

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 COMMERCIAL

Report Number: P775736

Luminaire Tested: HCDJBL510CSD-HCD61TRMW-1000lm-3000K

Issue Date: 2/13/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P775736  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2312156B037)  
Test Lab:  
Issue Date: 2/13/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBL510CSD-HCD61TRMW-1000lm-3000K  
Description: 6 INCH ROUND SHALLOW-WIDE MATTE WHITE TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

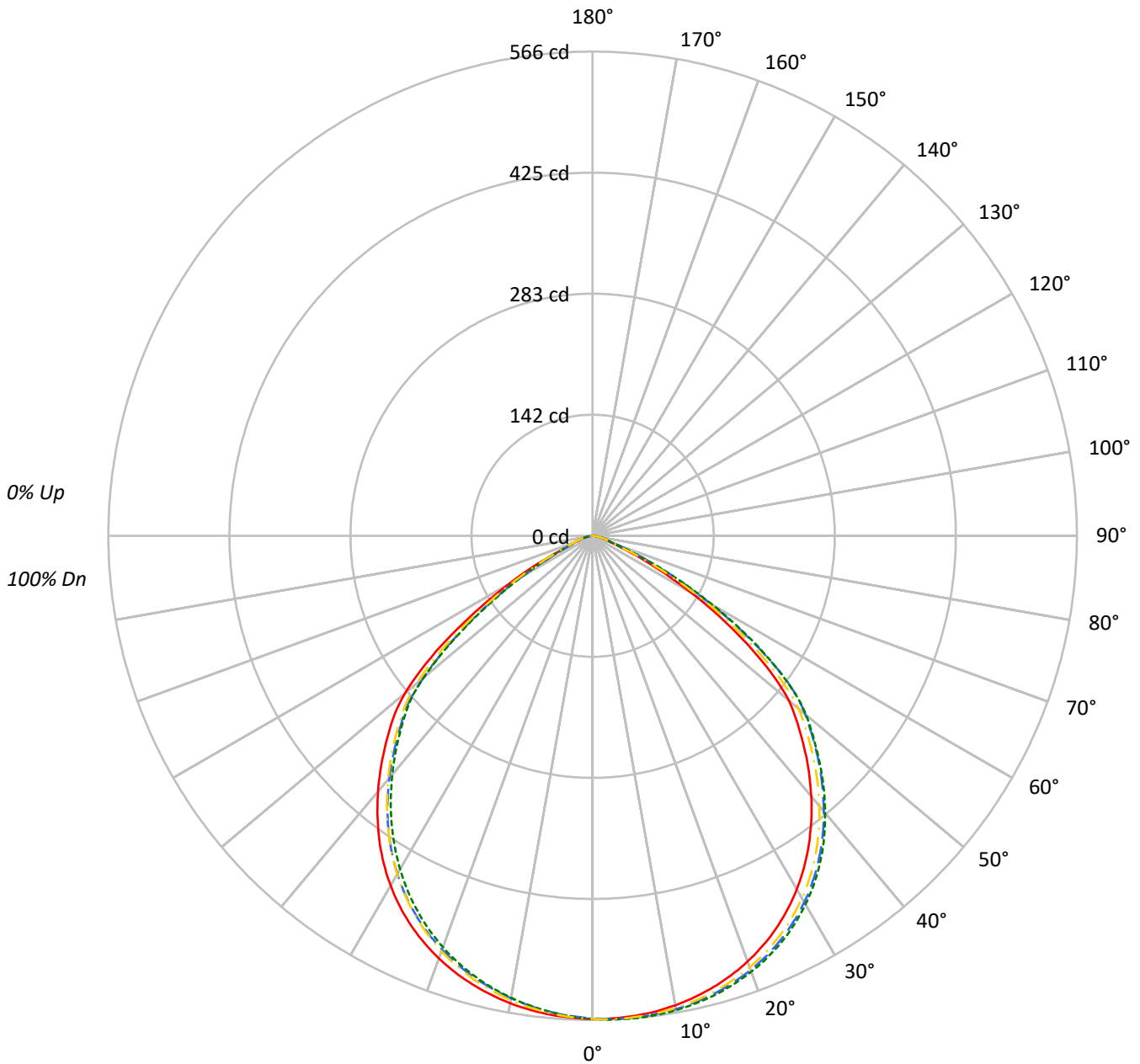
Lumens per Lamp: N/A  
Luminaire Lumens: 1246.1 lumens  
Efficiency: N/A  
Efficacy: 124.6 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.24 / 1.32  
Luminous Opening: Circular (Dia: 0.5' x H: 0')  
CIE Type: Direct

Input Watts (W): 10  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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										
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	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	111	107	104	101	109	105	102	99	101	99	96	97	95	93	94	92	91	89								
2	103	96	91	86	100	94	89	85	91	87	83	88	84	81	85	82	79	77								
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	67								
4	88	77	70	64	86	76	69	63	74	67	63	71	66	62	69	65	61	59								
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52								
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46								
7	70	58	50	44	68	57	49	44	55	49	44	54	48	43	53	47	43	41								
8	65	53	45	40	64	52	45	39	51	44	39	50	44	39	49	43	39	37								
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34								
10	57	45	38	33	56	44	37	33	44	37	32	43	37	32	42	36	32	30								

