

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: P639481

Luminaire Tested: RL4LS9FSD2W1EWHDM -600LM -3500K

Issue Date: 1/25/2023

Test Information

Test Method: LM-79-2019
Report Number: P639481
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 -3500K
Description: 4IN DIRECT MOUNT, SELECTABLE LUMEN AND CCT, MATTE WHITE BAFFLE
Light Source: (1) SELECTABLE LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 705.0 lumens
Efficiency: N/A
Efficacy: 92.8 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

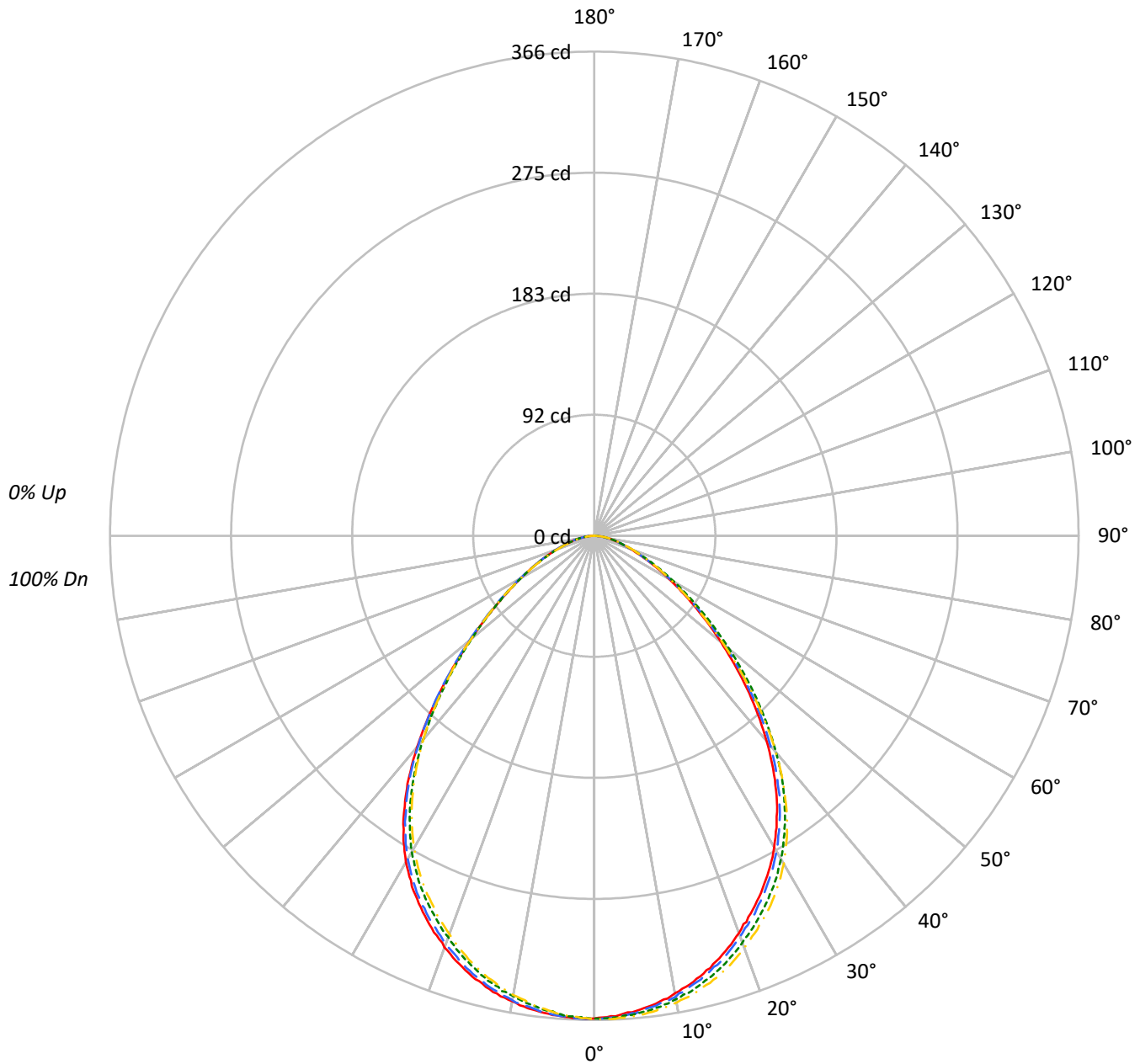
Input Watts (W): 7.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P639481

CATALOG NUMBER: RL4LS9FSD2W1EWHDM -600LM -3500K

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°	45099	45099	45099	45099
5°	44750	44998	45110	44775
10°	44075	44653	44841	44339
15°	43299	44054	44399	43606
20°	42048	43048	43548	42456
25°	40638	41852	42302	41224
30°	38789	40273	40659	39346
35°	36256	37855	37674	36467
40°	32687	34494	33591	32461
45°	28455	30221	28455	27826
50°	24034	25592	23458	23208
55°	19781	21181	19221	19177
60°	16141	17278	15869	15795
65°	13043	13891	13189	13043
70°	10516	11021	10985	10805
75°	8834	8977	9312	9216
80°	7473	7616	8185	8114
85°	5105	5247	6665	6523

