

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: P775698

Luminaire Tested: HCDJBL5510CSD-HCD4TSQH-1000lm-4000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P775698
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2310613A001)
Test Lab:
Issue Date: 2/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL510CSD-HCD4TSQH-1000lm-4000K
Description: 4 INCH SQUARE MEDIUM HAZE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT
Ballast/Driver: -

Summary

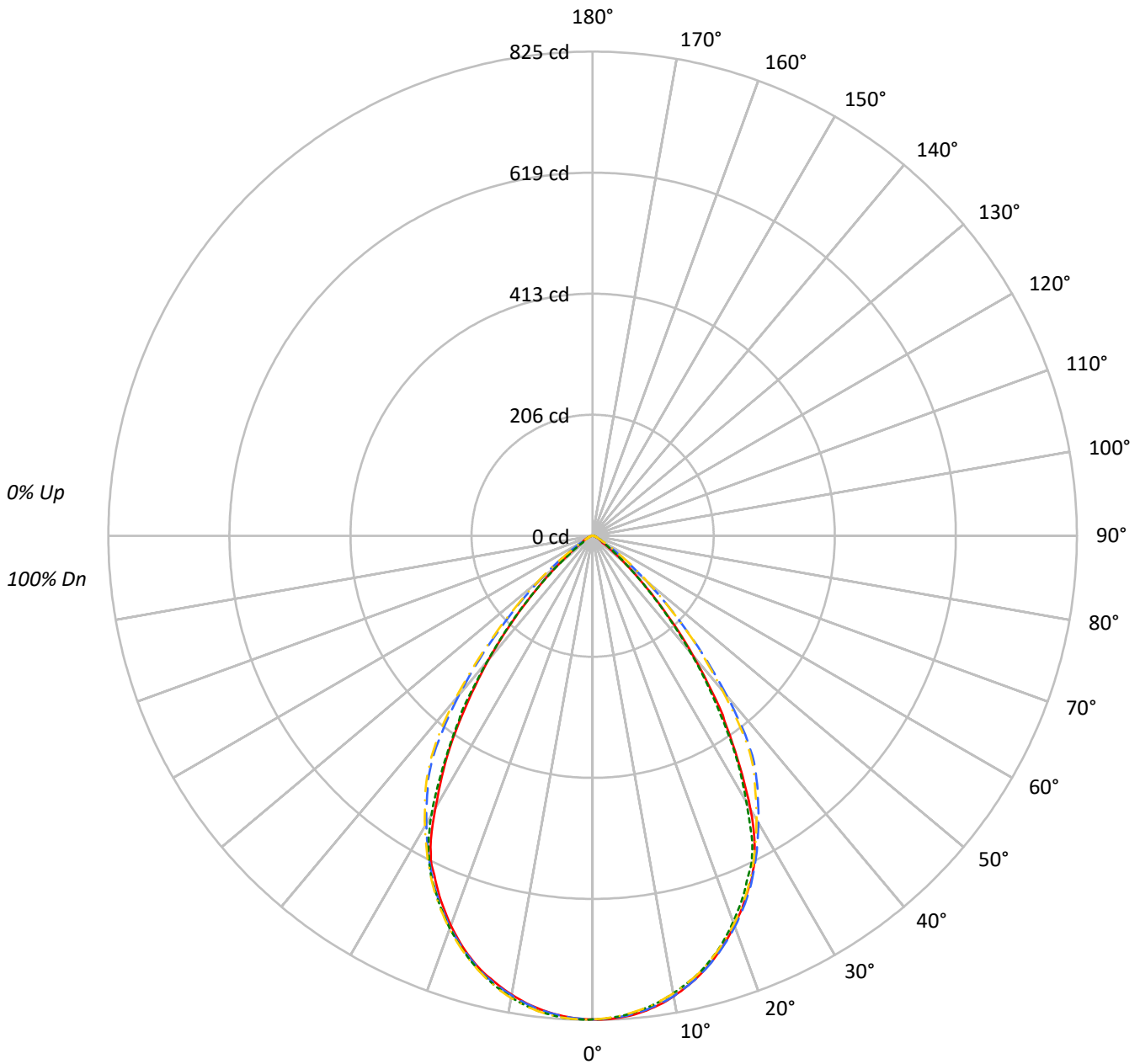
Lumens per Lamp: N/A
Luminaire Lumens: 1055.0 lumens
Efficiency: N/A
Efficacy: 105.5 lumens/watt
Spacing Criteria (0/90/45): 1.05 / 1.05 / 1.09
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 10
Input Voltage (V): NR
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: 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					100			
1	113	110	107	104	110	107	105	103	103	101	100	100	98	97	96	95	94	92					92			
2	106	101	96	92	104	99	95	91	96	92	89	93	90	87	90	88	85	84					84			
3	100	93	87	82	98	91	86	82	88	84	80	86	82	79	84	81	78	76					76			
4	94	85	79	74	92	84	78	74	82	77	73	80	76	72	78	74	71	70					70			
5	88	79	72	67	87	78	72	67	76	71	66	74	70	66	73	69	65	64					64			
6	83	73	66	61	82	72	66	61	71	65	61	69	64	60	68	63	60	58					58			
7	78	68	61	56	77	67	61	56	66	60	56	65	59	56	63	59	55	54					54			
8	74	63	56	52	73	63	56	52	61	56	51	60	55	51	59	55	51	49					49			
9	70	59	52	48	69	58	52	48	57	52	48	57	51	47	56	51	47	46					46			
10	66	55	49	44	65	55	49	44	54	48	44	53	48	44	52	47	44	43					43			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	81456	81456	81456	81456
5°	81231	80884	80983	81311
10°	79942	79451	79671	80173
15°	77678	77258	77668	78016
20°	74324	73630	74282	74850
25°	70071	68904	69635	70671
30°	61381	59783	61130	62739
35°	48169	47143	49110	49762
40°	34270	33535	35586	35935
45°	20954	20422	22212	22337
50°	10287	10610	11456	11072
55°	3860	5325	5618	4308
60°	2807	3558	3598	2847
65°	2222	2807	2853	2292
70°	1763	2254	2283	1850
75°	1375	1757	1757	1528
80°	911	1366	1309	1195
85°	340	1021	567	794