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	30951	30951	30951	30951
5°	30998	31158	30932	30756
10°	31023	31345	30883	30527
15°	30999	31516	30812	30244
20°	30890	31637	30668	29852
25°	30655	31659	30389	29288
30°	30207	31499	29891	28498
35°	29486	31059	29091	27418
40°	28446	30257	27924	26063
45°	27104	29096	26445	24491
50°	25500	27777	24383	21944
55°	21027	24190	19153	16391
60°	14582	17795	12510	10328
65°	7900	10507	5967	5279
70°	3767	4472	3286	3270
75°	3029	3410	2499	2626
80°	2273	2810	1705	1989
85°	1384	2264	692	1132

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 29910 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	53.5	4.3
10°-20°	153.5	12.3
20°-30°	232.0	18.6
30°-40°	272.9	21.9
40°-50°	265.7	21.3
50°-60°	187.4	15.0
60°-70°	62.8	5.0
70°-80°	15.2	1.2
80°-90°	3.0	0.2
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°	439.0	35.2
0°-40°	711.9	57.1
0°-60°	1165.1	93.5
0°-90°	1246.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1246.1	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	565	565	565	565	565	
5°	563	566	562	559	563	54
15°	546	555	543	533	546	154
25°	507	523	502	484	507	233
35°	441	464	435	410	441	275
45°	350	375	341	316	350	269
55°	220	253	200	172	220	195
65°	61	81	46	41	61	65
75°	14	16	12	12	14	15
85°	2	4	1	2	2	3
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°	564.6	564.6	564.6	564.6	564.6	564.6	564.6	564.6	564.6	564.6	564.6
0.5°	564.9	564.8	564.5	564.0	565.1	565.3	565.1	565.1	564.8	564.4	563.9
1°	564.9	564.9	564.8	564.4	565.5	565.5	565.4	565.1	564.7	564.2	563.5
1.5°	564.9	565.0	564.9	564.7	565.7	565.7	565.5	565.0	564.4	563.8	563.1
2°	564.8	565.0	565.1	565.0	565.9	565.8	565.5	564.9	564.2	563.5	562.6
2.5°	564.6	565.0	565.3	565.3	566.1	565.8	565.5	564.8	564.0	563.1	562.2
3°	564.5	565.0	565.4	565.5	566.1	565.9	565.5	564.6	563.6	562.7	561.6
3.5°	564.2	565.0	565.5	565.7	566.2	565.9	565.4	564.4	563.3	562.2	561.0
4°	564.0	564.8	565.4	565.8	566.2	565.9	565.3	564.2	563.0	561.7	560.4
4.5°	563.6	564.6	565.4	565.9	566.3	565.8	565.1	563.8	562.5	561.1	559.5
5°	563.3	564.4	565.3	565.9	566.2	565.7	564.8	563.5	562.1	560.5	558.9
5.5°	562.9	564.2	565.0	565.8	566.1	565.5	564.6	563.1	561.6	559.8	558.1
6°	562.5	563.8	564.9	565.8	565.9	565.3	564.4	562.7	561.0	559.1	557.3
6.5°	562.0	563.5	564.6	565.7	565.7	565.0	564.0	562.2	560.4	558.3	556.4
7°	561.5	563.1	564.3	565.5	565.5	564.6	563.7	561.7	559.7	557.6	555.5
7.5°	560.9	562.7	564.0	565.3	565.1	564.3	563.3	561.1	559.0	556.8	554.4
8°	560.3	562.2	563.6	565.0	564.8	563.9	562.8	560.5	558.3	555.9	553.5
8.5°	559.5	561.7	563.3	564.8	564.4	563.5	562.2	559.8	557.5	554.9	552.4
9°	558.8	561.1	562.8	564.4	564.0	563.0	561.7	559.1	556.7	553.9	551.4
9.5°	558.0	560.5	562.3	564.0	563.6	562.5	561.2	558.4	555.8	552.9	550.1
10°	557.3	559.7	561.8	563.6	563.1	561.9	560.5	557.5	554.8	551.9	549.0
10.5°	556.4	559.0	561.2	563.2	562.5	561.2	559.7	556.7	553.8	550.8	547.7
11°	555.5	558.2	560.5	562.6	561.9	560.6	559.0	555.8	552.8	549.6	546.5
11.5°	554.4	557.4	559.8	562.1	561.2	559.7	558.2	554.8	551.8	548.4	545.2
12°	553.4	556.5	559.0	561.5	560.5	559.0	557.4	553.8	550.7	547.2	543.8
12.5°	552.3	555.6	558.2	560.8	559.7	558.2	556.5	552.8	549.4	545.9	542.4
13°	551.2	554.5	557.4	560.0	558.9	557.4	555.6	551.7	548.2	544.5	540.9
13.5°	549.9	553.6	556.5	559.3	558.1	556.4	554.5	550.6	547.0	543.1	539.3
14°	548.7	552.5	555.6	558.5	557.2	555.5	553.5	549.3	545.7	541.7	537.8
14.5°	547.5	551.4	554.5	557.7	556.2	554.4	552.4	548.1	544.2	540.2	536.1
15°	546.2	550.1	553.5	556.7	555.3	553.4	551.3	546.8	542.9	538.7	534.4
15.5°	544.7	548.9	552.4	555.8	554.2	552.2	550.0	545.5	541.4	537.1	532.7
16°	543.3	547.6	551.3	554.7	553.1	551.1	548.7	544.0	539.9	535.5	531.0
16.5°	541.8	546.3	549.9	553.8	551.9	549.8	547.5	542.6	538.3	533.7	529.1
17°	540.2	544.8	548.8	552.6	550.8	548.5	546.2	541.1	536.7	532.0	527.2
17.5°	538.5	543.4	547.5	551.5	549.4	547.2	544.7	539.4	534.9	530.2	525.3
18°	536.9	541.9	546.2	550.3	548.1	545.9	543.2	537.8	533.2	528.3	523.3
18.5°	535.2	540.4	544.7	548.9	546.7	544.3	541.7	536.2	531.5	526.4	521.2
19°	533.3	538.7	543.2	547.6	545.4	542.9	540.2	534.4	529.5	524.4	519.1
19.5°	531.5	537.0	541.7	546.3	543.8	541.3	538.5	532.6	527.6	522.4	517.0
20°	529.5	535.3	540.0	544.8	542.3	539.6	536.9	530.8	525.7	520.3	514.7
20.5°	527.6	533.5	538.5	543.3	540.7	537.9	535.0	528.8	523.6	518.1	512.4
21°	525.6	531.6	536.8	541.8	539.0	536.2	533.2	526.8	521.6	516.0	510.2