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 45°

Luminance: 30221 cd/sqm



TEST NUMBER: P639481

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.3	4.9
10°-20°	96.4	13.7
20°-30°	139.9	19.8
30°-40°	152.9	21.7
40°-50°	127.0	18.0
50°-60°	83.1	11.8
60°-70°	45.7	6.5
70°-80°	20.6	2.9
80°-90°	5.0	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°	270.7	38.4
0°-40°	423.6	60.1
0°-60°	633.7	89.9
0°-90°	705.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	705.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	365	365	365	365	365	
5°	361	363	364	361	361	34
15°	338	344	347	341	338	95
25°	298	307	310	302	298	137
35°	240	251	250	242	240	149
45°	163	173	163	159	163	126
55°	92	98	89	89	92	83
65°	45	48	45	45	45	45
75°	18	19	20	19	18	20
85°	4	4	5	5	4	4
90°	0	0	0	0	0	

TEST NUMBER: P639481

CATALOG NUMBER: RL4LS9FSD2W1EWHDM -600LM -3500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	364.9	364.9	364.9	364.9	364.9	364.9	364.9	364.9	364.9	364.9	364.9
0.5°	364.4	364.2	365.2	365.1	364.9	365.3	365.4	365.1	364.9	364.2	365.2
1°	364.1	363.6	365.1	365.3	364.9	365.6	365.6	365.2	365.4	364.3	365.2
1.5°	364.0	364.1	364.4	364.6	364.8	365.4	365.4	365.4	364.9	364.4	365.3
2°	363.4	363.4	364.6	364.4	364.6	364.7	365.5	365.1	364.8	364.4	364.9
2.5°	363.6	362.7	364.0	364.0	364.4	364.9	365.5	365.1	365.0	364.9	364.9
3°	362.9	362.6	363.6	363.8	364.7	365.2	364.9	365.3	364.4	363.9	364.4
3.5°	361.9	362.8	363.2	363.1	363.5	364.5	365.0	364.9	364.4	363.7	364.0
4°	361.1	361.9	363.0	362.9	363.1	364.4	364.8	364.6	364.0	363.6	364.1
4.5°	361.3	361.3	362.0	362.8	363.5	364.6	364.6	364.2	363.7	363.1	363.7
5°	360.7	360.5	362.4	362.7	362.7	363.3	364.1	364.5	363.6	363.3	363.3
5.5°	359.8	360.4	360.7	361.6	362.1	363.8	364.0	363.5	362.9	362.4	362.6
6°	358.9	358.8	360.3	360.9	361.7	362.6	363.5	363.4	362.7	362.3	362.5
6.5°	358.2	358.3	359.4	360.6	361.3	362.5	362.8	362.8	362.1	361.7	361.8
7°	357.6	357.6	358.9	360.1	360.8	361.9	362.6	362.4	361.6	361.3	360.8
7.5°	356.8	356.8	358.3	358.4	359.8	360.7	361.9	361.7	361.2	359.9	360.1
8°	355.6	355.5	357.1	357.7	359.4	360.5	360.6	361.5	360.7	359.6	359.3
8.5°	354.3	354.8	356.1	357.6	358.3	359.8	360.6	360.3	359.8	359.3	359.0
9°	354.2	354.0	355.8	356.5	357.9	358.9	359.8	360.0	359.3	357.8	358.1
9.5°	352.6	352.5	354.7	355.0	356.6	358.2	358.8	359.5	358.1	357.1	357.9
10°	351.2	352.0	354.0	354.7	355.8	357.3	358.4	358.3	357.3	357.3	356.6
10.5°	350.3	350.3	351.7	353.1	355.0	356.3	357.1	357.4	356.7	355.8	355.3
11°	348.7	349.0	351.5	352.0	353.3	355.8	356.4	357.0	355.6	355.2	354.6
11.5°	347.9	348.0	349.7	350.2	353.1	354.0	355.8	355.4	355.3	353.7	353.9
12°	346.8	347.2	348.4	350.2	352.0	353.5	354.3	354.6	353.8	353.0	352.3
12.5°	345.4	346.2	347.2	348.3	350.7	352.2	353.8	353.6	353.3	351.5	351.5
13°	343.7	344.2	346.0	347.3	349.5	351.3	352.3	352.6	351.7	350.8	350.4
13.5°	342.7	342.7	345.0	346.4	348.2	349.7	351.1	351.1	350.8	350.0	349.2
14°	341.1	341.4	342.7	345.1	346.6	348.5	349.9	350.3	349.0	347.7	347.5
14.5°	339.2	340.1	341.9	343.8	345.7	347.6	349.2	348.7	347.7	346.7	346.6
15°	338.4	338.4	340.0	342.2	344.3	346.2	347.5	348.0	347.0	345.7	345.0
15.5°	336.1	336.9	338.1	340.8	342.6	344.7	346.7	346.2	345.7	344.7	343.7
16°	334.6	334.7	337.6	338.0	341.3	343.4	345.2	345.1	344.0	343.2	341.9
16.5°	333.1	333.4	335.8	337.0	339.7	342.1	343.4	344.0	342.7	341.3	340.7
17°	331.0	331.8	333.5	335.1	338.1	340.1	341.9	342.0	340.9	339.2	338.7
17.5°	329.2	329.8	332.0	333.0	336.4	339.0	340.5	340.2	339.4	338.1	337.6
18°	327.5	328.5	330.2	331.8	334.5	336.9	338.7	339.2	338.0	336.2	335.1
18.5°	325.7	325.7	328.2	329.2	333.0	335.4	336.9	337.2	336.4	335.0	333.4
19°	323.5	324.3	326.3	328.0	331.1	333.7	335.2	335.2	334.2	332.8	331.8
19.5°	321.5	322.2	324.3	326.0	329.4	331.4	333.6	333.9	332.6	331.4	330.1
20°	319.7	320.4	322.3	324.0	327.3	329.8	331.6	331.7	331.1	329.6	328.2
20.5°	317.4	318.6	320.3	321.7	325.0	327.9	329.7	329.7	328.4	327.4	326.3
21°	314.4	315.6	317.7	319.8	323.5	325.9	327.8	327.9	326.8	324.9	323.9