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 315°

Vertical Angle: 45°

Luminance: 32136 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.3	7.3
10°-20°	213.1	20.2
20°-30°	293.3	27.8
30°-40°	269.5	25.5
40°-50°	145.7	13.8
50°-60°	39.3	3.7
60°-70°	11.2	1.1
70°-80°	4.7	0.4
80°-90°	0.9	0.1
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°	583.7	55.3
0°-40°	853.2	80.9
0°-60°	1038.2	98.4
0°-90°	1055.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1055.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	824	824	824	824	824	
5°	819	815	816	820	819	77
15°	759	755	759	762	759	213
25°	642	632	638	648	642	292
35°	399	391	407	412	399	248
45°	150	146	159	160	150	118
55°	22	31	33	25	22	26
65°	10	12	12	10	10	10
75°	4	5	5	4	4	4
85°	0	1	0	1	0	1
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°	824.1	824.1	824.1	824.1	824.1	824.1	824.1	824.1	824.1	824.1	824.1
0.5°	824.5	824.2	823.9	823.6	824.1	823.6	823.8	823.9	824.2	824.2	823.8
1°	824.5	824.0	823.6	823.4	823.7	823.1	823.3	823.4	823.8	824.0	823.6
1.5°	824.2	823.6	823.5	822.8	822.9	822.3	822.6	822.7	823.4	823.5	823.0
2°	824.0	823.3	822.8	822.3	822.1	821.7	821.8	822.0	822.5	822.9	822.5
2.5°	823.5	822.7	822.3	821.6	821.3	820.7	820.9	821.0	821.9	822.2	821.9
3°	822.8	821.8	821.6	820.8	820.4	819.7	819.9	820.1	821.0	821.6	821.0
3.5°	822.0	820.9	820.6	819.9	819.4	818.5	818.6	818.9	820.0	820.6	820.2
4°	821.0	819.9	819.9	818.8	818.1	817.4	817.4	817.8	818.7	819.7	819.2
4.5°	820.0	818.6	818.5	817.7	816.6	815.8	816.0	816.4	817.6	818.6	817.9
5°	818.7	817.3	817.3	816.2	815.2	814.3	814.4	815.0	816.2	817.2	816.5
5.5°	817.2	815.8	815.9	814.7	813.5	812.5	812.7	813.3	814.6	815.9	815.1
6°	815.7	814.0	814.2	813.1	811.7	810.6	811.0	811.6	812.9	814.2	813.4
6.5°	813.9	812.2	812.5	811.4	809.7	808.7	809.0	809.6	811.1	812.6	811.7
7°	811.9	810.1	810.5	809.3	807.6	806.4	807.0	807.7	809.1	810.8	809.8
7.5°	809.8	808.0	808.5	807.4	805.3	804.2	804.7	805.5	806.9	808.8	807.7
8°	807.6	805.7	806.6	804.9	802.9	801.6	802.2	803.0	804.7	806.6	805.5
8.5°	805.1	803.3	804.1	802.4	800.1	799.2	799.8	800.6	802.1	804.1	803.2
9°	802.5	800.8	801.6	799.8	797.5	796.4	797.1	797.9	799.5	801.6	800.8
9.5°	799.6	797.7	799.1	797.2	794.6	793.5	794.3	795.1	796.7	799.1	798.0
10°	796.5	794.8	796.2	794.2	791.6	790.6	791.4	792.3	793.8	796.4	795.3
10.5°	793.4	791.5	793.2	791.1	788.6	787.5	788.5	789.2	790.8	793.5	792.3
11°	790.2	788.3	790.4	788.0	785.4	784.4	785.3	786.1	787.8	790.5	789.2
11.5°	786.8	784.9	786.8	784.7	782.0	780.9	781.9	783.1	784.7	787.3	786.0
12°	783.1	781.2	783.4	781.1	778.5	777.6	778.5	779.7	781.2	784.3	783.8
12.5°	779.6	777.5	779.7	777.6	775.0	774.1	775.0	776.3	777.8	780.7	780.2
13°	775.8	773.7	776.1	773.8	771.7	770.6	771.6	772.8	774.3	777.3	776.6
13.5°	771.9	769.6	772.2	769.9	768.1	767.2	768.1	769.5	770.8	773.8	773.1
14°	767.8	765.6	768.0	765.9	763.9	762.9	764.1	765.3	767.4	770.3	769.6
14.5°	763.4	761.1	763.7	761.8	759.5	758.6	759.8	761.0	763.3	766.9	764.7
15°	759.1	756.7	759.5	757.6	755.0	754.3	755.3	756.8	759.0	762.7	760.3
15.5°	754.5	752.2	755.1	753.0	750.4	749.5	750.7	752.2	754.5	758.3	755.8
16°	749.8	747.4	750.3	748.3	745.6	744.9	746.0	747.6	749.8	753.8	751.3
16.5°	744.8	742.8	745.4	743.5	740.6	739.9	741.2	742.8	745.2	749.1	746.6
17°	739.9	737.6	740.7	738.7	735.5	734.9	736.3	738.0	740.4	744.4	741.7
17.5°	734.7	732.5	735.6	733.6	730.1	729.8	731.1	732.7	735.0	739.6	736.6
18°	729.4	727.2	730.5	728.2	724.2	724.3	726.0	727.6	729.5	734.5	731.6
18.5°	723.6	721.6	725.1	723.0	718.3	718.7	720.5	722.1	723.9	729.2	726.3
19°	718.1	715.9	719.8	717.4	712.2	712.8	715.1	716.4	718.1	723.6	720.9
19.5°	712.4	710.3	714.2	711.4	706.3	706.8	709.5	710.7	712.2	717.8	715.3
20°	706.6	704.4	708.7	705.3	700.0	700.5	703.8	704.7	706.2	711.9	709.7
20.5°	700.5	698.4	702.9	699.1	693.7	694.2	697.9	698.5	700.0	705.9	703.7
21°	694.3	692.1	696.7	692.7	687.1	687.8	691.9	692.2	693.7	699.6	697.9