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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°	518.9	525.7	531.3	536.9	533.6	530.6	527.4	520.6	514.8	508.9	502.8
23°	516.7	523.6	529.3	535.0	531.7	528.6	525.4	518.3	512.4	506.5	500.1
23.5°	514.3	521.4	527.3	533.2	529.7	526.6	523.2	516.0	510.1	503.9	497.5
24°	511.9	519.1	525.2	531.4	527.7	524.4	521.0	513.6	507.5	501.4	494.7
24.5°	509.4	516.8	523.0	529.3	525.6	522.2	518.7	511.2	505.0	498.6	492.0
25°	506.8	514.3	520.8	527.3	523.4	519.9	516.5	508.7	502.4	496.0	489.1
25.5°	504.1	511.9	518.5	525.2	521.2	517.6	514.0	506.1	499.6	493.2	486.1
26°	501.4	509.3	516.1	523.0	518.8	515.3	511.6	503.4	496.9	490.4	483.1
26.5°	498.7	506.8	513.7	520.8	516.5	512.7	509.1	500.8	494.0	487.3	480.1
27°	495.8	504.0	511.2	518.4	514.0	510.3	506.5	497.9	491.2	484.4	476.9
27.5°	492.9	501.4	508.6	516.1	511.5	507.6	503.7	495.1	488.2	481.4	473.7
28°	489.8	498.6	506.1	513.6	508.8	504.8	501.1	492.2	485.2	478.1	470.4
28.5°	486.9	495.7	503.3	511.2	506.2	502.1	498.2	489.2	482.0	475.0	467.1
29°	483.7	492.7	500.6	508.5	503.4	499.2	495.3	486.2	478.8	471.6	463.6
29.5°	480.5	489.7	497.6	505.9	500.6	496.3	492.3	483.0	475.5	468.2	460.2
30°	477.2	486.6	494.7	503.1	497.6	493.4	489.3	479.7	472.2	464.8	456.5
30.5°	473.9	483.4	491.8	500.3	494.6	490.3	486.1	476.5	468.7	461.2	452.8
31°	470.5	480.3	488.6	497.5	491.6	487.1	482.9	473.1	465.3	457.6	449.1
31.5°	467.0	476.9	485.5	494.4	488.4	483.8	479.7	469.6	461.7	453.9	445.3
32°	463.4	473.4	482.2	491.4	485.3	480.6	476.3	466.1	458.0	450.2	441.4
32.5°	459.8	470.1	478.9	488.2	481.9	477.2	472.8	462.5	454.3	446.3	437.3
33°	456.1	466.5	475.5	485.1	478.5	473.6	469.3	458.9	450.6	442.4	433.3
33.5°	452.3	462.8	472.0	481.7	475.1	470.1	465.8	455.2	446.6	438.3	429.3
34°	448.4	459.2	468.5	478.4	471.6	466.5	462.1	451.3	442.6	434.2	425.1
34.5°	444.7	455.5	464.9	475.0	467.9	462.8	458.3	447.4	438.6	430.2	420.9
35°	440.6	451.7	461.2	471.4	464.1	459.0	454.5	443.5	434.7	426.0	416.5
35.5°	436.6	447.7	457.4	467.8	460.4	455.3	450.6	439.4	430.5	421.6	412.1
36°	432.3	443.7	453.5	464.1	456.6	451.2	446.7	435.4	426.2	417.3	407.5
36.5°	428.2	439.8	449.6	460.4	452.6	447.1	442.6	431.2	421.8	412.8	403.0
37°	424.1	435.7	445.6	456.6	448.5	443.0	438.4	427.0	417.5	408.3	398.4
37.5°	419.8	431.6	441.7	452.6	444.3	438.8	434.2	422.6	413.1	403.8	393.8
38°	415.4	427.3	437.5	448.6	440.3	434.7	430.1	418.2	408.7	399.2	389.0
38.5°	411.0	423.0	433.3	444.5	435.9	430.4	425.7	413.8	404.0	394.6	384.1
39°	406.5	418.6	429.0	440.5	431.7	425.9	421.3	409.2	399.5	389.8	379.4
39.5°	402.1	414.2	424.8	436.2	427.2	421.5	416.8	404.7	394.9	384.9	374.5
40°	397.5	409.9	420.4	431.9	422.8	417.0	412.3	400.2	390.2	380.1	369.5
40.5°	392.8	405.3	416.0	427.5	418.2	412.4	407.7	395.5	385.5	375.2	364.7
41°	388.2	400.7	411.4	423.1	413.7	407.7	403.1	390.8	380.6	370.2	359.5
41.5°	383.5	396.1	406.8	418.5	409.1	403.1	398.3	385.9	375.8	365.3	354.5
42°	378.7	391.5	402.2	414.0	404.4	398.4	393.6	381.1	370.9	360.3	349.4
42.5°	373.9	386.8	397.6	409.4	399.7	393.6	389.0	376.3	366.0	355.3	344.3
43°	369.1	382.0	392.8	404.9	394.9	388.8	384.1	371.4	361.1	350.1	338.9
43.5°	364.4	377.2	388.1	400.1	390.1	384.0	379.1	366.5	356.1	345.0	333.8



