

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: P639479

Luminaire Tested: RL4LS9FSD2W1EWHDM -600LM -2700K

Issue Date: 1/25/2023

Test Information

Test Method: LM-79-2019
Report Number: P639479
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2206549A001)
Test Lab:
Issue Date: 1/25/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: RL4LS9FSD2W1EWHDM -600LM -2700K
Description: 4IN DIRECT MOUNT, SELECTABLE LUMEN AND CCT, MATTE WHITE BAFFLE
Light Source: (1) SELECTABLE LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 685.0 lumens
Efficiency: N/A
Efficacy: 91.3 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.15 / 1.2
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

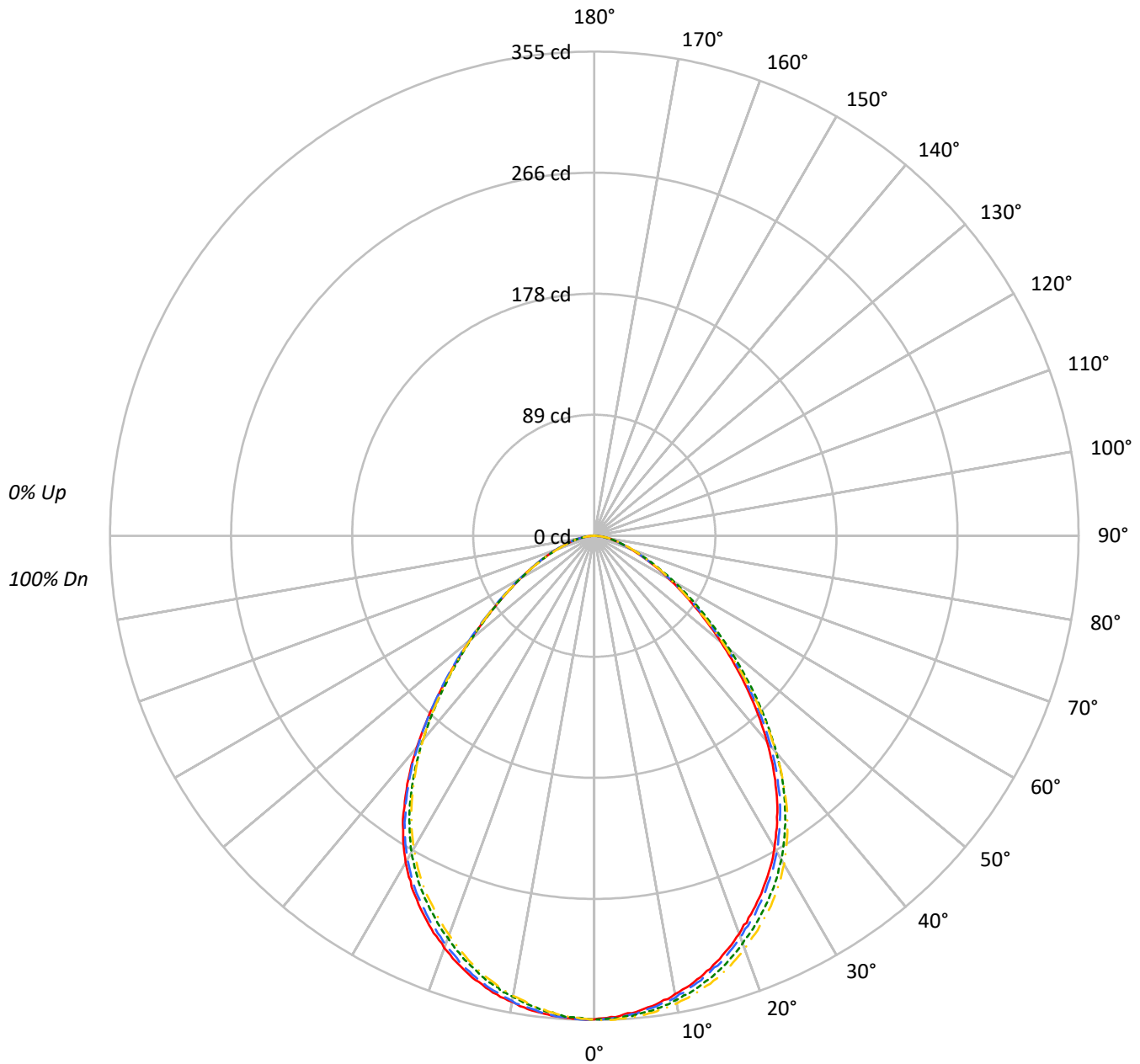
Input Watts (W): 7.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	111	107	103	100	108	105	101	99	101	98	96	97	95	93	93	91	90	88		
2	102	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77		
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67		
4	88	77	70	64	86	76	69	63	74	68	63	71	66	62	69	65	61	59		
5	81	70	62	56	80	69	62	56	67	60	55	65	59	55	63	58	54	52		
6	76	64	56	50	74	63	55	50	61	55	50	60	54	49	58	53	49	47		
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44	42		
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38		
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35		
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	43826	43826	43826	43826
5°	43485	43720	43832	43509
10°	42820	43385	43561	43071
15°	42071	42800	43146	42365
20°	40865	41825	42311	41259
25°	39493	40652	41102	40052
30°	37690	39132	39503	38233
35°	35215	36769	36603	35426
40°	31751	33510	32639	31526
45°	27651	29364	27651	27039
50°	23342	24861	22804	22535
55°	19221	20578	18660	18639
60°	15696	16784	15400	15350
65°	12663	13482	12809	12663
70°	10226	10696	10696	10516
75°	8595	8691	9025	8930
80°	7260	7402	7971	7900
85°	4963	5105	6381	6381

