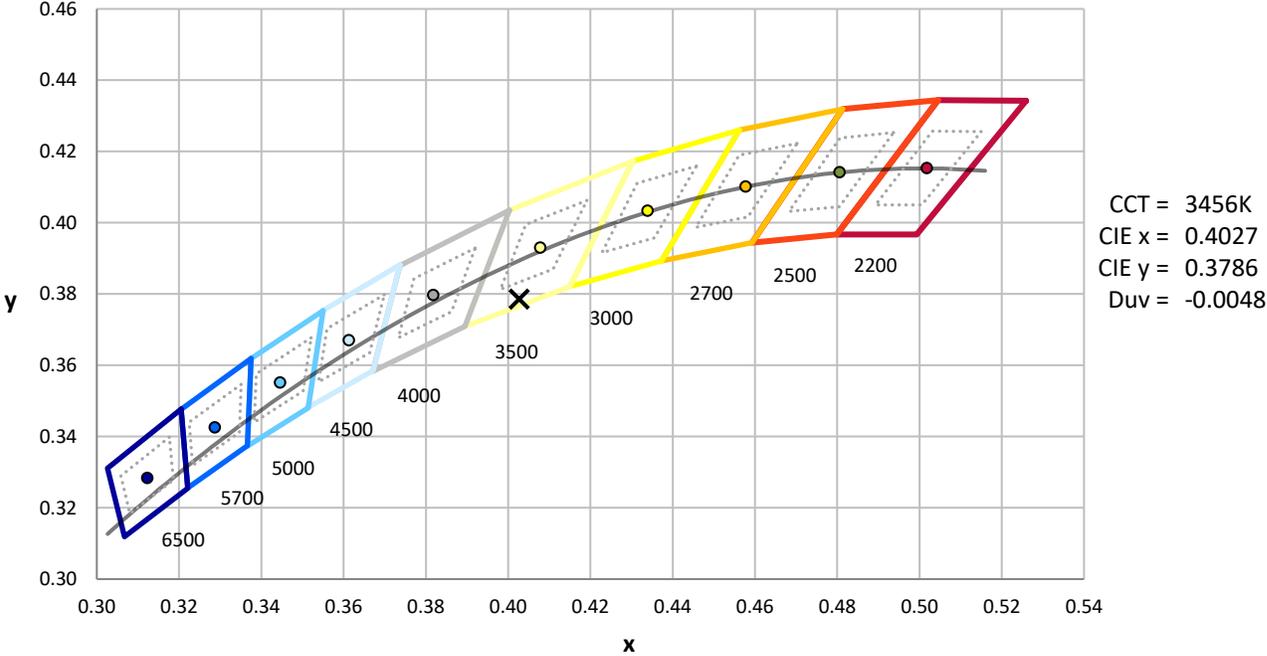
Sample Number	Condition	Description
P2509-560-LM.4	Good	EX LINEAR 4' SURFACE MOUNT DEEP, 400LM/FT 6

REPORT NUMBER: SP1-2509-560-3

CIE 1931 Chromaticity Diagram



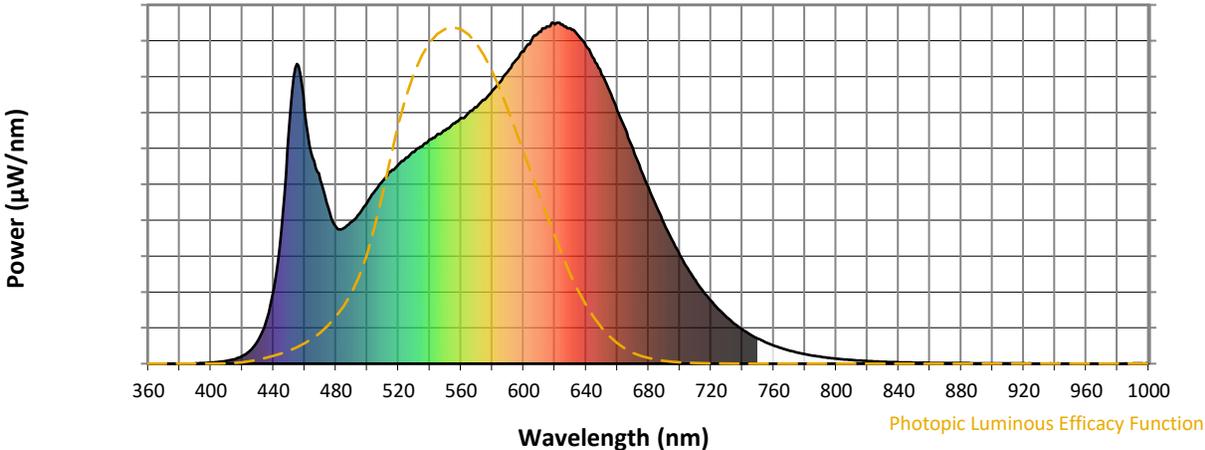
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3500K 7-step quadrangle