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	349.6	362.6	373.6	385.8	375.3	369.1	364.4	351.4	341.1	329.8	318.7
45.5°	344.6	357.6	368.8	380.9	370.3	364.1	359.4	346.4	336.1	324.9	313.8
46°	339.6	352.6	363.8	376.0	365.4	359.0	354.3	341.4	331.0	319.9	309.1
46.5°	334.5	347.6	358.8	371.0	360.3	354.0	349.1	336.3	326.0	314.9	304.2
47°	329.6	342.7	353.8	366.0	355.2	349.1	344.3	331.4	321.2	310.1	299.0
47.5°	324.7	337.7	348.9	361.0	350.3	344.3	339.4	326.5	316.3	304.9	293.4
48°	319.8	332.7	343.8	355.9	345.5	339.3	334.5	321.6	311.0	299.3	287.4
48.5°	314.7	327.8	338.9	351.0	340.5	334.6	329.5	316.4	305.4	293.1	280.6
49°	309.9	322.9	333.9	346.0	335.6	329.5	324.6	310.6	299.5	286.4	273.3
49.5°	304.5	317.8	329.2	340.9	330.7	324.6	319.4	304.7	292.9	279.2	265.5
50°	299.0	312.7	324.2	336.0	325.7	319.1	313.6	298.3	285.9	271.5	257.6
50.5°	292.9	307.1	318.9	331.1	320.2	313.3	307.7	291.6	278.5	264.0	249.8
51°	286.1	301.1	313.3	326.1	314.4	307.0	301.3	284.4	271.0	255.9	241.5
51.5°	278.4	294.4	307.3	320.8	308.2	299.8	294.2	276.5	262.7	247.7	233.2
52°	270.7	287.2	301.0	315.1	301.3	292.4	286.5	268.1	254.3	239.4	224.8
52.5°	262.6	279.6	294.0	309.1	293.7	285.0	279.0	259.6	245.7	230.9	216.4
53°	254.4	271.5	286.6	302.6	286.2	277.0	270.7	250.8	236.9	222.0	207.9
53.5°	245.8	263.1	278.6	295.7	278.1	269.0	262.4	241.7	228.0	213.2	199.5
54°	237.3	254.9	270.3	288.1	270.0	260.8	253.9	232.7	218.9	204.6	191.1
54.5°	228.7	246.2	261.4	280.1	261.5	252.6	245.2	223.9	209.8	195.8	182.5
55°	220.0	237.4	252.5	271.5	253.1	244.2	236.2	214.5	200.4	186.7	173.9
55.5°	211.2	228.2	243.4	262.7	244.5	235.5	227.3	205.5	191.2	177.9	165.5
56°	202.6	219.2	234.2	253.6	235.7	226.6	218.3	196.3	181.9	169.2	157.0
56.5°	193.7	210.0	224.7	244.5	226.7	217.6	209.3	187.5	172.8	160.4	148.7
57°	185.0	200.6	215.1	235.2	217.6	208.7	200.1	178.7	164.0	151.8	140.5
57.5°	176.2	191.4	205.8	225.8	208.3	199.7	191.1	170.0	155.2	143.3	132.5
58°	167.3	182.0	196.5	216.6	199.3	190.5	182.1	161.2	146.5	134.8	124.6
58.5°	158.7	172.6	187.0	207.3	190.0	181.1	173.2	152.5	137.9	126.6	116.7
59°	150.1	163.7	177.7	198.1	180.7	171.8	164.3	143.9	129.8	118.4	109.2
59.5°	141.6	154.7	168.8	189.2	171.5	162.5	155.5	135.7	121.8	110.5	101.9
60°	133.0	145.8	160.0	180.1	162.3	153.5	146.8	127.3	114.1	102.7	95.0
60.5°	124.7	137.2	151.2	171.2	153.4	144.4	138.3	119.4	106.5	95.9	88.1
61°	116.8	128.8	142.2	162.2	144.6	135.5	129.9	111.3	99.1	89.1	81.1
61.5°	108.8	120.5	133.9	153.9	136.0	126.8	121.6	103.8	92.1	82.3	74.2
62°	101.2	112.4	125.7	145.0	127.4	118.3	113.4	96.7	85.2	75.5	67.2
62.5°	93.9	104.7	117.7	136.6	119.0	109.8	105.3	89.6	78.2	68.7	61.3
63°	86.8	97.2	109.9	128.4	110.8	101.8	98.1	82.5	71.2	62.9	55.7
63.5°	79.9	89.9	102.1	120.2	102.8	94.4	90.7	75.5	64.2	57.4	50.5
64°	73.4	83.0	94.8	112.1	95.5	87.0	83.4	68.5	57.7	52.2	45.7
64.5°	67.0	76.2	87.6	104.2	88.3	79.6	76.1	62.1	51.6	47.3	41.3
65°	60.9	69.9	80.8	96.6	81.0	72.2	68.8	56.2	46.0	42.9	37.4
65.5°	55.1	63.8	74.3	89.3	73.7	65.7	62.1	50.6	40.7	38.7	34.0
66°	49.6	58.3	68.0	82.0	66.4	59.4	56.0	45.4	36.2	35.1	31.1