TEST NUMBER: P639481

CATALOG NUMBER: RL4LS9FSD2W1EWHDM -600LM -3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	309.1	310.0	312.0	314.1	317.6	320.0	322.1	322.5	321.0	319.8	318.3
23°	306.9	307.7	310.4	311.5	315.5	317.9	319.5	320.2	319.0	317.3	316.4
23.5°	304.8	305.6	307.6	310.0	313.4	316.2	318.2	318.0	316.9	315.8	314.2
24°	302.3	303.1	305.3	307.0	311.2	314.4	315.7	316.8	314.6	313.2	312.1
24.5°	300.1	300.9	303.4	305.3	309.3	311.9	313.4	313.9	312.7	311.4	309.4
25°	298.0	298.8	300.9	303.6	306.9	310.0	311.7	311.5	310.2	309.4	308.2
25.5°	295.3	296.3	298.8	300.4	305.1	307.7	309.4	309.1	308.1	306.6	305.2
26°	292.8	293.7	296.2	298.7	302.1	305.1	307.0	307.2	305.5	304.1	303.2
26.5°	290.5	291.8	293.5	296.3	300.0	303.7	304.7	304.5	303.2	302.1	301.1
27°	288.1	289.0	291.2	293.5	297.9	300.6	301.8	301.9	301.0	299.0	298.2
27.5°	285.4	286.5	288.7	291.2	295.2	298.1	299.5	299.5	298.8	297.0	295.8
28°	283.0	283.8	286.4	289.0	292.9	295.5	296.9	297.2	295.1	294.3	293.1
28.5°	280.4	281.2	283.6	285.9	290.3	293.0	294.6	294.3	293.1	291.7	290.2
29°	277.8	278.2	280.7	283.0	287.2	290.5	291.7	291.1	290.1	289.1	287.5
29.5°	274.7	275.8	278.1	280.5	284.7	287.6	288.7	288.6	287.4	285.4	284.8
30°	271.8	272.1	275.4	277.8	282.2	284.7	286.4	285.8	284.9	283.3	282.1
30.5°	268.8	270.0	272.5	275.0	279.4	282.1	282.8	282.9	281.5	280.2	278.9
31°	266.0	267.4	269.4	271.8	276.5	279.0	280.1	280.1	278.5	277.1	275.6
31.5°	262.4	264.3	266.2	268.8	273.3	276.1	277.1	276.6	275.1	274.0	272.8
32°	260.0	260.9	263.4	265.7	270.1	272.6	273.8	273.0	272.1	270.9	269.3
32.5°	256.6	258.2	260.3	262.8	267.5	270.0	270.8	269.5	268.4	267.2	266.0
33°	253.1	254.6	257.0	259.4	263.9	266.3	267.5	266.6	264.6	263.9	262.3
33.5°	250.3	251.4	254.1	256.7	261.1	263.2	263.8	262.7	261.6	260.4	259.4
34°	247.0	248.1	250.8	253.3	257.6	260.2	260.5	259.0	258.1	256.4	255.2
34.5°	243.7	244.7	247.3	249.6	254.4	256.7	256.9	255.4	254.1	253.4	251.1
35°	240.3	241.0	243.9	246.1	250.9	253.4	253.5	251.6	249.7	249.3	248.4
35.5°	236.5	237.7	241.0	243.0	247.6	249.6	249.7	248.0	246.2	245.5	244.3
36°	232.7	234.2	236.8	239.8	244.1	246.1	245.6	244.1	242.4	241.6	240.6
36.5°	229.5	230.4	233.0	236.0	240.5	242.2	242.0	240.1	238.0	237.3	236.2
37°	225.6	226.9	230.0	232.2	236.9	238.5	238.1	235.9	234.5	233.9	232.4
37.5°	221.9	223.6	226.1	228.1	233.2	234.9	234.1	231.9	229.9	229.5	228.6
38°	218.3	219.7	222.4	224.2	229.7	230.7	230.1	227.7	225.5	225.4	224.4
38.5°	214.2	216.0	218.8	220.8	225.4	227.1	226.0	223.3	221.7	221.3	220.4
39°	210.5	211.9	214.7	217.5	221.8	222.6	221.8	218.8	217.3	216.6	215.9
39.5°	206.7	208.6	210.7	213.5	217.5	218.9	217.6	214.5	212.5	212.6	211.5
40°	202.6	204.6	207.2	209.4	213.8	214.9	213.1	210.0	208.2	208.0	207.1
40.5°	198.8	200.2	203.2	205.3	209.7	210.5	209.2	205.7	203.5	203.8	203.0
41°	194.8	196.6	199.3	201.6	205.7	206.5	204.7	201.1	199.1	199.4	198.6
41.5°	190.8	192.2	195.3	197.4	201.5	202.4	200.5	196.4	194.7	194.9	193.9
42°	187.0	188.6	191.3	193.1	197.5	198.1	195.8	191.7	189.6	189.9	189.3
42.5°	182.8	184.5	187.0	189.6	193.5	194.0	191.6	187.5	185.5	186.0	185.3
43°	179.0	180.6	183.5	185.4	189.3	189.6	187.1	182.8	181.2	181.4	181.0
43.5°	174.9	176.6	179.0	181.3	185.1	185.5	182.8	178.2	176.2	177.0	176.4