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CATALOG NUMBER: HCDJBL510CSD-HCD4TSQH-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	675.4	672.9	678.1	672.8	667.4	667.9	673.1	672.4	674.0	680.2	679.4
23°	668.3	666.2	671.6	665.7	660.4	661.0	666.7	665.4	667.4	673.5	672.9
23.5°	661.8	659.6	664.8	659.1	653.0	654.3	659.8	658.6	660.4	666.7	666.0
24°	655.1	652.6	658.2	652.0	645.5	647.1	652.9	651.6	653.2	659.8	659.1
24.5°	649.0	645.7	651.1	645.0	638.4	639.8	645.6	644.6	645.8	652.8	652.0
25°	642.5	638.3	643.9	637.4	631.8	632.2	638.3	637.4	638.5	645.6	644.8
25.5°	634.0	631.5	636.4	629.8	625.2	624.6	630.8	629.9	631.7	638.0	637.5
26°	626.3	624.9	628.6	621.9	618.6	617.1	623.2	622.3	625.3	630.4	630.1
26.5°	618.0	618.4	621.2	614.5	608.9	610.1	615.3	614.6	617.4	622.8	622.3
27°	608.2	609.7	613.4	607.2	598.7	603.3	607.4	607.1	607.1	615.7	614.6
27.5°	597.9	601.4	605.5	600.5	589.2	596.4	599.5	599.9	598.1	609.1	606.7
28°	587.1	592.6	597.4	593.7	576.0	588.4	591.4	593.0	587.0	601.9	598.7
28.5°	575.7	583.4	589.5	586.1	562.7	577.6	583.3	585.2	574.2	591.6	590.8
29°	564.0	573.3	581.2	575.7	549.9	568.7	575.2	575.1	561.4	582.2	582.7
29.5°	551.0	562.8	573.3	566.1	536.8	557.7	566.7	565.8	548.3	572.8	574.7
30°	537.8	551.4	565.2	555.8	523.8	544.6	558.5	555.5	535.6	560.6	566.5
30.5°	523.8	540.3	556.9	543.2	511.2	531.6	550.0	543.0	522.6	547.6	558.3
31°	509.8	527.6	548.5	530.0	498.7	519.0	541.4	530.7	510.3	535.0	549.9
31.5°	495.5	515.2	540.1	517.2	486.1	506.1	532.7	517.7	498.0	522.1	541.3
32°	480.9	501.5	531.6	504.5	473.9	493.6	524.3	505.1	485.6	509.6	533.0
32.5°	466.8	488.3	523.7	491.7	460.8	481.4	515.6	492.5	473.0	497.1	524.5
33°	453.1	474.4	516.1	479.3	447.7	469.4	507.6	480.6	460.5	484.8	516.5
33.5°	439.4	460.2	507.9	467.0	433.5	457.2	499.7	468.2	447.8	472.4	509.5
34°	426.1	446.5	498.5	454.8	419.7	445.0	492.0	456.4	434.6	460.2	502.2
34.5°	412.6	432.8	490.4	442.4	405.0	432.3	483.9	444.2	420.7	447.9	491.6
35°	399.2	419.0	482.1	430.0	390.7	420.2	475.0	432.6	407.0	435.5	480.9
35.5°	386.1	406.0	473.2	417.1	376.3	406.7	465.1	420.2	393.2	422.7	471.6
36°	378.0	393.1	462.7	404.2	362.7	393.4	455.2	408.1	379.3	409.9	460.2
36.5°	363.3	380.5	450.6	390.9	349.0	379.9	442.4	395.3	365.6	396.8	447.5
37°	348.2	367.8	439.3	377.3	335.9	366.3	429.7	382.5	351.6	383.3	434.5
37.5°	333.2	355.0	427.1	364.2	322.9	352.4	416.1	369.6	338.5	369.7	421.3
38°	318.2	342.3	412.9	351.1	310.3	339.2	401.3	356.5	325.7	356.5	408.0
38.5°	304.8	329.6	398.2	338.1	297.6	326.4	386.6	343.3	313.0	343.0	394.7
39°	291.4	316.7	384.0	324.9	285.4	313.9	371.9	330.4	300.3	330.2	381.0
39.5°	278.4	303.7	369.8	311.8	272.6	302.1	357.8	317.7	287.9	317.5	367.5
40°	265.6	290.9	355.6	299.3	259.9	289.8	343.9	305.5	275.8	305.0	353.8
40.5°	253.3	277.9	341.4	287.2	247.1	277.9	330.6	293.0	263.2	292.6	340.4
41°	241.0	265.5	327.1	275.4	234.8	266.3	317.6	281.2	250.7	280.6	326.5
41.5°	228.8	253.3	313.0	263.6	222.2	254.9	304.8	269.7	238.0	269.0	313.1
42°	217.1	241.5	299.4	251.6	210.4	242.8	292.3	258.1	225.8	257.1	299.3