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 45°

Luminance: 29364 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	33.4	4.9
10°-20°	93.7	13.7
20°-30°	135.9	19.8
30°-40°	148.6	21.7
40°-50°	123.4	18.0
50°-60°	80.8	11.8
60°-70°	44.4	6.5
70°-80°	20.0	2.9
80°-90°	4.8	0.7
90°-100°	0.0	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°	263.0	38.4
0°-40°	411.6	60.1
0°-60°	615.7	89.9
0°-90°	685.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	685.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	355	355	355	355	355	
5°	350	352	353	351	350	33
15°	329	334	337	331	329	92
25°	290	298	301	294	290	133
35°	233	244	243	235	233	145
45°	158	168	158	155	158	122
55°	89	96	87	86	89	81
65°	43	46	44	43	43	44
75°	18	18	19	19	18	19
85°	4	4	4	4	4	4
90°	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°	354.6	354.6	354.6	354.6	354.6	354.6	354.6	354.6	354.6	354.6	354.6
0.5°	354.0	353.9	354.9	354.7	354.5	354.9	355.0	354.7	354.6	353.9	354.9
1°	353.8	353.3	354.7	354.9	354.5	355.2	355.3	354.9	355.0	354.0	354.9
1.5°	353.7	353.8	354.1	354.2	354.4	355.1	355.0	355.0	354.5	354.0	354.9
2°	353.0	353.0	354.3	354.0	354.2	354.4	355.1	354.7	354.4	354.0	354.5
2.5°	353.3	352.4	353.7	353.7	354.1	354.6	355.1	354.8	354.6	354.6	354.5
3°	352.6	352.3	353.3	353.5	354.4	354.9	354.5	354.9	354.0	353.6	354.1
3.5°	351.6	352.5	352.9	352.8	353.2	354.2	354.6	354.5	354.0	353.4	353.7
4°	350.8	351.7	352.7	352.6	352.8	354.0	354.4	354.3	353.7	353.3	353.7
4.5°	351.1	351.1	351.7	352.5	353.2	354.2	354.2	353.9	353.4	352.8	353.4
5°	350.5	350.3	352.1	352.4	352.4	353.0	353.7	354.2	353.3	353.0	353.0
5.5°	349.6	350.2	350.5	351.4	351.8	353.5	353.7	353.2	352.6	352.1	352.3
6°	348.7	348.7	350.1	350.7	351.4	352.3	353.2	353.0	352.4	352.0	352.2
6.5°	348.0	348.2	349.2	350.4	351.0	352.2	352.5	352.5	351.9	351.4	351.5
7°	347.5	347.4	348.7	349.9	350.6	351.6	352.3	352.1	351.4	351.0	350.5
7.5°	346.6	346.7	348.1	348.2	349.6	350.5	351.6	351.4	351.0	349.7	349.8
8°	345.5	345.5	346.9	347.6	349.2	350.3	350.3	351.2	350.5	349.4	349.2
8.5°	344.2	344.7	345.9	347.4	348.2	349.6	350.3	350.1	349.6	349.2	348.8
9°	344.1	343.9	345.7	346.4	347.8	348.7	349.6	349.8	349.1	347.7	348.0
9.5°	342.6	342.5	344.6	344.9	346.5	348.0	348.7	349.3	347.9	347.0	347.8
10°	341.2	342.1	343.9	344.6	345.7	347.1	348.2	348.2	347.1	347.2	346.5
10.5°	340.4	340.4	341.7	343.1	345.0	346.2	347.0	347.3	346.6	345.7	345.3
11°	338.9	339.1	341.5	342.1	343.3	345.7	346.3	346.9	345.5	345.1	344.6
11.5°	338.0	338.2	339.8	340.3	343.1	343.9	345.7	345.3	345.2	343.7	343.9
12°	337.0	337.4	338.5	340.2	342.0	343.5	344.2	344.6	343.7	343.0	342.3
12.5°	335.6	336.3	337.4	338.4	340.7	342.2	343.7	343.6	343.2	341.6	341.6
13°	334.0	334.4	336.1	337.5	339.5	341.3	342.3	342.6	341.7	340.9	340.5
13.5°	333.0	333.0	335.2	336.6	338.3	339.8	341.1	341.1	340.8	340.0	339.3
14°	331.4	331.8	333.0	335.3	336.8	338.6	340.0	340.4	339.1	337.8	337.7
14.5°	329.6	330.4	332.2	334.1	335.9	337.7	339.3	338.8	337.9	336.8	336.8
15°	328.8	328.8	330.4	332.5	334.5	336.4	337.7	338.1	337.2	335.9	335.2
15.5°	326.5	327.4	328.5	331.1	332.9	335.0	336.8	336.3	335.9	334.9	334.0
16°	325.1	325.2	328.0	328.4	331.6	333.7	335.4	335.3	334.3	333.5	332.2
16.5°	323.7	324.0	326.3	327.4	330.1	332.4	333.7	334.3	333.0	331.6	331.0
17°	321.6	322.4	324.0	325.6	328.6	330.4	332.2	332.3	331.3	329.6	329.1
17.5°	319.9	320.5	322.6	323.5	326.8	329.4	330.9	330.5	329.7	328.5	328.1
18°	318.2	319.2	320.8	322.4	325.0	327.3	329.1	329.5	328.4	326.7	325.6
18.5°	316.4	316.4	318.9	319.9	323.5	325.8	327.4	327.7	326.8	325.5	324.0
19°	314.4	315.1	317.1	318.7	321.7	324.2	325.7	325.7	324.7	323.3	322.4
19.5°	312.3	313.0	315.1	316.8	320.1	322.0	324.2	324.4	323.2	322.0	320.8
20°	310.7	311.3	313.2	314.8	318.0	320.5	322.2	322.3	321.7	320.3	318.9
20.5°	308.4	309.6	311.2	312.6	315.8	318.6	320.3	320.3	319.1	318.1	317.0
21°	305.5	306.6	308.7	310.7	314.3	316.7	318.5	318.6	317.5	315.7	314.7