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	162.8	164.8	166.8	169.3	172.9	172.6	169.4	164.6	162.8	163.6	163.6
45.5°	159.0	160.9	163.0	165.1	168.6	168.1	165.1	160.3	158.7	159.3	159.3
46°	154.9	156.6	159.3	161.2	164.6	164.3	160.4	156.0	154.0	155.3	155.3
46.5°	151.2	153.0	155.3	157.2	160.5	159.9	156.5	151.6	149.8	151.2	150.7
47°	147.2	149.2	151.3	153.2	156.3	155.9	152.0	147.2	145.9	146.8	146.9
47.5°	143.4	145.0	147.3	149.2	152.4	151.6	147.8	143.1	141.6	142.6	142.9
48°	139.7	141.4	143.5	145.2	148.4	147.5	143.8	139.1	137.5	138.5	138.7
48.5°	135.6	137.4	139.9	141.4	144.5	144.0	139.6	135.1	133.4	134.6	135.0
49°	132.1	133.8	135.8	137.9	140.9	139.5	135.6	131.1	129.5	130.6	131.3
49.5°	128.3	130.0	132.1	133.8	136.8	135.8	131.7	127.0	125.6	126.8	127.4
50°	125.0	126.5	128.3	130.0	133.1	132.0	127.8	123.5	122.0	123.0	123.5
50.5°	121.2	122.7	125.0	126.3	129.1	128.3	124.0	119.6	118.2	119.4	120.2
51°	117.8	119.2	121.2	122.7	125.7	124.5	120.4	115.9	114.6	115.9	116.4
51.5°	114.4	115.9	117.6	119.2	122.0	120.9	116.8	112.4	111.1	112.1	112.9
52°	111.0	112.3	114.1	115.7	118.4	117.2	113.1	109.1	107.8	108.8	109.6
52.5°	107.6	108.8	110.8	112.1	114.9	113.6	109.6	105.6	104.6	105.5	106.3
53°	104.1	105.6	107.5	108.6	111.5	110.3	106.2	102.4	101.2	102.0	102.9
53.5°	101.0	102.5	104.2	105.4	108.0	106.9	103.0	99.2	98.0	98.9	99.8
54°	97.8	99.3	100.6	102.0	104.8	103.4	99.5	96.2	95.0	95.8	96.6
54.5°	94.9	96.1	97.6	98.8	101.5	100.3	96.5	93.0	92.0	92.7	93.7
55°	91.8	93.2	94.6	96.0	98.3	97.4	93.5	90.3	89.2	89.8	90.7
55.5°	88.8	90.2	91.4	92.7	95.2	94.0	90.5	87.3	86.2	87.0	87.8
56°	86.1	87.2	88.6	89.8	92.1	90.9	87.6	84.6	83.6	84.1	85.1
56.5°	83.2	84.5	85.7	86.7	89.0	87.9	84.8	81.9	80.8	81.5	82.2
57°	80.5	81.7	82.8	83.9	86.1	85.1	82.0	79.3	78.1	78.8	79.6
57.5°	78.0	78.8	80.1	81.1	83.3	82.2	79.3	76.8	75.8	76.3	77.0
58°	75.2	76.3	77.5	78.4	80.4	79.6	76.8	74.2	73.1	73.8	74.5
58.5°	72.8	73.6	74.7	75.7	77.6	76.9	74.3	72.0	71.0	71.3	72.2
59°	70.3	71.1	72.0	73.0	75.0	74.1	71.7	69.5	68.6	69.0	69.7
59.5°	67.6	68.6	69.7	70.5	72.5	71.6	69.2	67.2	66.2	66.7	67.4
60°	65.3	66.2	67.2	68.0	69.9	69.2	66.9	65.0	64.2	64.4	65.0
60.5°	63.1	63.9	64.8	65.5	67.4	66.6	64.6	62.9	62.0	62.2	62.9
61°	60.7	61.4	62.3	63.3	65.0	64.3	62.4	60.7	59.9	60.1	60.9
61.5°	58.6	59.3	60.0	60.8	62.7	61.9	60.2	58.7	58.0	58.1	58.9
62°	56.5	57.0	57.9	58.6	60.3	59.8	58.1	56.7	56.0	56.1	56.9
62.5°	54.4	54.9	55.6	56.4	58.1	57.6	56.1	54.8	54.1	54.1	54.9
63°	52.2	52.8	53.6	54.2	55.9	55.4	54.1	52.8	52.1	52.1	52.9
63.5°	50.3	50.8	51.4	52.1	53.8	53.3	52.0	50.8	50.3	50.4	50.9
64°	48.3	48.8	49.4	50.1	51.6	51.1	50.1	49.1	48.6	48.6	49.1
64.5°	46.4	46.9	47.5	48.1	49.6	49.2	48.2	47.3	46.8	46.9	47.3
65°	44.6	45.0	45.7	46.0	47.5	47.2	46.4	45.6	45.1	45.2	45.6
65.5°	42.8	43.3	43.8	44.3	45.6	45.4	44.7	44.0	43.5	43.5	43.9
66°	41.0	41.4	42.0	42.4	43.7	43.5	43.0	42.3	41.9	41.9	42.3