REPORT NUMBER: SP1-2509-560-3

Photopic Flux vs. Wavelength

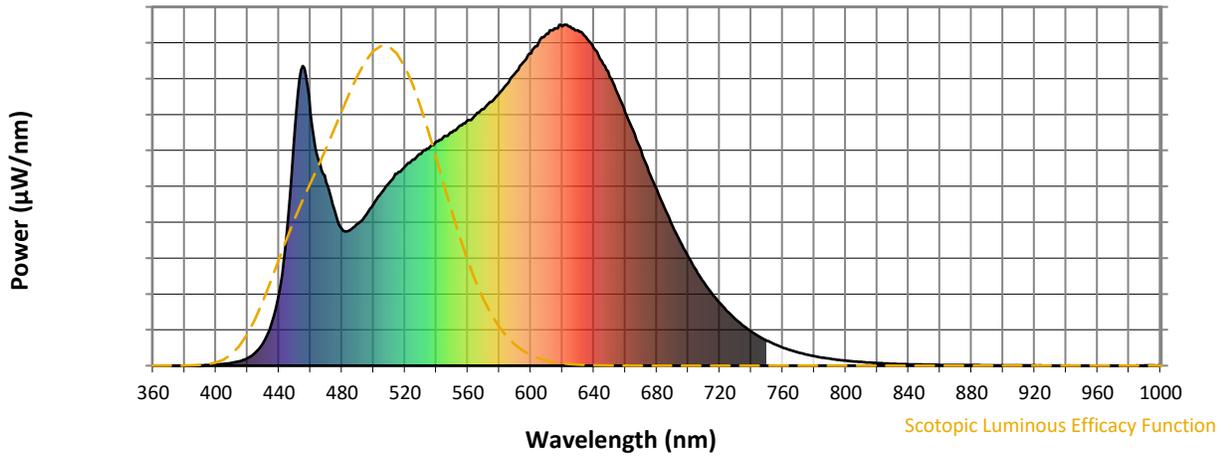


Photopic Lumens: NR

λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)
360	0	NR	490	416	NR	620	995	NR	750	73	NR	880	2	NR
365	0	NR	495	439	NR	625	995	NR	755	63	NR	885	1	NR
370	0	NR	500	473	NR	630	984	NR	760	54	NR	890	1	NR
375	0	NR	505	507	NR	635	963	NR	765	46	NR	895	1	NR
380	0	NR	510	537	NR	640	932	NR	770	39	NR	900	1	NR
385	0	NR	515	563	NR	645	895	NR	775	33	NR	905	1	NR
390	1	NR	520	584	NR	650	847	NR	780	28	NR	910	1	NR
395	2	NR	525	605	NR	655	800	NR	785	24	NR	915	1	NR
400	3	NR	530	621	NR	660	742	NR	790	20	NR	920	1	NR
405	5	NR	535	637	NR	665	689	NR	795	17	NR	925	0	NR
410	8	NR	540	658	NR	670	632	NR	800	15	NR	930	0	NR
415	13	NR	545	674	NR	675	568	NR	805	12	NR	935	0	NR
420	22	NR	550	684	NR	680	517	NR	810	11	NR	940	0	NR
425	38	NR	555	705	NR	685	461	NR	815	9	NR	945	0	NR
430	67	NR	560	721	NR	690	411	NR	820	8	NR	950	0	NR
435	120	NR	565	737	NR	695	363	NR	825	7	NR	955	0	NR
440	214	NR	570	753	NR	700	319	NR	830	6	NR	960	0	NR
445	391	NR	575	774	NR	705	280	NR	835	5	NR	965	0	NR
450	689	NR	580	800	NR	710	244	NR	840	4	NR	970	0	NR
455	879	NR	585	826	NR	715	212	NR	845	4	NR	975	0	NR
460	742	NR	590	858	NR	720	184	NR	850	3	NR	980	0	NR
465	605	NR	595	889	NR	725	159	NR	855	3	NR	985	1	NR
470	537	NR	600	916	NR	730	136	NR	860	2	NR	990	1	NR
475	459	NR	605	947	NR	735	117	NR	865	2	NR	995	1	NR
480	401	NR	610	974	NR	740	100	NR	870	2	NR	1000	0	NR
485	397	NR	615	989	NR	745	86	NR	875	2	NR			