42.5°	205.3	229.8	286.2	240.1	198.8	230.9	280.2	246.8	213.9	245.4	285.9
43°	193.9	218.4	273.1	228.4	187.6	219.4	268.2	235.2	202.4	233.6	272.2
43.5°	182.1	207.4	260.2	216.9	176.5	208.1	256.2	223.9	191.0	221.9	259.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	149.9	175.1	222.6	183.4	146.1	175.3	220.5	190.7	158.9	188.3	221.2
45.5°	139.8	164.5	210.4	173.0	136.3	165.4	209.1	179.9	148.8	177.7	209.4
46°	130.1	154.4	198.6	162.7	126.8	155.4	197.6	169.7	139.0	167.4	197.6
46.5°	120.7	144.5	187.1	153.0	117.8	145.9	186.7	159.6	129.6	157.5	186.4
47°	111.7	135.1	175.9	143.6	109.3	136.5	176.2	150.0	120.2	147.8	175.7
47.5°	103.4	125.8	165.1	134.2	101.3	127.5	166.0	140.3	111.5	138.1	165.2
48°	95.4	117.0	154.8	125.1	94.6	118.7	156.6	131.2	103.2	129.2	155.0
48.5°	87.8	108.7	144.9	116.4	87.9	110.3	147.1	122.5	96.0	120.2	145.1
49°	80.6	100.7	135.5	108.3	81.2	102.3	138.2	113.7	88.8	111.7	136.1
49.5°	73.5	93.0	126.5	100.3	74.6	95.4	129.7	105.5	81.6	103.5	126.5
50°	66.9	85.7	117.8	92.5	69.0	88.4	121.5	98.5	74.5	96.3	117.7
50.5°	60.8	78.6	109.2	85.1	63.9	81.5	113.7	91.5	68.7	89.0	109.5
51°	55.1	71.9	101.2	78.3	59.4	74.6	105.9	84.3	63.3	81.6	101.9
51.5°	49.9	65.7	93.6	72.0	55.2	68.9	99.0	77.3	58.5	74.4	94.7
52°	44.9	59.9	86.4	66.2	51.2	63.6	92.4	70.3	54.0	68.2	87.7
52.5°	40.4	54.2	79.4	60.9	47.5	58.8	85.7	64.4	50.0	62.6	80.7
53°	36.2	48.9	73.0	56.1	43.9	54.4	79.0	59.0	46.1	57.6	73.6
53.5°	32.8	44.2	66.9	51.8	40.6	50.4	72.3	54.2	42.5	52.9	67.2
54°	29.3	39.8	61.2	47.7	37.3	46.7	66.6	49.8	39.1	48.7	61.5
54.5°	25.8	35.6	55.8	43.9	34.0	43.2	61.2	45.7	35.7	44.7	56.3
55°	22.4	31.7	51.0	40.5	30.9	39.8	56.2	42.0	32.6	41.2	51.2
55.5°	20.1	28.9	46.4	37.2	28.0	36.7	51.5	38.5	29.4	37.8	46.6
56°	19.2	26.1	42.2	34.4	25.5	33.5	47.0	35.2	26.7	34.6	42.3
56.5°	18.5	23.3	38.3	31.6	23.7	30.5	43.0	32.1	24.5	31.5	38.4
57°	17.9	20.6	35.5	28.8	22.7	27.5	39.2	29.2	22.9	28.5	34.8
57.5°	17.1	17.7	32.6	25.9	21.8	24.9	35.7	26.4	22.1	25.6	31.5
58°	16.5	17.1	29.7	23.5	21.0	22.5	32.5	23.6	21.2	23.2	28.6
58.5°	15.9	16.5	26.9	21.4	20.3	20.7	29.6	21.4	20.4	21.3	25.8
59°	15.2	15.9	24.0	19.8	19.4	19.7	26.9	19.7	19.6	20.1	23.5
59.5°	14.7	15.2	21.9	19.0	18.7	18.9	24.6	18.8	18.9	19.3	21.5
60°	14.2	14.7	20.2	18.2	18.0	18.2	22.5	18.1	18.2	18.6	19.7
60.5°	13.5	14.2	18.5	17.5	17.2	17.5	20.6	17.3	17.4	17.9	18.1
61°	13.0	13.5	17.1	16.8	16.6	16.8	18.9	16.6	16.8	17.1	16.8
61.5°	12.6	13.1	15.9	16.2	16.0	16.2	17.4	16.0	16.2	16.5	15.5
62°	12.1	12.6	14.8	15.4	15.3	15.5	16.2	15.3	15.4	15.9	14.5
62.5°	11.6	12.1	13.8	14.9	14.7	14.9	15.1	14.7	14.9	15.2	13.5
63°	11.1	11.7	12.9	14.3	14.1	14.3	14.1	14.2	14.3	14.6	12.8
63.5°	10.7	11.1	12.2	13.7	13.5	13.8	13.2	13.5	13.8	14.1	12.1
64°	10.3	10.7	11.7	13.1	13.0	13.2	12.4	13.0	13.1	13.4	11.6
64.5°	9.9	10.3	11.2	12.6	12.5	12.7	11.8	12.5	12.6	12.9	11.0
65°	9.5	10.0	10.7	12.1	12.0	12.2	11.2	12.0	12.2	12.4	10.6
65.5°	9.1	9.6	10.3	11.7	11.4	11.7	10.8	11.4	11.7	11.9	10.2
66°	8.7	9.1	10.0	11.1	10.9	11.2	10.4	11.0	11.1	11.4	9.8