TEST NUMBER: P639481

CATALOG NUMBER: RL4LS9FSD2W1EWHDM -600LM -3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	36.2	36.5	36.9	37.2	38.4	38.2	38.0	37.6	37.3	37.4	37.6
68°	34.7	34.9	35.2	35.7	36.7	36.7	36.5	36.1	35.8	35.9	36.1
68.5°	33.2	33.4	33.8	34.0	35.1	35.1	35.0	34.7	34.4	34.5	34.7
69°	31.9	32.0	32.3	32.5	33.5	33.5	33.6	33.3	33.2	33.2	33.3
69.5°	30.5	30.6	30.9	31.1	32.0	32.1	32.2	31.9	31.7	31.8	31.9
70°	29.1	29.3	29.4	29.6	30.5	30.6	30.7	30.6	30.4	30.6	30.6
70.5°	27.9	28.0	28.2	28.4	29.1	29.3	29.5	29.4	29.2	29.3	29.4
71°	26.6	26.8	26.9	27.0	27.8	28.0	28.2	28.1	27.9	28.1	28.2
71.5°	25.5	25.6	25.6	25.7	26.5	26.6	26.9	26.9	26.8	26.9	27.0
72°	24.8	24.6	24.6	24.4	25.3	25.4	25.7	25.7	25.7	25.8	25.9
72.5°	23.6	23.5	23.5	23.3	24.1	24.3	24.6	24.6	24.6	24.6	24.7
73°	22.6	22.4	22.4	22.3	22.8	23.1	23.5	23.5	23.5	23.6	23.6
73.5°	21.4	21.3	21.3	21.3	21.8	22.0	22.3	22.4	22.4	22.6	22.6
74°	20.3	20.3	20.3	20.2	20.8	21.0	21.3	21.4	21.4	21.5	21.6
74.5°	19.3	19.3	19.3	19.2	19.8	20.0	20.3	20.4	20.4	20.5	20.6
75°	18.5	18.4	18.3	18.3	18.8	19.0	19.3	19.5	19.5	19.5	19.6
75.5°	17.6	17.5	17.5	17.5	17.9	18.1	18.4	18.5	18.5	18.6	18.7
76°	16.8	16.7	16.6	16.6	17.1	17.3	17.5	17.6	17.6	17.8	17.8
76.5°	16.0	15.9	15.8	15.8	16.3	16.4	16.7	16.8	16.8	16.9	17.0
77°	15.2	15.1	15.0	15.0	15.5	15.7	15.9	16.0	16.0	16.2	16.3
77.5°	14.5	14.3	14.3	14.3	14.7	14.9	15.2	15.3	15.3	15.5	15.5
78°	13.6	13.5	13.5	13.5	13.9	14.1	14.4	14.5	14.5	14.8	14.8
78.5°	12.8	12.7	12.7	12.6	13.1	13.3	13.6	13.7	13.8	14.0	14.0
79°	12.0	12.0	11.8	11.8	12.3	12.5	12.8	12.9	13.0	13.2	13.2
79.5°	11.2	11.2	11.1	11.0	11.5	11.7	12.0	12.2	12.2	12.5	12.5
80°	10.5	10.4	10.3	10.2	10.7	11.0	11.2	11.5	11.5	11.7	11.8
80.5°	9.7	9.7	9.6	9.5	10.0	10.2	10.5	10.7	10.8	11.0	11.1
81°	9.1	9.0	8.8	8.7	9.2	9.5	9.7	10.0	10.0	10.2	10.3
81.5°	8.3	8.2	8.1	7.9	8.5	8.7	9.0	9.2	9.3	9.5	9.6
82°	7.6	7.5	7.4	7.3	7.7	7.9	8.3	8.5	8.6	8.8	8.9
82.5°	6.9	6.8	6.7	6.6	7.1	7.3	7.6	7.7	7.9	8.1	8.2
83°	6.2	6.1	5.9	5.9	6.4	6.6	6.9	7.1	7.2	7.4	7.5
83.5°	5.5	5.4	5.3	5.2	5.7	5.9	6.3	6.4	6.6	6.8	6.9
84°	4.9	4.8	4.7	4.7	5.1	5.3	5.6	5.8	5.9	6.2	6.2
84.5°	4.3	4.2	4.0	3.9	4.4	4.7	4.9	5.2	5.3	5.5	5.6
85°	3.6	3.5	3.4	3.4	3.7	4.0	4.3	4.5	4.7	4.9	4.9
85.5°	3.1	2.9	2.8	2.8	3.2	3.4	3.7	3.9	4.0	4.2	4.3
86°	2.5	2.4	2.4	2.3	2.6	2.8	3.1	3.2	3.4	3.5	3.7
86.5°	2.0	1.9	1.9	1.7	2.0	2.2	2.5	2.7	2.9	2.9	3.0
87°	1.5	1.4	1.4	1.2	1.4	1.6	1.9	2.1	2.3	2.4	2.5
87.5°	1.0	0.9	0.9	0.7	1.0	1.1	1.4	1.6	1.7	1.9	1.9
88°	0.5	0.4	0.4	0.4	0.6	0.7	1.0	1.1	1.2	1.4	1.4
88.5°	0.2	0.3	0.2	0.1	0.2	0.4	0.6	0.7	0.8	0.9	1.0