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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°	300.4	301.2	303.2	305.2	308.6	311.0	313.0	313.4	311.9	310.7	309.3
23°	298.1	299.0	301.6	302.7	306.6	308.9	310.5	311.2	310.0	308.3	307.5
23.5°	296.2	297.0	298.9	301.2	304.5	307.3	309.1	308.9	307.9	306.8	305.2
24°	293.7	294.5	296.7	298.3	302.4	305.5	306.7	307.8	305.7	304.3	303.2
24.5°	291.6	292.4	294.8	296.7	300.5	303.1	304.5	305.0	303.8	302.5	300.7
25°	289.6	290.4	292.4	295.0	298.1	301.2	302.8	302.7	301.4	300.7	299.5
25.5°	286.9	287.9	290.3	291.9	296.4	299.0	300.7	300.4	299.4	297.9	296.5
26°	284.5	285.3	287.8	290.2	293.5	296.5	298.3	298.5	296.8	295.4	294.6
26.5°	282.3	283.5	285.1	287.9	291.5	295.1	296.1	295.9	294.6	293.6	292.5
27°	279.9	280.8	283.0	285.2	289.5	292.1	293.3	293.3	292.4	290.6	289.7
27.5°	277.3	278.4	280.5	283.0	286.8	289.7	291.1	291.1	290.3	288.6	287.4
28°	275.0	275.7	278.3	280.8	284.6	287.2	288.5	288.8	286.7	285.9	284.8
28.5°	272.5	273.2	275.5	277.8	282.1	284.7	286.3	286.0	284.8	283.4	281.9
29°	269.9	270.3	272.8	275.0	279.1	282.2	283.4	282.8	281.9	280.9	279.4
29.5°	266.9	268.0	270.2	272.5	276.6	279.4	280.5	280.4	279.2	277.3	276.7
30°	264.1	264.4	267.6	269.9	274.2	276.6	278.3	277.7	276.8	275.3	274.1
30.5°	261.1	262.3	264.8	267.2	271.4	274.1	274.8	274.9	273.5	272.3	270.9
31°	258.4	259.8	261.8	264.1	268.6	271.1	272.2	272.1	270.6	269.3	267.7
31.5°	254.9	256.8	258.6	261.2	265.6	268.3	269.2	268.7	267.3	266.2	265.1
32°	252.6	253.5	255.9	258.2	262.5	264.8	266.1	265.2	264.4	263.2	261.7
32.5°	249.3	250.9	252.9	255.4	259.9	262.4	263.1	261.9	260.8	259.6	258.4
33°	245.9	247.4	249.7	252.0	256.4	258.7	259.9	259.0	257.1	256.4	254.9
33.5°	243.2	244.2	246.9	249.4	253.7	255.8	256.3	255.3	254.2	253.0	252.1
34°	240.0	241.0	243.7	246.1	250.3	252.8	253.1	251.7	250.8	249.2	247.9
34.5°	236.8	237.8	240.3	242.6	247.1	249.4	249.7	248.2	246.9	246.2	243.9
35°	233.4	234.1	237.0	239.1	243.7	246.2	246.3	244.4	242.6	242.3	241.4
35.5°	229.8	231.0	234.1	236.2	240.6	242.5	242.6	241.0	239.2	238.5	237.3
36°	226.1	227.6	230.1	233.0	237.1	239.1	238.7	237.1	235.5	234.8	233.8
36.5°	223.0	223.8	226.3	229.3	233.6	235.3	235.1	233.3	231.3	230.6	229.5
37°	219.2	220.5	223.5	225.6	230.2	231.8	231.4	229.2	227.9	227.2	225.8
37.5°	215.6	217.2	219.7	221.6	226.6	228.2	227.5	225.3	223.4	223.0	222.1
38°	212.1	213.5	216.0	217.9	223.1	224.1	223.6	221.2	219.1	219.0	218.0
38.5°	208.1	209.9	212.6	214.6	219.0	220.6	219.6	216.9	215.4	215.0	214.2
39°	204.6	205.9	208.6	211.3	215.5	216.3	215.5	212.6	211.1	210.5	209.8
39.5°	200.8	202.7	204.7	207.4	211.3	212.7	211.5	208.5	206.4	206.6	205.5
40°	196.8	198.8	201.3	203.5	207.7	208.8	207.1	204.1	202.3	202.1	201.2
40.5°	193.2	194.5	197.4	199.5	203.8	204.6	203.3	199.8	197.7	198.0	197.3
41°	189.3	191.1	193.6	195.9	199.9	200.7	198.9	195.4	193.4	193.7	193.0
41.5°	185.4	186.8	189.7	191.8	195.8	196.7	194.8	190.8	189.2	189.3	188.4
42°	181.7	183.2	185.8	187.6	191.9	192.5	190.2	186.3	184.2	184.5	184.0
42.5°	177.6	179.3	181.7	184.2	188.0	188.5	186.1	182.2	180.3	180.7	180.1
43°	173.9	175.5	178.3	180.1	184.0	184.2	181.8	177.6	176.0	176.2	175.9
43.5°	169.9	171.6	173.9	176.2	179.9	180.3	177.6	173.2	171.2	171.9	171.4