TEST NUMBER: P775736

CATALOG NUMBER: HCDJBL510CSD-HCD61TRMW-1000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	35.8	43.3	50.6	61.9	48.7	43.2	40.2	32.5	26.3	26.5	24.8
68°	33.1	39.0	45.5	56.0	43.4	38.6	36.0	29.4	24.5	24.6	23.4
68.5°	30.4	35.5	40.8	50.3	38.9	34.4	32.3	26.7	23.4	23.0	22.3
69°	27.7	32.8	36.7	45.1	34.6	30.8	29.3	24.6	22.4	21.8	21.4
69.5°	24.9	30.1	34.0	40.2	31.0	27.8	26.6	23.1	21.5	20.9	20.6
70°	23.5	27.3	31.2	35.7	27.9	25.4	24.6	21.9	20.5	20.0	19.7
70.5°	22.4	24.7	28.6	32.9	25.5	23.5	23.1	21.0	19.6	19.1	18.9
71°	21.5	23.0	25.9	29.9	23.6	22.3	22.0	20.1	18.6	18.3	18.1
71.5°	20.6	21.7	23.2	27.0	22.2	21.4	21.1	19.2	17.7	17.3	17.1
72°	19.7	20.8	22.0	24.2	21.3	20.5	20.3	18.3	16.7	16.4	16.3
72.5°	18.7	19.9	21.2	22.7	20.4	19.6	19.4	17.3	15.8	15.6	15.5
73°	17.8	19.0	20.3	21.7	19.6	18.8	18.5	16.4	15.0	14.8	14.7
73.5°	16.8	18.1	19.4	20.8	18.7	17.9	17.7	15.6	14.2	14.0	14.0
74°	16.0	17.1	18.5	20.0	17.8	17.0	16.7	14.7	13.4	13.2	13.2
74.5°	15.1	16.3	17.7	19.1	16.9	16.1	15.9	13.9	12.5	12.3	12.4
75°	14.3	15.4	16.7	18.2	16.1	15.3	15.1	13.1	11.8	11.6	11.7
75.5°	13.5	14.6	15.9	17.3	15.3	14.5	14.3	12.3	11.1	10.9	11.0
76°	12.7	13.8	15.0	16.4	14.5	13.8	13.5	11.5	10.4	10.2	10.4
76.5°	11.9	13.0	14.3	15.6	13.7	13.0	12.8	10.8	9.7	9.5	9.7
77°	11.1	12.2	13.5	14.8	13.0	12.2	12.0	10.1	9.0	8.9	9.1
77.5°	10.4	11.4	12.7	14.0	12.2	11.5	11.3	9.4	8.4	8.3	8.5
78°	9.8	10.7	11.9	13.3	11.5	10.8	10.6	8.8	7.8	7.7	7.9
78.5°	9.1	10.0	11.2	12.4	10.8	10.2	9.9	8.2	7.1	6.9	7.2
79°	8.5	9.4	10.5	11.7	10.1	9.5	9.3	7.6	6.5	6.3	6.7
79.5°	7.9	8.7	9.8	11.1	9.5	9.0	8.7	6.9	5.9	5.8	6.1
80°	7.2	8.1	9.2	10.4	8.9	8.4	8.1	6.3	5.4	5.2	5.5
80.5°	6.6	7.4	8.6	9.7	8.3	7.8	7.4	5.7	4.9	4.7	5.0
81°	6.1	6.8	8.0	9.1	7.7	7.1	6.8	5.2	4.4	4.2	4.6
81.5°	5.6	6.3	7.3	8.5	7.0	6.6	6.2	4.6	3.9	3.7	4.1
82°	5.0	5.7	6.7	7.9	6.4	6.0	5.7	4.2	3.5	3.2	3.6
82.5°	4.5	5.2	6.2	7.3	5.9	5.5	5.2	3.7	3.0	2.8	3.2
83°	4.1	4.7	5.7	6.7	5.4	5.0	4.7	3.2	2.6	2.3	2.8
83.5°	3.6	4.3	5.2	6.2	5.0	4.5	4.2	2.8	2.1	1.9	2.3
84°	3.2	3.8	4.7	5.7	4.5	4.1	3.8	2.3	1.7	1.5	1.9
84.5°	2.8	3.4	4.2	5.2	4.0	3.6	3.3	1.9	1.4	1.2	1.6
85°	2.2	2.9	3.8	4.7	3.6	3.2	2.9	1.6	1.1	1.0	1.3
85.5°	1.8	2.4	3.3	4.2	3.2	2.8	2.4	1.3	0.8	0.8	1.0
86°	1.5	2.0	2.9	3.8	2.8	2.3	2.1	1.1	0.7	0.6	0.7
86.5°	1.1	1.6	2.6	3.4	2.3	1.9	1.7	0.8	0.5	0.4	0.4
87°	0.9	1.3	2.1	3.0	1.9	1.6	1.4	0.6	0.3	0.2	0.2
87.5°	0.7	1.1	1.8	2.6	1.5	1.2	1.1	0.4	0.2	0.1	0.0
88°	0.5	0.9	1.4	2.1	1.2	0.9	0.8	0.2	0.1	0.0	0.0
88.5°	0.3	0.6	1.1	1.7	0.9	0.6	0.5	0.1	0.0	0.0	0.0