TEST NUMBER: P639481
CATALOG NUMBER: RL4LS9FSD2W1EWHDM -600LM -3500K

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: P639481

CATALOG NUMBER: RL4LS9FSD2W1EWHDM -600LM -3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	364.9	364.9	364.9	364.9	364.9	364.9
0.5°	364.6	364.9	365.1	365.1	364.7	364.4
1°	364.9	364.5	364.4	364.6	364.9	364.1
1.5°	365.7	364.0	364.7	364.8	364.6	364.0
2°	364.2	364.1	364.3	363.9	363.9	363.4
2.5°	365.1	363.7	363.7	363.8	363.9	363.6
3°	364.4	363.8	363.4	363.4	363.5	362.9
3.5°	363.5	363.6	363.1	363.2	362.6	361.9
4°	363.5	362.5	362.7	362.6	362.1	361.1
4.5°	363.3	362.5	362.1	362.1	361.3	361.3
5°	362.6	360.9	361.3	361.3	360.9	360.7
5.5°	361.9	361.0	360.4	360.6	360.1	359.8
6°	361.6	360.5	360.2	359.6	359.5	358.9
6.5°	361.0	359.7	359.6	359.1	359.2	358.2
7°	360.4	358.7	358.2	358.7	357.6	357.6
7.5°	359.4	358.1	357.8	357.3	357.2	356.8
8°	358.7	357.2	356.7	356.6	356.1	355.6
8.5°	358.3	356.6	355.8	355.1	354.8	354.3
9°	356.5	355.3	354.9	354.3	354.4	354.2
9.5°	355.5	354.5	353.8	353.3	352.9	352.6
10°	355.3	353.3	353.0	352.5	351.6	351.2
10.5°	354.8	352.5	351.7	351.0	350.0	350.3
11°	354.1	351.2	350.5	350.1	349.5	348.7
11.5°	352.0	351.3	349.5	349.0	348.2	347.9
12°	351.5	348.6	348.2	347.7	346.7	346.8
12.5°	349.4	348.0	346.7	346.1	345.5	345.4
13°	349.0	346.6	345.0	344.7	344.7	343.7
13.5°	348.0	345.9	344.1	343.6	342.7	342.7
14°	346.3	343.9	343.0	342.2	341.4	341.1
14.5°	344.7	342.6	341.3	340.9	340.2	339.2
15°	343.9	340.8	339.3	339.0	338.1	338.4
15.5°	341.9	339.1	338.1	336.9	336.3	336.1
16°	340.4	337.7	336.6	335.7	335.1	334.6
16.5°	338.8	335.9	334.7	334.1	333.3	333.1
17°	337.4	334.6	333.3	332.0	331.3	331.0
17.5°	335.6	332.8	331.7	330.3	329.6	329.2
18°	333.9	330.8	329.5	328.6	328.0	327.5
18.5°	332.4	329.2	327.8	326.5	325.6	325.7
19°	330.6	327.0	325.8	324.6	323.5	323.5
19.5°	328.0	325.2	323.8	322.5	321.9	321.5
20°	326.6	322.8	322.2	320.3	319.8	319.7
20.5°	324.3	321.4	319.7	318.5	317.9	317.4
21°	322.5	319.6	317.8	316.4	315.7	314.4