REPORT NUMBER: SP1-2509-560-3

Scotopic Flux vs. Wavelength



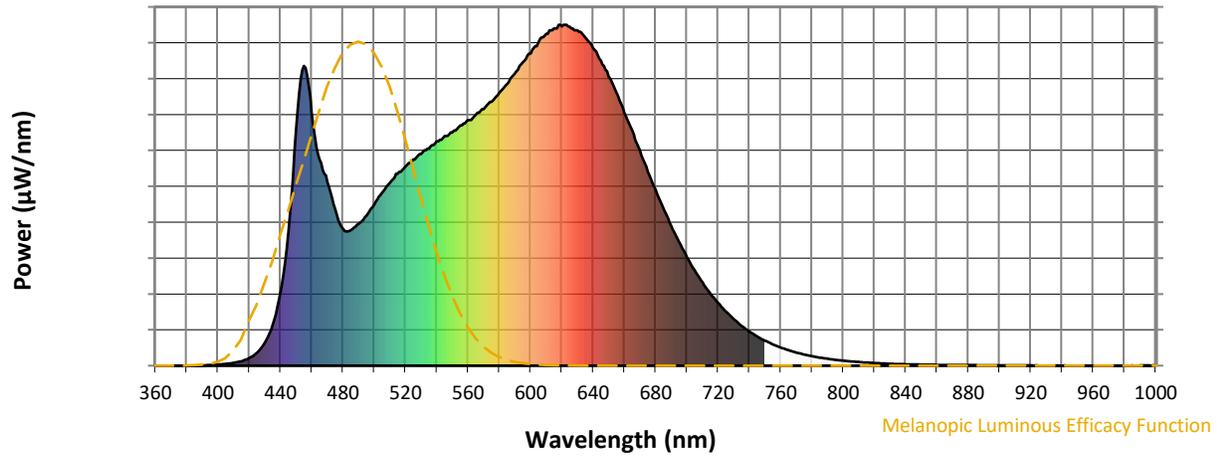
Scotopic Lumens: NR

S/P: 1.7

λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)
360	0	NR	490	416	NR	620	995	NR	750	73	NR	880	2	NR
365	0	NR	495	439	NR	625	995	NR	755	63	NR	885	1	NR
370	0	NR	500	473	NR	630	984	NR	760	54	NR	890	1	NR
375	0	NR	505	507	NR	635	963	NR	765	46	NR	895	1	NR
380	0	NR	510	537	NR	640	932	NR	770	39	NR	900	1	NR
385	0	NR	515	563	NR	645	895	NR	775	33	NR	905	1	NR
390	1	NR	520	584	NR	650	847	NR	780	28	NR	910	1	NR
395	2	NR	525	605	NR	655	800	NR	785	24	NR	915	1	NR
400	3	NR	530	621	NR	660	742	NR	790	20	NR	920	1	NR
405	5	NR	535	637	NR	665	689	NR	795	17	NR	925	0	NR
410	8	NR	540	658	NR	670	632	NR	800	15	NR	930	0	NR
415	13	NR	545	674	NR	675	568	NR	805	12	NR	935	0	NR
420	22	NR	550	684	NR	680	517	NR	810	11	NR	940	0	NR
425	38	NR	555	705	NR	685	461	NR	815	9	NR	945	0	NR
430	67	NR	560	721	NR	690	411	NR	820	8	NR	950	0	NR
435	120	NR	565	737	NR	695	363	NR	825	7	NR	955	0	NR
440	214	NR	570	753	NR	700	319	NR	830	6	NR	960	0	NR
445	391	NR	575	774	NR	705	280	NR	835	5	NR	965	0	NR
450	689	NR	580	800	NR	710	244	NR	840	4	NR	970	0	NR
455	879	NR	585	826	NR	715	212	NR	845	4	NR	975	0	NR
460	742	NR	590	858	NR	720	184	NR	850	3	NR	980	0	NR
465	605	NR	595	889	NR	725	159	NR	855	3	NR	985	1	NR
470	537	NR	600	916	NR	730	136	NR	860	2	NR	990	1	NR
475	459	NR	605	947	NR	735	117	NR	865	2	NR	995	1	NR
480	401	NR	610	974	NR	740	100	NR	870	2	NR	1000	0	NR
485	397	NR	615	989	NR	745	86	NR	875	2	NR			