TEST NUMBER: P775698

CATALOG NUMBER: HCDJBL510CSD-HCD4TSQH-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	7.7	8.1	8.8	9.8	9.7	9.9	9.2	9.7	9.8	10.1	8.6
68°	7.4	7.8	8.4	9.3	9.2	9.5	8.8	9.2	9.3	9.7	8.3
68.5°	7.0	7.4	8.1	9.0	8.8	9.0	8.5	8.8	8.9	9.2	8.0
69°	6.7	7.0	7.8	8.6	8.5	8.7	8.1	8.5	8.6	8.8	7.7
69.5°	6.4	6.7	7.5	8.3	8.1	8.3	7.8	8.1	8.2	8.4	7.4
70°	6.1	6.4	7.1	7.9	7.8	8.0	7.5	7.8	7.9	8.1	6.9
70.5°	5.8	6.2	6.8	7.6	7.4	7.7	7.0	7.4	7.5	7.7	6.7
71°	5.6	5.9	6.5	7.2	7.0	7.2	6.7	7.0	7.1	7.4	6.4
71.5°	5.3	5.6	6.2	6.8	6.7	6.9	6.4	6.7	6.7	6.9	6.1
72°	5.0	5.4	5.9	6.6	6.4	6.6	6.2	6.4	6.4	6.6	5.8
72.5°	4.7	5.0	5.7	6.3	6.1	6.3	5.9	6.1	6.1	6.3	5.6
73°	4.5	4.8	5.4	6.0	5.8	6.0	5.6	5.8	5.8	6.0	5.3
73.5°	4.2	4.5	5.0	5.7	5.5	5.7	5.4	5.5	5.5	5.7	5.0
74°	4.0	4.3	4.8	5.4	5.3	5.5	5.0	5.1	5.3	5.5	4.8
74.5°	3.8	4.1	4.6	5.1	4.9	5.1	4.8	4.9	4.9	5.1	4.5
75°	3.6	3.8	4.3	4.8	4.6	4.9	4.5	4.6	4.6	4.8	4.3
75.5°	3.4	3.6	4.1	4.6	4.4	4.6	4.3	4.4	4.4	4.6	4.1
76°	3.0	3.4	3.9	4.4	4.2	4.4	4.1	4.1	4.1	4.3	3.9
76.5°	2.8	3.2	3.7	4.1	3.9	4.2	3.9	3.9	3.9	4.1	3.6
77°	2.7	2.9	3.5	3.9	3.7	3.9	3.7	3.6	3.6	3.8	3.4
77.5°	2.5	2.7	3.3	3.7	3.5	3.7	3.5	3.4	3.4	3.6	3.2
78°	2.3	2.5	3.0	3.5	3.3	3.5	3.3	3.2	3.2	3.4	2.9
78.5°	2.1	2.3	2.8	3.3	3.0	3.3	3.0	2.9	2.9	3.0	2.8
79°	2.0	2.1	2.6	3.0	2.8	3.0	2.8	2.7	2.7	2.8	2.6
79.5°	1.8	1.9	2.5	2.8	2.6	2.8	2.6	2.5	2.5	2.6	2.4
80°	1.6	1.8	2.3	2.6	2.4	2.6	2.5	2.3	2.3	2.4	2.2
80.5°	1.5	1.6	2.1	2.4	2.3	2.4	2.3	2.1	2.1	2.2	2.1
81°	1.3	1.4	2.0	2.2	2.1	2.2	2.1	1.9	1.9	2.0	1.9
81.5°	1.2	1.3	1.8	2.0	1.9	2.1	2.0	1.7	1.7	1.8	1.8
82°	1.1	1.1	1.7	1.9	1.8	1.9	1.8	1.6	1.6	1.6	1.6
82.5°	0.8	0.9	1.5	1.7	1.6	1.8	1.7	1.4	1.4	1.4	1.5
83°	0.7	0.8	1.4	1.6	1.5	1.6	1.5	1.3	1.2	1.3	1.3
83.5°	0.5	0.6	1.2	1.4	1.4	1.5	1.4	1.1	1.1	1.1	1.2
84°	0.4	0.5	1.1	1.3	1.2	1.3	1.3	0.9	0.8	0.9	1.1
84.5°	0.4	0.4	0.9	1.1	1.1	1.2	1.1	0.8	0.7	0.7	0.9
85°	0.3	0.4	0.8	0.9	0.9	1.1	0.9	0.6	0.5	0.6	0.8
85.5°	0.2	0.3	0.7	0.8	0.7	0.8	0.8	0.5	0.4	0.5	0.6
86°	0.2	0.2	0.5	0.6	0.6	0.7	0.7	0.4	0.4	0.4	0.5
86.5°	0.2	0.2	0.4	0.5	0.5	0.6	0.6	0.4	0.3	0.3	0.4
87°	0.1	0.1	0.3	0.4	0.4	0.4	0.5	0.3	0.3	0.3	0.3
87.5°	0.0	0.1	0.2	0.3	0.3	0.3	0.4	0.2	0.2	0.2	0.2
88°	0.0	0.0	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.1
88.5°	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1



TEST NUMBER: P775698
CATALOG NUMBER: HCDJBL510CSD-HCD4TSQH-1000lm-4000K

CANDELA DISTRIBUTION (continued):