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	158.2	160.1	162.1	164.5	168.0	167.7	164.6	160.0	158.2	159.0	159.0
45.5°	154.5	156.3	158.4	160.4	163.8	163.4	160.5	155.7	154.2	154.8	154.8
46°	150.5	152.2	154.7	156.6	159.9	159.6	155.9	151.5	149.7	150.8	150.9
46.5°	147.0	148.6	150.8	152.7	155.9	155.4	152.1	147.3	145.6	146.9	146.5
47°	143.0	144.9	147.0	148.9	151.8	151.5	147.6	143.1	141.7	142.6	142.8
47.5°	139.3	140.9	143.1	145.0	148.1	147.3	143.6	139.0	137.6	138.5	138.8
48°	135.7	137.4	139.4	141.1	144.2	143.3	139.7	135.1	133.6	134.6	134.8
48.5°	131.8	133.5	135.9	137.4	140.4	139.9	135.7	131.2	129.6	130.8	131.2
49°	128.4	130.0	132.0	134.0	136.9	135.5	131.8	127.4	125.9	126.9	127.6
49.5°	124.7	126.3	128.4	130.0	132.9	132.0	128.0	123.4	122.0	123.2	123.8
50°	121.4	122.9	124.7	126.4	129.3	128.2	124.2	120.0	118.6	119.5	120.0
50.5°	117.8	119.2	121.4	122.7	125.5	124.6	120.4	116.2	114.8	116.1	116.8
51°	114.5	115.9	117.7	119.2	122.1	121.0	117.0	112.6	111.3	112.6	113.1
51.5°	111.1	112.6	114.2	115.8	118.6	117.5	113.5	109.2	107.9	109.0	109.7
52°	107.8	109.1	110.8	112.4	115.1	113.9	109.9	106.0	104.7	105.8	106.5
52.5°	104.5	105.8	107.6	109.0	111.6	110.4	106.5	102.6	101.6	102.5	103.3
53°	101.1	102.6	104.4	105.6	108.3	107.2	103.2	99.5	98.3	99.2	100.0
53.5°	98.2	99.6	101.2	102.4	104.9	103.9	100.1	96.4	95.3	96.1	96.9
54°	95.0	96.4	97.8	99.1	101.8	100.5	96.7	93.4	92.3	93.1	93.9
54.5°	92.2	93.4	94.8	96.0	98.7	97.4	93.8	90.4	89.4	90.0	91.0
55°	89.2	90.5	91.9	93.3	95.5	94.6	90.8	87.7	86.6	87.3	88.1
55.5°	86.3	87.7	88.8	90.1	92.5	91.3	87.9	84.8	83.8	84.5	85.3
56°	83.6	84.7	86.1	87.3	89.5	88.4	85.1	82.2	81.2	81.8	82.7
56.5°	80.9	82.1	83.3	84.3	86.5	85.4	82.4	79.5	78.6	79.2	79.9
57°	78.2	79.4	80.4	81.5	83.7	82.7	79.7	77.1	75.9	76.5	77.3
57.5°	75.8	76.6	77.9	78.8	80.9	79.9	77.1	74.6	73.6	74.2	74.8
58°	73.1	74.2	75.3	76.2	78.1	77.3	74.7	72.1	71.0	71.7	72.4
58.5°	70.8	71.5	72.6	73.5	75.4	74.7	72.2	70.0	69.0	69.3	70.1
59°	68.3	69.1	70.0	70.9	72.9	72.0	69.6	67.6	66.7	67.0	67.7
59.5°	65.7	66.7	67.7	68.5	70.4	69.6	67.3	65.3	64.3	64.8	65.5
60°	63.5	64.3	65.3	66.0	67.9	67.2	65.0	63.1	62.3	62.6	63.2
60.5°	61.3	62.1	63.0	63.7	65.5	64.7	62.8	61.1	60.3	60.5	61.1
61°	58.9	59.7	60.5	61.5	63.2	62.5	60.7	58.9	58.2	58.4	59.1
61.5°	56.9	57.6	58.3	59.1	61.0	60.2	58.5	57.1	56.4	56.4	57.2
62°	54.9	55.4	56.3	57.0	58.6	58.1	56.5	55.1	54.4	54.5	55.2
62.5°	52.8	53.3	54.1	54.8	56.5	55.9	54.6	53.2	52.5	52.5	53.4
63°	50.7	51.3	52.0	52.7	54.3	53.9	52.5	51.3	50.6	50.7	51.4
63.5°	48.8	49.3	50.0	50.7	52.3	51.8	50.5	49.4	48.9	49.0	49.5
64°	47.0	47.4	48.0	48.7	50.2	49.7	48.7	47.7	47.2	47.2	47.7
64.5°	45.1	45.6	46.2	46.7	48.1	47.8	46.8	46.0	45.5	45.6	46.0
65°	43.3	43.8	44.4	44.7	46.1	45.9	45.1	44.3	43.8	43.9	44.3
65.5°	41.6	42.0	42.5	43.0	44.3	44.1	43.4	42.7	42.2	42.2	42.7
66°	39.9	40.2	40.8	41.2	42.4	42.2	41.7	41.1	40.7	40.7	41.1