REPORT NUMBER: SP1-2509-560-3

Melanopic Flux vs. Wavelength



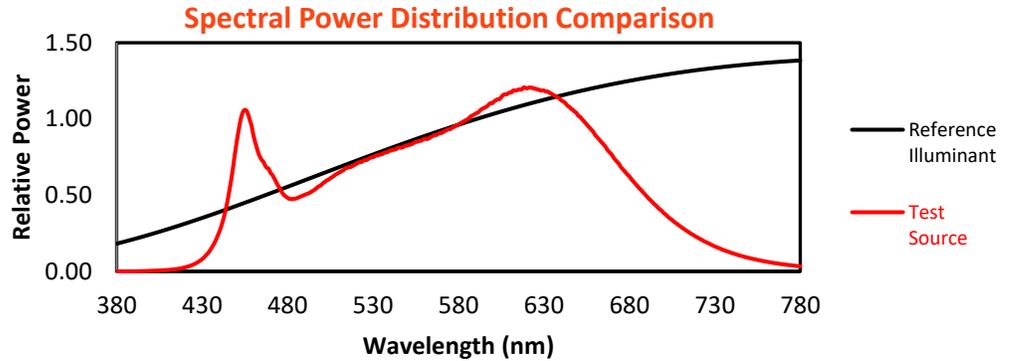
Melanopic Lumens: NR

M/P: 3.56

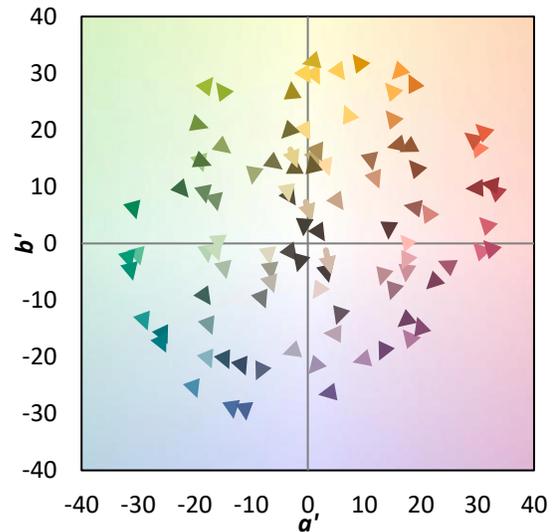
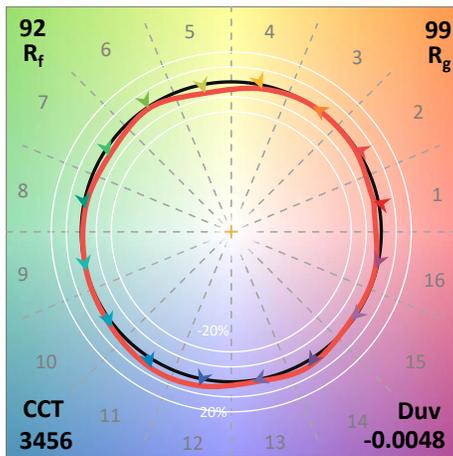
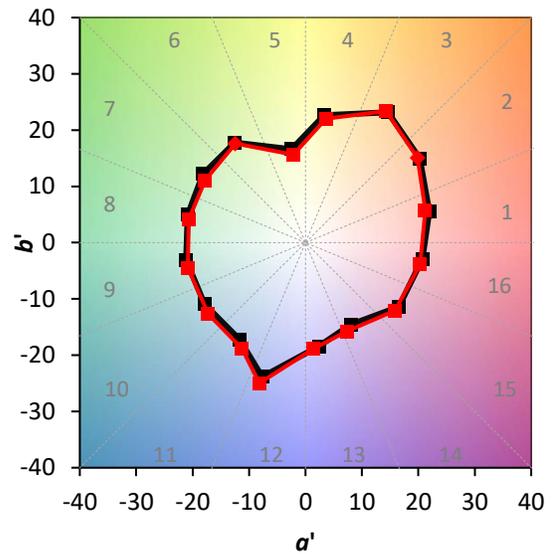
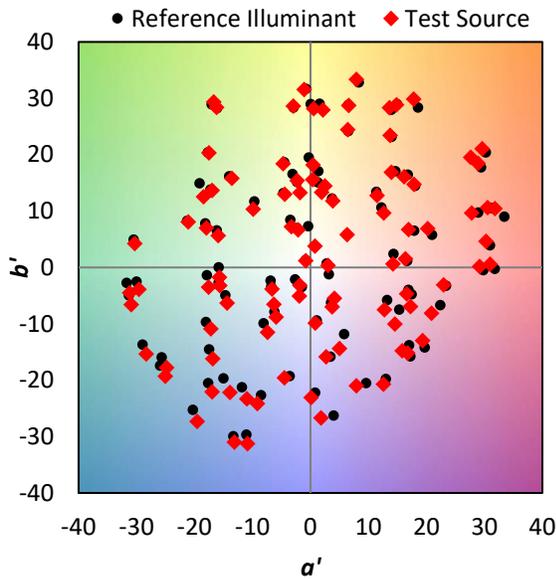
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	416	NR	620	995	NR	750	73	NR	880	2	NR
365	0	NR	495	439	NR	625	995	NR	755	63	NR	885	1	NR
370	0	NR	500	473	NR	630	984	NR	760	54	NR	890	1	NR
375	0	NR	505	507	NR	635	963	NR	765	46	NR	895	1	NR
380	0	NR	510	537	NR	640	932	NR	770	39	NR	900	1	NR
385	0	NR	515	563	NR	645	895	NR	775	33	NR	905	1	NR
390	1	NR	520	584	NR	650	847	NR	780	28	NR	910	1	NR
395	2	NR	525	605	NR	655	800	NR	785	24	NR	915	1	NR
400	3	NR	530	621	NR	660	742	NR	790	20	NR	920	1	NR
405	5	NR	535	637	NR	665	689	NR	795	17	NR	925	0	NR