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



TEST NUMBER: P775698

CATALOG NUMBER: HCDJBL510CSD-HCD4TSQH-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	824.1	824.1	824.1	824.1	824.1	824.1
0.5°	823.9	824.6	824.2	824.4	824.2	824.5
1°	823.8	824.5	824.2	824.4	824.2	824.5
1.5°	823.5	824.5	824.2	824.3	824.2	824.2
2°	823.0	824.2	824.1	824.1	824.0	824.0
2.5°	822.5	824.0	823.7	824.0	823.6	823.5
3°	821.8	823.5	823.1	823.4	823.0	822.8
3.5°	820.9	822.6	822.5	822.7	822.3	822.0
4°	819.9	821.7	821.7	821.9	821.6	821.0
4.5°	818.7	820.6	820.7	820.9	820.5	820.0
5°	817.5	819.5	819.6	819.8	819.4	818.7
5.5°	816.0	818.2	818.3	818.4	818.0	817.2
6°	814.4	816.6	816.8	817.1	816.5	815.7
6.5°	812.6	815.0	815.3	815.4	814.9	813.9
7°	810.8	813.2	813.5	813.7	813.1	811.9
7.5°	808.7	811.3	811.7	811.7	811.1	809.8
8°	806.3	809.0	809.5	809.7	808.9	807.6
8.5°	804.0	806.8	807.3	807.4	806.6	805.1
9°	801.6	804.1	805.0	805.1	803.9	802.5
9.5°	798.9	801.4	802.2	802.5	801.5	799.6
10°	796.1	798.8	799.4	799.8	798.6	796.5
10.5°	793.0	795.8	796.6	796.9	795.6	793.4
11°	790.1	792.6	793.4	793.7	792.5	790.2
11.5°	786.8	789.4	790.2	790.6	789.2	786.8
12°	783.4	785.9	786.8	787.2	785.5	783.1
12.5°	779.7	782.4	783.2	783.6	782.1	779.6
13°	776.0	778.7	779.7	780.1	778.4	775.8
13.5°	772.3	774.9	775.9	776.1	774.4	771.9
14°	768.5	771.1	772.0	771.9	770.4	767.8
14.5°	765.6	766.9	767.9	767.6	766.2	763.4
15°	761.3	762.4	763.7	763.3	761.9	759.1
15.5°	756.8	758.1	759.0	758.9	757.4	754.5
16°	752.2	753.5	754.6	754.5	752.8	749.8
16.5°	747.4	748.8	749.9	749.6	748.2	744.8
17°	742.5	743.8	745.1	744.7	743.3	739.9
17.5°	737.5	738.8	740.1	739.8	738.2	734.7
18°	732.2	733.5	734.9	734.6	733.0	729.4
18.5°	726.8	728.2	729.7	729.2	727.5	723.6
19°	721.5	722.7	724.2	723.9	721.9	718.1
19.5°	715.7	717.3	718.5	718.3	716.3	712.4
20°	709.9	711.6	713.0	712.8	710.6	706.6
20.5°	704.1	705.6	707.1	706.9	704.6	700.5
21°	698.0	699.6	700.9	701.0	698.3	694.3