TEST NUMBER: P639481

CATALOG NUMBER: RL4LS9FSD2W1EWHDM -600LM -3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	317.2	312.9	311.4	310.4	309.1	309.1
23°	314.3	310.6	309.1	307.8	307.2	306.9
23.5°	312.1	308.9	307.0	305.3	304.8	304.8
24°	309.6	306.6	305.1	303.2	302.6	302.3
24.5°	308.1	304.3	302.8	300.9	300.2	300.1
25°	305.1	302.3	300.3	299.1	298.4	298.0
25.5°	302.7	299.5	298.2	296.1	295.6	295.3
26°	301.3	297.3	295.8	294.0	292.9	292.8
26.5°	298.1	295.1	293.3	291.3	290.8	290.5
27°	295.9	292.5	290.6	289.1	288.1	288.1
27.5°	293.7	289.5	287.7	286.3	285.6	285.4
28°	290.7	286.9	284.9	283.9	283.2	283.0
28.5°	288.3	284.2	282.4	280.9	280.1	280.4
29°	284.9	281.3	279.3	278.2	277.6	277.8
29.5°	282.4	278.9	276.8	275.1	274.6	274.7
30°	279.6	275.7	274.1	272.4	272.3	271.8
30.5°	276.6	272.8	270.8	269.4	269.0	268.8
31°	273.7	269.3	267.7	266.3	265.7	266.0
31.5°	270.8	266.4	264.8	263.3	262.7	262.4
32°	266.8	263.0	261.5	260.1	259.4	260.0
32.5°	263.4	259.4	258.0	256.7	256.6	256.6
33°	260.2	256.2	254.8	253.3	253.1	253.1
33.5°	256.4	252.7	251.2	250.2	249.9	250.3
34°	253.6	249.1	247.5	246.6	246.6	247.0
34.5°	249.4	245.7	243.9	243.1	242.8	243.7
35°	245.8	241.7	240.2	239.5	239.4	240.3
35.5°	242.1	238.0	236.5	235.5	236.0	236.5
36°	238.0	233.9	232.8	232.2	232.4	232.7
36.5°	234.5	230.2	228.9	228.5	228.6	229.5
37°	230.1	226.1	225.0	224.4	224.7	225.6
37.5°	226.4	222.2	221.1	220.9	221.1	221.9
38°	222.3	218.0	217.1	216.9	217.3	218.3
38.5°	218.1	213.7	213.2	212.8	213.3	214.2
39°	213.7	209.8	208.7	208.9	209.9	210.5
39.5°	209.7	205.5	205.1	205.2	205.7	206.7
40°	205.6	201.2	200.5	200.9	201.6	202.6
40.5°	200.9	197.1	196.7	197.0	198.1	198.8
41°	196.8	192.6	192.4	192.8	193.6	194.8
41.5°	192.5	188.6	188.3	188.8	189.6	190.8
42°	187.9	184.7	184.3	184.9	185.6	187.0
42.5°	183.5	180.0	180.0	180.8	181.7	182.8
43°	179.1	175.8	175.9	176.4	177.5	179.0
43.5°	174.8	171.7	171.7	172.4	173.7	174.9

TEST NUMBER: P639481

CATALOG NUMBER: RL4LS9FSD2W1EWHDM -600LM -3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	162.0	159.2	159.5	160.1	161.5	162.8
45.5°	157.6	155.0	155.4	156.4	157.6	159.0
46°	153.8	151.2	151.6	152.2	153.5	154.9
46.5°	149.8	146.9	147.8	148.4	149.7	151.2
47°	145.7	143.2	143.7	144.7	145.7	147.2
47.5°	141.6	139.2	139.6	140.6	142.1	143.4
48°	137.9	135.5	136.2	136.6	138.1	139.7
48.5°	134.1	131.6	132.3	133.1	134.3	135.6
49°	130.3	128.0	128.8	129.5	130.6	132.1
49.5°	126.6	124.4	124.9	125.7	127.0	128.3
50°	122.7	120.7	121.3	122.2	123.5	125.0
50.5°	119.2	117.3	117.8	118.4	119.7	121.2
51°	115.9	113.8	114.4	115.2	116.4	117.8
51.5°	112.4	110.6	111.1	111.8	113.0	114.4
52°	109.1	107.2	107.7	108.4	109.6	111.0
52.5°	105.6	103.9	104.6	105.2	106.1	107.6
53°	102.5	100.8	101.4	101.9	103.0	104.1
53.5°	99.5	97.8	98.2	98.9	99.7	101.0
54°	96.5	94.5	95.2	95.7	96.7	97.8
54.5°	93.5	91.8	92.2	92.7	93.6	94.9
55°	90.4	89.0	89.2	89.8	90.6	91.8
55.5°	87.7	86.2	86.5	86.9	87.8	88.8
56°	85.1	83.5	83.6	84.1	85.0	86.1
56.5°	82.1	80.8	81.1	81.4	82.0	83.2
57°	79.6	78.4	78.4	78.7	79.4	80.5
57.5°	77.3	75.7	75.8	76.1	76.7	78.0
58°	74.7	73.3	73.3	73.7	74.3	75.2
58.5°	72.3	70.9	70.9	71.1	71.6	72.8
59°	69.9	68.5	68.7	68.6	69.2	70.3
59.5°	67.5	66.3	66.2	66.3	66.8	67.6
60°	65.4	63.9	64.1	64.1	64.6	65.3
60.5°	63.2	61.9	61.7	61.8	62.4	63.1
61°	61.1	59.7	59.7	59.6	60.0	60.7
61.5°	59.1	57.7	57.6	57.5	57.9	58.6
62°	57.1	55.7	55.4	55.5	55.8	56.5
62.5°	55.1	53.6	53.5	53.4	53.9	54.4
63°	53.1	51.8	51.6	51.4	51.8	52.2
63.5°	51.1	49.9	49.7	49.6	49.8	50.3
64°	49.3	48.1	47.8	47.8	47.9	48.3
64.5°	47.5	46.3	46.1	45.9	46.1	46.4
65°	45.7	44.6	44.3	44.3	44.3	44.6
65.5°	44.0	43.0	42.6	42.5	42.5	42.8
66°	42.5	41.3	41.0	40.7	40.8	41.0