410	8	NR	540	658	NR	670	632	NR	800	15	NR	930	0	NR
415	13	NR	545	674	NR	675	568	NR	805	12	NR	935	0	NR
420	22	NR	550	684	NR	680	517	NR	810	11	NR	940	0	NR
425	38	NR	555	705	NR	685	461	NR	815	9	NR	945	0	NR
430	67	NR	560	721	NR	690	411	NR	820	8	NR	950	0	NR
435	120	NR	565	737	NR	695	363	NR	825	7	NR	955	0	NR
440	214	NR	570	753	NR	700	319	NR	830	6	NR	960	0	NR
445	391	NR	575	774	NR	705	280	NR	835	5	NR	965	0	NR
450	689	NR	580	800	NR	710	244	NR	840	4	NR	970	0	NR
455	879	NR	585	826	NR	715	212	NR	845	4	NR	975	0	NR
460	742	NR	590	858	NR	720	184	NR	850	3	NR	980	0	NR
465	605	NR	595	889	NR	725	159	NR	855	3	NR	985	1	NR
470	537	NR	600	916	NR	730	136	NR	860	2	NR	990	1	NR
475	459	NR	605	947	NR	735	117	NR	865	2	NR	995	1	NR
480	401	NR	610	974	NR	740	100	NR	870	2	NR	1000	0	NR
485	397	NR	615	989	NR	745	86	NR	875	2	NR			