TEST NUMBER: P775698

CATALOG NUMBER: HCDJBL510CSD-HCD4TSQH-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	679.1	680.7	682.1	682.4	679.3	675.4
23°	672.7	674.2	675.5	675.9	672.7	668.3
23.5°	665.9	667.5	668.9	669.2	665.9	661.8
24°	658.9	660.6	662.0	662.4	659.2	655.1
24.5°	652.1	654.0	655.1	655.3	652.3	649.0
25°	645.1	648.0	647.9	648.3	645.1	642.5
25.5°	637.8	639.8	640.6	641.0	637.8	634.0
26°	630.3	631.9	633.8	633.5	630.9	626.3
26.5°	623.9	623.9	627.4	626.1	624.3	618.0
27°	616.8	614.6	618.8	618.7	617.7	608.2
27.5°	607.9	605.3	610.8	610.9	609.2	597.9
28°	600.0	595.4	602.5	602.9	600.7	587.1
28.5°	591.3	584.9	593.4	595.3	592.4	575.7
29°	582.2	573.5	584.1	587.5	583.1	564.0
29.5°	572.4	562.1	574.0	579.5	573.3	551.0
30°	562.4	549.7	563.6	571.5	562.9	537.8
30.5°	551.7	536.5	552.9	563.4	551.7	523.8
31°	540.6	522.6	541.2	555.2	540.2	509.8
31.5°	529.0	509.3	529.1	546.9	528.0	495.5
32°	517.1	495.1	516.7	538.8	515.6	480.9
32.5°	504.3	480.6	503.6	531.4	502.6	466.8
33°	491.1	466.8	489.8	523.3	489.0	453.1
33.5°	477.5	453.0	476.1	514.7	475.2	439.4
34°	464.1	439.4	462.3	507.0	461.5	426.1
34.5°	450.1	425.5	448.8	498.0	447.7	412.6
35°	436.7	412.4	435.0	487.8	433.9	399.2
35.5°	423.4	399.3	421.4	477.8	420.8	386.1
36°	410.3	386.3	408.5	467.8	407.9	378.0
36.5°	397.1	378.7	395.7	456.5	395.0	363.3
37°	384.4	363.9	382.9	444.9	382.4	348.2
37.5°	371.8	348.7	370.1	432.8	369.7	333.2
38°	359.3	333.4	357.3	420.1	357.1	318.2
38.5°	346.6	318.2	344.5	407.2	344.4	304.8
39°	333.9	305.1	331.7	393.5	331.7	291.4
39.5°	321.2	291.6	318.8	380.1	319.1	278.4
40°	308.3	278.5	305.7	365.7	305.8	265.6
40.5°	295.5	265.8	292.6	351.2	293.0	253.3
41°	282.7	253.6	279.9	336.8	280.5	241.0
41.5°	270.3	241.0	267.3	322.4	268.1	228.8
42°	258.2	229.2	255.2	308.0	256.1	217.1
42.5°	246.3	217.5	243.1	294.2	244.2	205.3
43°	234.6	205.2	231.6	280.6	232.6	193.9
43.5°	223.2	193.4	220.0	267.4	221.1	182.1