TEST NUMBER: P639479

CATALOG NUMBER: RL4LS9FSD2W1EWHDM -600LM -2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	35.2	35.4	35.8	36.2	37.3	37.2	36.9	36.5	36.3	36.3	36.5
68°	33.7	34.0	34.2	34.7	35.6	35.6	35.5	35.1	34.8	34.9	35.1
68.5°	32.3	32.5	32.8	33.1	34.1	34.1	34.0	33.7	33.5	33.5	33.7
69°	31.0	31.1	31.4	31.6	32.6	32.6	32.6	32.4	32.2	32.2	32.4
69.5°	29.6	29.8	30.0	30.2	31.1	31.2	31.2	31.0	30.8	30.9	31.0
70°	28.3	28.5	28.6	28.7	29.6	29.8	29.8	29.8	29.6	29.7	29.8
70.5°	27.1	27.2	27.4	27.6	28.3	28.5	28.7	28.5	28.4	28.5	28.6
71°	25.9	26.0	26.1	26.2	27.0	27.2	27.4	27.3	27.1	27.3	27.4
71.5°	24.8	24.8	24.9	25.0	25.7	25.9	26.2	26.2	26.0	26.1	26.2
72°	24.1	23.9	23.9	23.7	24.6	24.7	25.0	25.0	25.0	25.0	25.1
72.5°	23.0	22.8	22.8	22.7	23.4	23.6	23.9	23.9	23.9	23.9	24.0
73°	21.9	21.8	21.8	21.7	22.2	22.5	22.8	22.8	22.8	22.9	23.0
73.5°	20.8	20.7	20.7	20.7	21.2	21.4	21.7	21.8	21.8	21.9	21.9
74°	19.8	19.7	19.7	19.6	20.2	20.4	20.7	20.8	20.8	20.9	20.9
74.5°	18.8	18.8	18.7	18.6	19.2	19.4	19.7	19.8	19.8	19.9	20.0
75°	18.0	17.9	17.8	17.7	18.2	18.5	18.8	18.9	18.9	19.0	19.1
75.5°	17.1	17.0	17.0	17.0	17.4	17.6	17.9	18.0	18.0	18.1	18.2
76°	16.3	16.2	16.1	16.1	16.6	16.8	17.0	17.1	17.1	17.3	17.3
76.5°	15.5	15.4	15.4	15.4	15.9	15.9	16.2	16.3	16.4	16.4	16.6
77°	14.8	14.7	14.6	14.6	15.0	15.2	15.4	15.5	15.6	15.7	15.8
77.5°	14.1	13.9	13.8	13.8	14.3	14.5	14.8	14.8	14.9	15.0	15.1
78°	13.2	13.2	13.1	13.1	13.5	13.7	14.0	14.1	14.1	14.3	14.4
78.5°	12.5	12.4	12.3	12.2	12.7	12.9	13.2	13.3	13.4	13.6	13.6
79°	11.7	11.6	11.5	11.5	12.0	12.2	12.5	12.5	12.7	12.8	12.9
79.5°	10.9	10.9	10.8	10.7	11.2	11.4	11.7	11.8	11.9	12.1	12.1
80°	10.2	10.1	10.0	9.9	10.4	10.6	10.9	11.1	11.2	11.4	11.5
80.5°	9.5	9.4	9.3	9.3	9.7	9.9	10.2	10.4	10.5	10.6	10.8
81°	8.8	8.7	8.6	8.5	9.0	9.2	9.5	9.7	9.7	9.9	10.0
81.5°	8.1	7.9	7.9	7.7	8.2	8.5	8.8	9.0	9.0	9.3	9.3
82°	7.4	7.3	7.2	7.1	7.5	7.7	8.1	8.2	8.3	8.6	8.6
82.5°	6.7	6.6	6.5	6.4	6.9	7.1	7.4	7.5	7.7	7.9	7.9
83°	6.0	5.9	5.8	5.8	6.2	6.4	6.7	6.9	7.0	7.2	7.3
83.5°	5.4	5.3	5.1	5.1	5.6	5.8	6.1	6.3	6.4	6.6	6.7
84°	4.8	4.7	4.5	4.5	4.9	5.1	5.4	5.6	5.8	6.0	6.1
84.5°	4.2	4.0	3.9	3.8	4.2	4.5	4.8	5.0	5.1	5.4	5.4
85°	3.5	3.4	3.3	3.3	3.6	3.9	4.2	4.4	4.5	4.7	4.8
85.5°	3.0	2.9	2.7	2.7	3.1	3.3	3.5	3.8	3.9	4.0	4.2
86°	2.4	2.3	2.3	2.2	2.5	2.7	3.0	3.1	3.3	3.4	3.5
86.5°	1.9	1.8	1.8	1.7	1.9	2.2	2.4	2.6	2.8	2.9	2.9
87°	1.5	1.4	1.3	1.2	1.4	1.6	1.9	2.1	2.2	2.4	2.4
87.5°	1.0	0.9	0.8	0.7	1.0	1.1	1.3	1.5	1.7	1.8	1.9
88°	0.5	0.4	0.3	0.3	0.6	0.7	1.0	1.1	1.2	1.3	1.4
88.5°	0.2	0.3	0.2	0.1	0.2	0.3	0.6	0.7	0.8	0.9	1.0