Summary

$R_f = 91.6$
 $R_g = 98.9$
 $CIE R_a = 95.3$
 $R_9 = 82.9$

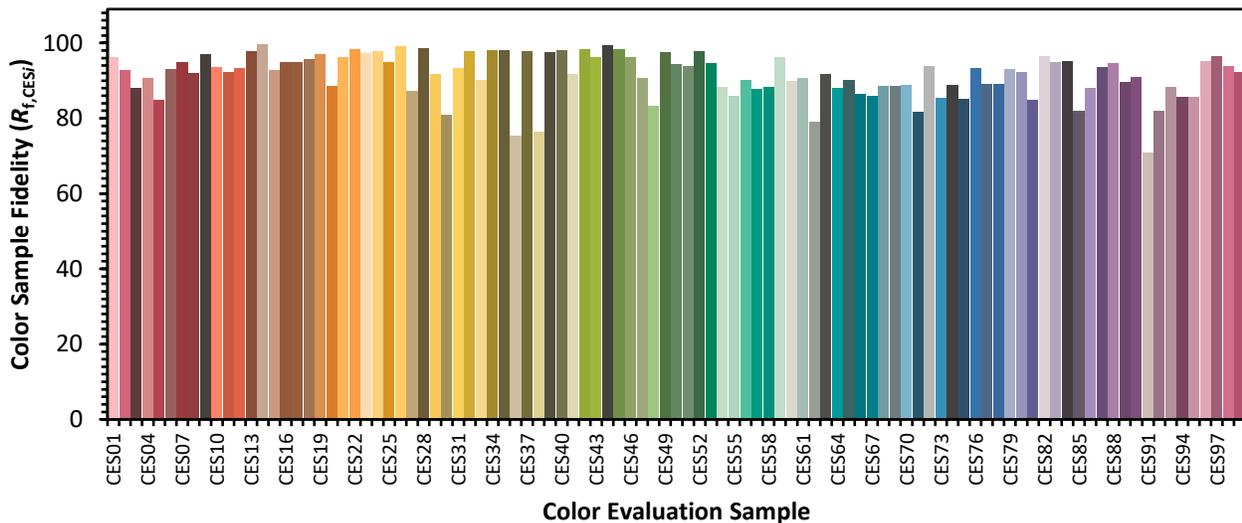


Color Vector Graphics