TEST NUMBER: P775736

CATALOG NUMBER: HCDJBL510CSD-HCD61TRMW-1000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.1	0.3	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P775736

CATALOG NUMBER: HCDJBL510CSD-HCD61TRMW-1000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	564.6	564.6	564.6	564.6	564.6	564.6
0.5°	563.2	564.4	564.6	564.6	564.9	564.9
1°	562.7	564.0	564.2	564.3	564.8	564.9
1.5°	562.1	563.5	563.8	564.0	564.6	564.9
2°	561.5	563.0	563.4	563.6	564.4	564.8
2.5°	560.9	562.4	562.9	563.2	564.1	564.6
3°	560.1	561.8	562.4	562.8	563.8	564.5
3.5°	559.4	561.2	561.8	562.2	563.5	564.2
4°	558.7	560.5	561.2	561.7	563.0	564.0
4.5°	557.9	559.7	560.5	561.1	562.6	563.6
5°	557.0	558.9	559.6	560.4	562.1	563.3
5.5°	556.1	558.1	558.9	559.6	561.6	562.9
6°	555.0	557.2	558.1	558.9	561.0	562.5
6.5°	554.0	556.3	557.3	558.1	560.4	562.0
7°	553.0	555.3	556.4	557.3	559.6	561.5
7.5°	551.9	554.2	555.4	556.4	558.9	560.9
8°	550.8	553.2	554.3	555.5	558.2	560.3
8.5°	549.5	552.1	553.3	554.4	557.4	559.5
9°	548.3	551.0	552.2	553.4	556.5	558.8
9.5°	547.1	549.7	551.1	552.3	555.6	558.0
10°	545.7	548.4	549.8	551.2	554.5	557.3
10.5°	544.3	547.2	548.6	549.9	553.5	556.4
11°	542.8	545.8	547.3	548.7	552.4	555.5
11.5°	541.4	544.3	545.9	547.4	551.4	554.4
12°	539.8	542.9	544.4	546.1	550.3	553.4
12.5°	538.2	541.4	543.0	544.6	548.9	552.3
13°	536.5	539.7	541.5	543.2	547.7	551.2
13.5°	534.8	538.1	539.8	541.7	546.3	549.9
14°	533.1	536.5	538.2	540.2	544.8	548.7
14.5°	531.3	534.7	536.5	538.4	543.4	547.5
15°	529.4	532.9	534.8	536.9	542.0	546.2
15.5°	527.5	531.1	533.0	535.0	540.4	544.7
16°	525.6	529.1	531.2	533.2	538.7	543.3
16.5°	523.5	527.2	529.1	531.4	537.0	541.8
17°	521.4	525.2	527.2	529.4	535.3	540.2
17.5°	519.3	523.0	525.2	527.5	533.5	538.5
18°	517.1	521.0	523.0	525.5	531.7	536.9
18.5°	514.8	518.6	520.9	523.3	529.7	535.2
19°	512.5	516.5	518.6	521.2	527.7	533.3
19.5°	510.1	514.1	516.4	518.9	525.7	531.5
20°	507.6	511.7	514.0	516.7	523.6	529.5
20.5°	505.2	509.3	511.5	514.3	521.5	527.6
21°	502.6	506.7	509.0	511.9	519.2	525.6