TEST NUMBER: P639479
CATALOG NUMBER: RL4LS9FSD2W1EWHDM -600LM -2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1

TEST NUMBER: P639479

CATALOG NUMBER: RL4LS9FSD2W1EWHDM -600LM -2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	354.6	354.6	354.6	354.6	354.6	354.6
0.5°	354.2	354.6	354.8	354.7	354.4	354.0
1°	354.5	354.2	354.0	354.2	354.5	353.8
1.5°	355.3	353.7	354.4	354.4	354.3	353.7
2°	353.9	353.7	354.0	353.6	353.5	353.0
2.5°	354.7	353.4	353.4	353.5	353.6	353.3
3°	354.0	353.5	353.1	353.0	353.2	352.6
3.5°	353.2	353.3	352.8	352.9	352.4	351.6
4°	353.2	352.2	352.4	352.3	351.8	350.8
4.5°	353.0	352.2	351.9	351.8	351.0	351.1
5°	352.3	350.7	351.1	351.0	350.7	350.5
5.5°	351.6	350.8	350.2	350.4	349.9	349.6
6°	351.4	350.3	350.0	349.4	349.3	348.7
6.5°	350.8	349.5	349.4	348.9	349.0	348.0
7°	350.2	348.5	348.0	348.5	347.5	347.5
7.5°	349.2	347.9	347.6	347.2	347.1	346.6
8°	348.5	347.1	346.6	346.5	346.0	345.5
8.5°	348.1	346.5	345.7	345.0	344.8	344.2
9°	346.4	345.2	344.8	344.2	344.3	344.1
9.5°	345.4	344.5	343.7	343.2	342.9	342.6
10°	345.3	343.2	343.0	342.5	341.6	341.2
10.5°	344.7	342.5	341.7	341.1	340.1	340.4
11°	344.1	341.2	340.6	340.2	339.5	338.9
11.5°	342.1	341.4	339.5	339.1	338.4	338.0
12°	341.5	338.7	338.4	337.8	336.9	337.0
12.5°	339.5	338.2	336.8	336.3	335.7	335.6
13°	339.1	336.8	335.2	335.0	334.9	334.0
13.5°	338.2	336.1	334.3	333.8	332.9	333.0
14°	336.5	334.1	333.3	332.5	331.7	331.4
14.5°	334.9	332.9	331.6	331.2	330.5	329.6
15°	334.2	331.1	329.7	329.4	328.6	328.8
15.5°	332.2	329.5	328.6	327.3	326.7	326.5
16°	330.8	328.1	327.0	326.2	325.6	325.1
16.5°	329.2	326.4	325.2	324.6	323.8	323.7
17°	327.9	325.1	323.8	322.6	321.9	321.6
17.5°	326.0	323.3	322.3	320.9	320.3	319.9
18°	324.4	321.4	320.1	319.2	318.7	318.2
18.5°	323.0	319.9	318.5	317.3	316.4	316.4
19°	321.2	317.8	316.5	315.4	314.4	314.4
19.5°	318.7	316.0	314.6	313.4	312.8	312.3
20°	317.4	313.7	313.0	311.2	310.7	310.7
20.5°	315.1	312.3	310.7	309.5	308.9	308.4
21°	313.4	310.5	308.8	307.5	306.7	305.5