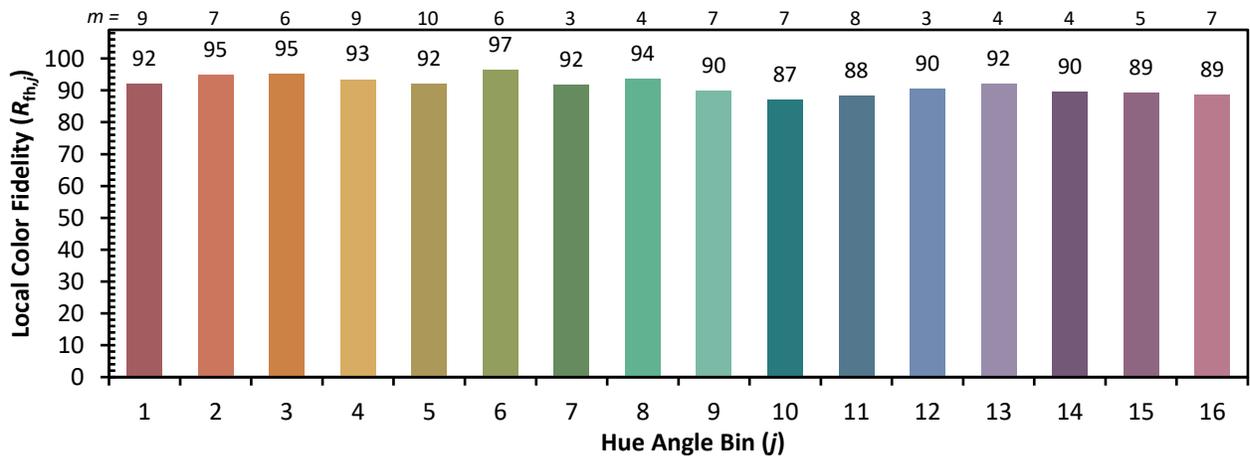
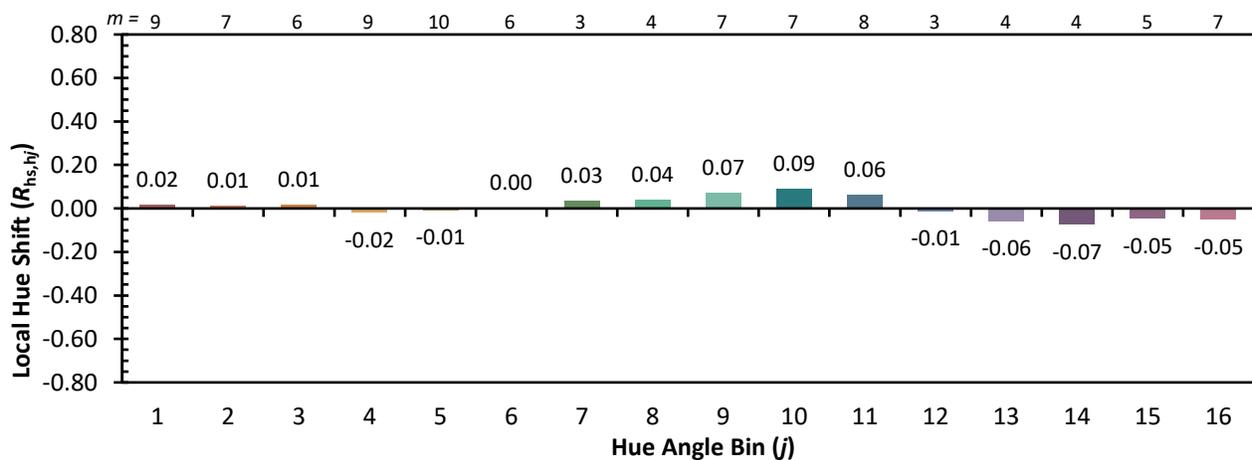
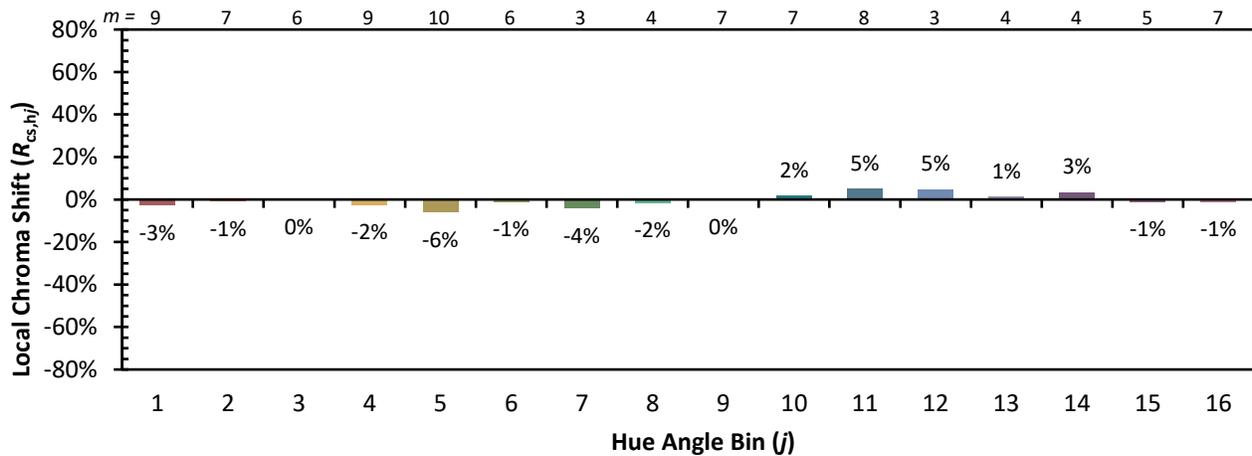


Individual Sample Fidelity Index ($R_{f,i}$)