TEST NUMBER: P775736

CATALOG NUMBER: HCDJBL510CSD-HCD61TRMW-1000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	494.4	498.7	501.3	504.2	512.2	518.9
23°	491.7	496.1	498.4	501.5	509.7	516.7
23.5°	488.7	493.2	495.7	498.7	507.2	514.3
24°	485.8	490.3	492.8	495.9	504.6	511.9
24.5°	482.8	487.3	489.8	493.0	502.0	509.4
25°	479.6	484.2	486.8	490.2	499.1	506.8
25.5°	476.5	481.2	483.6	487.1	496.3	504.1
26°	473.3	477.9	480.6	484.0	493.4	501.4
26.5°	470.0	474.7	477.3	480.8	490.5	498.7
27°	466.6	471.4	474.0	477.5	487.4	495.8
27.5°	463.2	468.0	470.6	474.3	484.3	492.9
28°	459.8	464.5	467.2	471.0	481.2	489.8
28.5°	456.1	461.0	463.7	467.5	477.9	486.9
29°	452.4	457.4	460.1	463.9	474.6	483.7
29.5°	448.7	453.7	456.5	460.5	471.2	480.5
30°	444.9	450.2	452.7	456.7	467.7	477.2
30.5°	441.1	446.3	448.9	453.1	464.2	473.9
31°	437.1	442.4	445.2	449.2	460.7	470.5
31.5°	433.0	438.6	441.4	445.5	457.0	467.0
32°	428.9	434.7	437.4	441.5	453.2	463.4
32.5°	424.9	430.6	433.3	437.6	449.4	459.8
33°	420.6	426.6	429.4	433.6	445.6	456.1
33.5°	416.3	422.5	425.4	429.5	441.6	452.3
34°	412.0	418.2	421.2	425.4	437.6	448.4
34.5°	407.5	413.9	416.9	421.3	433.5	444.7
35°	403.1	409.7	412.7	416.9	429.4	440.6
35.5°	398.5	405.3	408.4	412.6	425.3	436.6
36°	394.0	400.9	404.0	408.2	421.0	432.3
36.5°	389.3	396.5	399.8	403.8	416.7	428.2
37°	384.8	392.0	395.3	399.5	412.2	424.1
37.5°	380.0	387.4	390.8	395.0	407.9	419.8
38°	375.3	382.8	386.3	390.4	403.4	415.4
38.5°	370.3	378.3	381.7	385.7	398.9	411.0
39°	365.6	373.5	377.2	381.2	394.2	406.5
39.5°	360.6	368.8	372.6	376.6	389.7	402.1
40°	355.7	364.2	367.9	371.9	385.1	397.5
40.5°	350.8	359.6	363.2	367.1	380.4	392.8
41°	345.8	354.7	358.4	362.4	375.7	388.2
41.5°	340.7	349.9	353.7	357.6	370.8	383.5
42°	335.7	345.1	348.9	352.8	366.1	378.7
42.5°	330.6	340.3	344.1	348.0	361.2	373.9
43°	325.7	335.5	339.4	343.2	356.4	369.1
43.5°	320.6	330.5	334.6	338.2	351.5	364.4



TEST NUMBER: P775736

CATALOG NUMBER: HCDJBL510CSD-HCD61TRMW-1000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	306.2	315.9	320.0	323.5	336.7	349.6
45.5°	301.4	311.1	315.1	318.6	331.6	344.6
46°	296.3	306.2	310.3	313.8	326.7	339.6
46.5°	291.0	301.4	305.4	308.8	321.7	334.5
47°	285.3	296.5	300.7	304.1	316.9	329.6
47.5°	278.7	291.1	295.7	299.2	312.0	324.7
48°	271.6	285.7	290.3	293.8	307.1	319.8
48.5°	263.9	279.6	284.7	288.3	302.1	314.7
49°	255.9	272.7	279.0	282.7	296.8	309.9
49.5°	247.8	265.3	271.9	276.2	291.4	304.5
50°	239.8	257.3	264.6	269.0	285.5	299.0
50.5°	231.3	249.1	256.3	261.0	278.7	292.9
51°	222.8	240.8	248.1	252.8	271.2	286.1
51.5°	214.4	232.2	239.5	244.5	263.1	278.4
52°	205.8	223.8	231.1	235.9	255.0	270.7
52.5°	197.4	215.0	222.5	227.2	246.7	262.6
53°	188.9	206.0	213.7	218.5	238.4	254.4
53.5°	180.6	197.3	204.5	209.6	229.9	245.8
54°	172.2	188.6	195.8	200.8	221.3	237.3
54.5°	163.9	180.2	186.9	192.0	212.6	228.7
55°	155.7	171.5	177.9	183.7	203.9	220.0
55.5°	147.5	163.0	169.4	175.0	195.2	211.2
56°	139.7	154.8	160.8	166.5	186.5	202.6
56.5°	132.1	146.5	152.3	158.2	177.9	193.7
57°	124.3	138.5	144.1	150.2	169.4	185.0
57.5°	116.7	130.6	135.9	141.8	161.0	176.2
58°	109.2	122.7	127.9	133.9	152.6	167.3
58.5°	102.2	115.3	120.5	126.3	144.4	158.7
59°	95.4	108.1	113.2	118.7	136.5	150.1
59.5°	88.7	100.9	106.1	111.3	128.7	141.6
60°	81.8	94.2	99.2	104.2	121.0	133.0
60.5°	75.1	87.3	92.5	97.1	113.6	124.7
61°	68.3	80.9	86.1	90.4	106.0	116.8
61.5°	62.3	74.9	80.1	83.8	98.8	108.8
62°	56.6	69.2	74.2	77.6	91.7	101.2
62.5°	51.4	63.6	68.6	71.6	84.9	93.9
63°	46.5	58.4	63.3	65.8	78.3	86.8
63.5°	42.2	53.5	58.3	60.5	72.0	79.9
64°	38.2	48.9	53.6	55.4	65.9	73.4
64.5°	34.7	44.6	49.0	50.7	60.0	67.0
65°	31.8	40.7	44.9	46.2	54.5	60.9
65.5°	29.3	37.0	41.0	42.1	49.4	55.1
66°	27.1	34.5	37.4	38.4	44.8	49.6