TEST NUMBER: P639479

CATALOG NUMBER: RL4LS9FSD2W1EWHDM -600LM -2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	308.2	304.1	302.5	301.6	300.4	300.4
23°	305.4	301.8	300.3	299.1	298.5	298.1
23.5°	303.2	300.2	298.3	296.6	296.2	296.2
24°	300.8	297.9	296.5	294.6	294.0	293.7
24.5°	299.4	295.6	294.3	292.4	291.7	291.6
25°	296.5	293.7	291.7	290.6	289.9	289.6
25.5°	294.1	291.1	289.7	287.7	287.2	286.9
26°	292.7	288.8	287.4	285.7	284.6	284.5
26.5°	289.7	286.7	285.0	283.0	282.6	282.3
27°	287.5	284.2	282.4	280.9	279.9	279.9
27.5°	285.3	281.3	279.5	278.2	277.5	277.3
28°	282.5	278.7	276.8	275.9	275.1	275.0
28.5°	280.1	276.2	274.4	273.0	272.2	272.5
29°	276.8	273.3	271.4	270.3	269.8	269.9
29.5°	274.4	271.0	269.0	267.3	266.8	266.9
30°	271.7	267.9	266.3	264.7	264.5	264.1
30.5°	268.8	265.1	263.2	261.8	261.3	261.1
31°	265.9	261.6	260.1	258.8	258.1	258.4
31.5°	263.2	258.8	257.3	255.8	255.2	254.9
32°	259.3	255.6	254.0	252.7	252.1	252.6
32.5°	255.9	252.1	250.7	249.4	249.3	249.3
33°	252.9	249.0	247.6	246.1	245.9	245.9
33.5°	249.1	245.5	244.1	243.1	242.8	243.2
34°	246.5	242.1	240.5	239.6	239.6	240.0
34.5°	242.3	238.7	237.0	236.2	235.9	236.8
35°	238.8	234.8	233.4	232.7	232.6	233.4
35.5°	235.2	231.2	229.8	228.8	229.3	229.8
36°	231.3	227.2	226.2	225.6	225.8	226.1
36.5°	227.9	223.7	222.4	222.0	222.1	223.0
37°	223.6	219.7	218.6	218.1	218.3	219.2
37.5°	220.0	215.9	214.8	214.7	214.9	215.6
38°	216.0	211.8	210.9	210.8	211.1	212.1
38.5°	211.9	207.6	207.1	206.8	207.3	208.1
39°	207.6	203.9	202.8	203.0	203.9	204.6
39.5°	203.7	199.7	199.3	199.3	199.8	200.8
40°	199.8	195.4	194.8	195.2	195.9	196.8
40.5°	195.2	191.5	191.1	191.4	192.5	193.2
41°	191.2	187.2	187.0	187.3	188.1	189.3
41.5°	187.0	183.2	182.9	183.4	184.2	185.4
42°	182.6	179.4	179.0	179.7	180.4	181.7
42.5°	178.3	174.9	174.9	175.7	176.6	177.6
43°	174.0	170.8	170.9	171.4	172.5	173.9
43.5°	169.8	166.8	166.9	167.5	168.7	169.9



TEST NUMBER: P639479

CATALOG NUMBER: RL4LS9FSD2W1EWHDM -600LM -2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	157.4	154.7	155.0	155.5	156.9	158.2
45.5°	153.1	150.6	151.0	152.0	153.1	154.5
46°	149.5	146.9	147.3	147.9	149.2	150.5
46.5°	145.6	142.8	143.6	144.2	145.4	147.0
47°	141.5	139.1	139.6	140.6	141.6	143.0
47.5°	137.6	135.3	135.7	136.6	138.0	139.3
48°	133.9	131.6	132.3	132.8	134.2	135.7
48.5°	130.3	127.9	128.5	129.3	130.5	131.8
49°	126.6	124.4	125.1	125.8	126.9	128.4
49.5°	123.0	120.9	121.3	122.1	123.4	124.7
50°	119.3	117.2	117.9	118.8	120.0	121.4
50.5°	115.9	114.0	114.5	115.1	116.3	117.8
51°	112.6	110.6	111.2	112.0	113.1	114.5
51.5°	109.2	107.5	108.0	108.6	109.8	111.1
52°	106.0	104.2	104.6	105.3	106.5	107.8
52.5°	102.6	101.0	101.6	102.2	103.0	104.5
53°	99.6	98.0	98.5	99.0	100.1	101.1
53.5°	96.6	95.0	95.4	96.1	96.9	98.2
54°	93.7	91.8	92.5	93.0	94.0	95.0
54.5°	90.9	89.2	89.6	90.0	90.9	92.2
55°	87.8	86.5	86.7	87.3	88.0	89.2
55.5°	85.2	83.8	84.1	84.4	85.3	86.3
56°	82.7	81.1	81.3	81.8	82.6	83.6
56.5°	79.8	78.5	78.8	79.0	79.7	80.9
57°	77.4	76.2	76.2	76.5	77.2	78.2
57.5°	75.1	73.5	73.7	74.0	74.5	75.8
58°	72.6	71.2	71.2	71.6	72.2	73.1
58.5°	70.3	68.9	68.9	69.1	69.6	70.8
59°	67.9	66.6	66.7	66.7	67.3	68.3
59.5°	65.6	64.4	64.4	64.4	64.9	65.7
60°	63.5	62.1	62.3	62.3	62.8	63.5
60.5°	61.4	60.1	59.9	60.0	60.6	61.3
61°	59.4	58.0	58.0	57.9	58.3	58.9
61.5°	57.4	56.1	55.9	55.9	56.2	56.9
62°	55.5	54.1	53.8	53.9	54.2	54.9
62.5°	53.5	52.0	52.0	51.9	52.3	52.8
63°	51.6	50.3	50.1	50.0	50.3	50.7
63.5°	49.6	48.5	48.3	48.1	48.4	48.8
64°	47.9	46.7	46.5	46.4	46.5	47.0
64.5°	46.1	45.0	44.8	44.6	44.8	45.1
65°	44.4	43.3	43.1	43.0	43.0	43.3
65.5°	42.8	41.7	41.4	41.3	41.3	41.6
66°	41.3	40.1	39.9	39.6	39.7	39.9