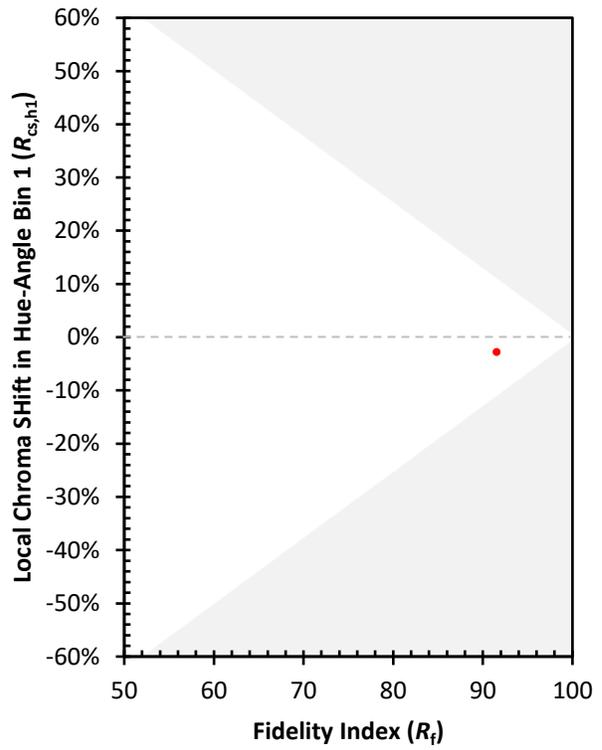
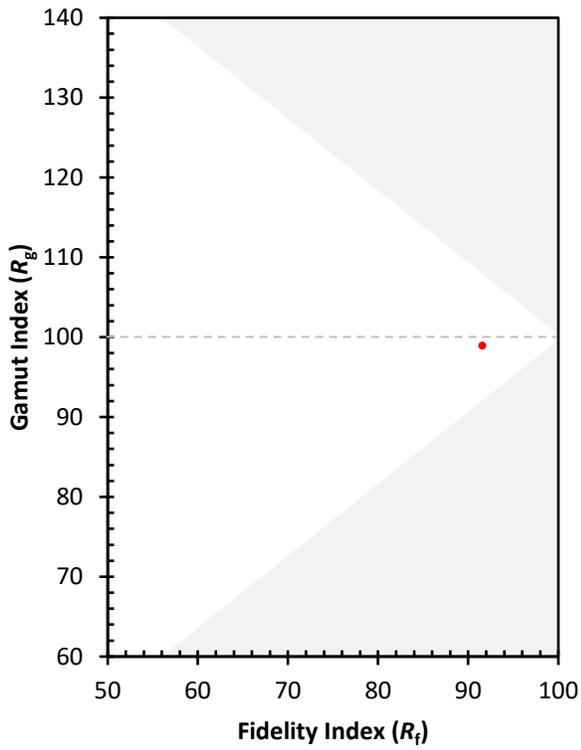
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CES02 = 63	CES27 = 87	CES52 = 98	CES77 = 89
CES03 = 32	CES28 = 99	CES53 = 95	CES78 = 89
CES04 = 70	CES29 = 92	CES54 = 88	CES79 = 93
CES05 = 50	CES30 = 81	CES55 = 86	CES80 = 92
CES06 = 51	CES31 = 93	CES56 = 90	CES81 = 85
CES07 = 43	CES32 = 98	CES57 = 88	CES82 = 97
CES08 = 42	CES33 = 90	CES58 = 88	CES83 = 95
CES09 = 29	CES34 = 98	CES59 = 96	CES84 = 95
CES10 = 75	CES35 = 98	CES60 = 90	CES85 = 82
CES11 = 58	CES36 = 75	CES61 = 91	CES86 = 88
CES12 = 64	CES37 = 98	CES62 = 79	CES87 = 93
CES13 = 44	CES38 = 76	CES63 = 92	CES88 = 95
CES14 = 74	CES39 = 98	CES64 = 88	CES89 = 90
CES15 = 72	CES40 = 98	CES65 = 90	CES90 = 91
CES16 = 48	CES41 = 92	CES66 = 86	CES91 = 71
CES17 = 50	CES42 = 98	CES67 = 86	CES92 = 82
CES18 = 56	CES43 = 96	CES68 = 89	CES93 = 88
CES19 = 71	CES44 = 99	CES69 = 89	CES94 = 86
CES20 = 67	CES45 = 98	CES70 = 89	CES95 = 86
CES21 = 86	CES46 = 96	CES71 = 82	CES96 = 95
CES22 = 78	CES47 = 91	CES72 = 94	CES97 = 96
CES23 = 91	CES48 = 83	CES73 = 85	CES98 = 94
CES24 = 90	CES49 = 98	CES74 = 89	CES99 = 92
CES25 = 71	CES50 = 94	CES75 = 85	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)