TEST NUMBER: P639481

CATALOG NUMBER: RL4LS9FSD2W1EWHDM -600LM -3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	37.7	36.7	36.4	36.2	36.0	36.2
68°	36.2	35.3	34.9	34.7	34.5	34.7
68.5°	34.7	33.8	33.5	33.2	33.1	33.2
69°	33.4	32.5	32.2	31.9	31.8	31.9
69.5°	32.1	31.2	30.8	30.5	30.4	30.5
70°	30.7	29.9	29.6	29.3	29.1	29.1
70.5°	29.5	28.6	28.4	28.0	27.9	27.9
71°	28.3	27.5	27.1	26.9	26.6	26.6
71.5°	27.0	26.3	26.0	25.7	25.6	25.5
72°	25.9	25.2	24.9	24.4	24.7	24.8
72.5°	24.8	24.2	23.8	23.5	23.6	23.6
73°	23.7	23.2	22.8	22.5	22.5	22.6
73.5°	22.6	22.2	21.8	21.5	21.4	21.4
74°	21.6	21.1	20.8	20.5	20.3	20.3
74.5°	20.7	20.1	19.8	19.5	19.4	19.3
75°	19.8	19.3	19.0	18.7	18.5	18.5
75.5°	18.8	18.3	18.1	17.8	17.6	17.6
76°	18.0	17.5	17.3	17.0	16.8	16.8
76.5°	17.1	16.7	16.5	16.3	16.1	16.0
77°	16.3	15.9	15.7	15.5	15.3	15.2
77.5°	15.6	15.2	15.0	14.8	14.6	14.5
78°	14.8	14.4	14.2	14.0	13.7	13.6
78.5°	14.1	13.7	13.5	13.2	13.0	12.8
79°	13.3	12.9	12.7	12.4	12.2	12.0
79.5°	12.6	12.1	11.9	11.7	11.5	11.2
80°	11.8	11.4	11.2	10.9	10.7	10.5
80.5°	11.1	10.7	10.5	10.2	10.0	9.7
81°	10.3	10.0	9.7	9.5	9.2	9.1
81.5°	9.7	9.2	9.0	8.7	8.5	8.3
82°	9.0	8.5	8.2	7.9	7.7	7.6
82.5°	8.2	7.8	7.6	7.3	7.1	6.9
83°	7.5	7.2	6.9	6.7	6.4	6.2
83.5°	6.9	6.5	6.2	5.9	5.7	5.5
84°	6.2	5.8	5.6	5.3	5.1	4.9
84.5°	5.6	5.2	4.9	4.7	4.4	4.3
85°	4.9	4.6	4.3	4.1	3.8	3.6
85.5°	4.3	3.9	3.7	3.4	3.2	3.1
86°	3.7	3.3	3.1	2.9	2.6	2.5
86.5°	3.1	2.8	2.6	2.4	2.1	2.0
87°	2.6	2.3	2.1	1.9	1.6	1.5
87.5°	2.0	1.8	1.6	1.4	1.1	1.0
88°	1.4	1.3	1.1	0.9	0.6	0.5
88.5°	1.0	0.8	0.6	0.4	0.2	0.2



TEST NUMBER: P639481
CATALOG NUMBER: RL4LS9FSD2W1EWHDM -600LM -3500K

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°	313.9	314.0	316.4	318.5	321.6	324.3	325.6	325.8	324.9	323.3	322.3
22°	310.9	311.9	314.2	316.2	319.7	321.9	324.0	323.8	323.4	322.0	320.1



44°	170.8	172.8	175.3	177.5	180.7	180.8	178.3	173.5	171.9	172.4	172.6
44.5°	167.1	168.5	171.3	173.4	176.7	177.0	173.8	169.1	167.1	168.3	167.7



66.5°	39.4	39.7	40.2	40.7	41.9	41.7	41.2	40.7	40.4	40.3	40.6
67°	37.8	38.1	38.5	38.9	40.1	40.0	39.6	39.1	38.8	39.0	39.1



89°	0.2	0.2	0.1	0.1	0.1	0.1	0.3	0.3	0.4	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°	320.5	317.2	315.9	314.3	313.7	313.9
22°	317.9	315.2	313.6	311.9	311.4	310.9



44°	170.6	167.6	167.5	168.4	169.6	170.8
44.5°	166.4	163.3	163.7	164.3	165.5	167.1



66.5°	40.7	39.7	39.4	39.2	39.2	39.4
67°	39.2	38.2	37.8	37.6	37.5	37.8



89°	0.6	0.4	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)