TEST NUMBER: P639479

CATALOG NUMBER: RL4LS9FSD2W1EWHDM -600LM -2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	36.7	35.6	35.3	35.1	35.0	35.2
68°	35.1	34.3	34.0	33.7	33.5	33.7
68.5°	33.7	32.8	32.6	32.3	32.1	32.3
69°	32.5	31.6	31.2	31.0	30.9	31.0
69.5°	31.2	30.3	29.9	29.6	29.5	29.6
70°	29.8	29.1	28.7	28.5	28.2	28.3
70.5°	28.7	27.8	27.6	27.2	27.1	27.1
71°	27.5	26.7	26.4	26.1	25.9	25.9
71.5°	26.2	25.5	25.3	25.0	24.8	24.8
72°	25.2	24.5	24.2	23.7	24.0	24.1
72.5°	24.1	23.5	23.2	22.8	22.9	23.0
73°	23.0	22.5	22.2	21.8	21.8	21.9
73.5°	22.0	21.6	21.2	20.9	20.8	20.8
74°	21.0	20.5	20.2	19.9	19.8	19.8
74.5°	20.1	19.6	19.3	19.0	18.9	18.8
75°	19.2	18.7	18.4	18.2	18.0	18.0
75.5°	18.3	17.8	17.6	17.3	17.1	17.1
76°	17.5	17.0	16.8	16.5	16.4	16.3
76.5°	16.6	16.2	16.0	15.8	15.7	15.5
77°	15.9	15.4	15.2	15.0	14.9	14.8
77.5°	15.2	14.8	14.5	14.3	14.2	14.1
78°	14.4	14.0	13.8	13.6	13.4	13.2
78.5°	13.7	13.3	13.1	12.8	12.6	12.5
79°	12.9	12.5	12.3	12.0	11.8	11.7
79.5°	12.2	11.8	11.6	11.3	11.1	10.9
80°	11.5	11.1	10.9	10.6	10.4	10.2
80.5°	10.8	10.4	10.2	9.9	9.7	9.5
81°	10.0	9.7	9.4	9.2	8.9	8.8
81.5°	9.4	9.0	8.8	8.5	8.2	8.1
82°	8.7	8.3	8.0	7.7	7.5	7.4
82.5°	8.0	7.6	7.4	7.1	6.9	6.7
83°	7.3	7.0	6.7	6.5	6.2	6.0
83.5°	6.7	6.3	6.1	5.8	5.5	5.4
84°	6.1	5.6	5.4	5.1	4.9	4.8
84.5°	5.4	5.0	4.8	4.6	4.3	4.2
85°	4.8	4.5	4.2	4.0	3.7	3.5
85.5°	4.2	3.8	3.5	3.3	3.1	3.0
86°	3.5	3.2	3.0	2.8	2.6	2.4
86.5°	3.0	2.7	2.5	2.3	2.1	1.9
87°	2.5	2.2	2.0	1.8	1.6	1.5
87.5°	1.9	1.7	1.5	1.3	1.1	1.0
88°	1.4	1.3	1.0	0.8	0.6	0.5
88.5°	1.0	0.8	0.6	0.3	0.2	0.2



TEST NUMBER: P639479

CATALOG NUMBER: RL4LS9FSD2W1EWHDM -600LM -2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.2	0.2	0.1	0.1	0.1	0.1



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







21.5°	305.0	305.1	307.5	309.5	312.5	315.1	316.4	316.6	315.7	314.1	313.2
22°	302.0	303.1	305.3	307.3	310.7	312.8	314.8	314.6	314.2	312.9	311.0



44°	165.9	167.9	170.3	172.4	175.6	175.7	173.3	168.6	167.0	167.5	167.7
44.5°	162.3	163.7	166.4	168.5	171.7	171.9	168.9	164.3	162.3	163.5	163.0



66.5°	38.3	38.6	39.1	39.5	40.7	40.5	40.1	39.6	39.2	39.2	39.5
67°	36.7	37.0	37.4	37.8	39.0	38.8	38.5	38.0	37.7	37.9	38.0



89°	0.2	0.2	0.1	0.1	0.1	0.1	0.3	0.3	0.3	0.5	0.6
89.5°	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2





21.5°	311.4	308.2	306.9	305.4	304.8	305.0
22°	308.9	306.3	304.7	303.0	302.6	302.0



44°	165.7	162.8	162.7	163.6	164.8	165.9
44.5°	161.6	158.7	159.1	159.7	160.8	162.3



66.5°	39.6	38.6	38.3	38.1	38.1	38.3
67°	38.1	37.2	36.7	36.5	36.5	36.7



89°	0.6	0.3	0.2	0.1	0.1	0.2
89.5°	0.3	0.2	0.1	0.1	0.1	0.1



(END OF REPORT)