TEST NUMBER: P775736

CATALOG NUMBER: HCDJBL510CSD-HCD61TRMW-1000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	22.5	26.9	29.7	29.7	34.3	35.8
68°	21.7	24.4	27.1	28.0	31.9	33.1
68.5°	20.8	23.0	24.6	26.1	29.5	30.4
69°	20.0	22.0	23.1	24.3	27.1	27.7
69.5°	19.2	21.2	22.0	22.4	24.7	24.9
70°	18.4	20.4	21.2	21.6	23.2	23.5
70.5°	17.5	19.5	20.4	20.7	22.0	22.4
71°	16.7	18.7	19.6	19.9	21.1	21.5
71.5°	15.9	17.9	18.8	19.1	20.2	20.6
72°	15.1	17.0	17.9	18.3	19.3	19.7
72.5°	14.4	16.2	17.0	17.4	18.5	18.7
73°	13.7	15.4	16.2	16.6	17.5	17.8
73.5°	12.9	14.7	15.5	15.8	16.7	16.8
74°	12.1	13.9	14.7	15.0	15.8	16.0
74.5°	11.5	13.2	14.0	14.2	15.0	15.1
75°	10.8	12.4	13.3	13.5	14.2	14.3
75.5°	10.2	11.7	12.5	12.8	13.4	13.5
76°	9.5	11.1	11.8	12.0	12.7	12.7
76.5°	8.9	10.4	11.1	11.3	11.8	11.9
77°	8.4	9.8	10.5	10.6	11.1	11.1
77.5°	7.8	9.2	9.8	9.9	10.4	10.4
78°	7.2	8.6	9.2	9.3	9.7	9.8
78.5°	6.6	8.0	8.6	8.7	9.1	9.1
79°	6.1	7.4	8.0	8.1	8.5	8.5
79.5°	5.6	6.8	7.4	7.4	7.8	7.9
80°	5.1	6.3	6.8	6.9	7.2	7.2
80.5°	4.6	5.8	6.3	6.3	6.6	6.6
81°	4.2	5.3	5.8	5.8	6.0	6.1
81.5°	3.7	4.8	5.3	5.3	5.5	5.6
82°	3.3	4.4	4.8	4.8	5.0	5.0
82.5°	2.9	3.9	4.4	4.4	4.5	4.5
83°	2.4	3.5	3.9	3.9	4.0	4.1
83.5°	2.0	3.1	3.5	3.5	3.5	3.6
84°	1.6	2.7	3.1	3.1	3.1	3.2
84.5°	1.2	2.2	2.7	2.7	2.7	2.8
85°	0.9	1.8	2.2	2.2	2.1	2.2
85.5°	0.6	1.4	1.8	1.8	1.8	1.8
86°	0.3	1.0	1.4	1.5	1.5	1.5
86.5°	0.1	0.7	1.1	1.1	1.2	1.1
87°	0.0	0.4	0.7	0.8	0.9	0.9
87.5°	0.0	0.2	0.4	0.5	0.7	0.7
88°	0.0	0.0	0.2	0.2	0.5	0.5
88.5°	0.0	0.0	0.0	0.1	0.3	0.3



TEST NUMBER: P775736

CATALOG NUMBER: HCDJBL510CSD-HCD61TRMW-1000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.0	0.0	0.0	0.0	0.0	0.0

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Peachtree City, GA 30269

Scaled Data Report



Report Generated By 670245859 / DESKTOP-T8S5UU9



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

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21.5°	523.4	529.6	534.9	540.3	537.3	534.3	531.4	524.8	519.3	513.6	507.7
22°	521.2	527.7	533.1	538.6	535.6	532.6	529.4	522.7	517.1	511.4	505.3



44°	359.6	372.4	383.4	395.5	385.2	379.0	374.2	361.5	351.1	339.9	328.7
44.5°	354.5	367.4	378.4	390.7	380.2	374.2	369.2	356.5	346.0	334.9	323.7



66.5°	44.6	52.9	61.9	75.3	60.1	53.7	50.2	40.7	32.2	31.8	28.7
67°	40.1	47.9	56.1	68.4	54.1	48.2	45.0	36.3	29.0	29.0	26.5



89°	0.2	0.4	0.8	1.4	0.6	0.3	0.2	0.0	0.0	0.0	0.0
89.5°	0.1	0.2	0.5	1.0	0.3	0.1	0.1	0.0	0.0	0.0	0.0



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21.5°	500.0	504.1	506.5	509.3	517.0	523.4
22°	497.2	501.6	503.9	506.8	514.6	521.2



44°	315.8	325.6	329.7	333.4	346.6	359.6
44.5°	311.0	320.7	324.8	328.4	341.6	354.5

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66.5°	25.3	31.9	34.9	34.9	40.5	44.6
67°	23.8	29.4	32.2	31.9	36.7	40.1

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89°	0.0	0.0	0.0	0.0	0.1	0.2
89.5°	0.0	0.0	0.0	0.0	0.0	0.1

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(END OF REPORT)