TEST NUMBER: P775698

CATALOG NUMBER: HCDJBL510CSD-HCD4TSQH-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	190.6	159.8	186.4	229.9	188.3	149.9
45.5°	180.1	149.3	175.5	218.2	177.7	139.8
46°	169.7	139.2	165.0	206.7	167.4	130.1
46.5°	159.3	129.4	154.3	195.0	157.1	120.7
47°	149.4	120.0	144.4	183.8	147.4	111.7
47.5°	139.8	110.9	134.6	172.8	137.8	103.4
48°	130.4	102.2	125.2	162.4	128.5	95.4
48.5°	121.5	94.1	116.3	151.8	119.4	87.8
49°	112.8	86.3	107.6	141.8	111.1	80.6
49.5°	104.7	79.1	99.1	132.1	102.8	73.5
50°	97.2	72.0	91.4	122.7	94.6	66.9
50.5°	89.8	65.3	83.9	113.8	87.1	60.8
51°	82.3	59.2	76.6	105.3	79.9	55.1
51.5°	75.0	53.7	69.9	97.1	73.1	49.9
52°	68.3	48.5	63.7	89.5	66.7	44.9
52.5°	62.1	43.6	57.7	82.1	60.5	40.4
53°	56.2	39.1	52.2	75.2	54.6	36.2
53.5°	50.6	35.6	46.9	68.8	49.3	32.8
54°	45.4	32.0	42.2	62.3	44.3	29.3
54.5°	40.7	28.5	37.9	56.6	39.8	25.8
55°	36.4	25.0	34.3	51.2	36.1	22.4
55.5°	32.6	21.4	30.9	46.1	32.6	20.1
56°	28.7	19.7	27.3	41.4	29.0	19.2
56.5°	25.2	18.9	23.8	37.0	25.4	18.5
57°	22.2	18.2	20.3	33.9	21.8	17.9
57.5°	19.5	17.4	18.3	31.0	19.2	17.1
58°	17.5	16.8	17.5	27.9	17.5	16.5
58.5°	16.8	16.2	16.9	24.9	16.8	15.9
59°	16.1	15.5	16.3	21.9	16.2	15.2
59.5°	15.5	15.0	15.6	20.0	15.5	14.7
60°	14.9	14.4	15.0	18.3	15.0	14.2
60.5°	14.4	13.9	14.5	16.8	14.4	13.5
61°	13.9	13.3	14.0	15.5	13.9	13.0
61.5°	13.3	12.8	13.4	14.4	13.3	12.6
62°	12.8	12.4	12.9	13.4	12.8	12.1
62.5°	12.3	11.9	12.4	12.6	12.4	11.6
63°	11.9	11.4	12.0	11.9	11.9	11.1
63.5°	11.4	11.0	11.4	11.3	11.3	10.7
64°	10.9	10.6	11.0	10.9	10.9	10.3
64.5°	10.6	10.2	10.6	10.5	10.5	9.9
65°	10.2	9.8	10.2	10.1	10.1	9.5
65.5°	9.8	9.3	9.9	9.7	9.7	9.1
66°	9.3	9.0	9.5	9.3	9.3	8.7



TEST NUMBER: P775698

CATALOG NUMBER: HCDJBL510CSD-HCD4TSQH-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	8.4	8.0	8.4	8.3	8.2	7.7
68°	8.0	7.7	8.0	7.9	7.9	7.4
68.5°	7.7	7.4	7.7	7.6	7.6	7.0
69°	7.4	7.0	7.4	7.2	7.2	6.7
69.5°	7.0	6.7	7.0	6.9	6.9	6.4
70°	6.7	6.4	6.8	6.6	6.6	6.1
70.5°	6.5	6.2	6.5	6.4	6.3	5.8
71°	6.2	5.9	6.2	6.1	6.0	5.6
71.5°	5.9	5.7	5.9	5.8	5.7	5.3
72°	5.7	5.4	5.7	5.6	5.5	5.0
72.5°	5.5	5.1	5.4	5.3	5.1	4.7
73°	5.1	4.8	5.1	5.0	4.8	4.5
73.5°	4.9	4.6	4.9	4.8	4.6	4.2
74°	4.7	4.4	4.6	4.5	4.4	4.0
74.5°	4.5	4.2	4.4	4.3	4.1	3.8
75°	4.2	4.0	4.2	4.1	3.9	3.6
75.5°	4.0	3.8	4.0	3.9	3.7	3.4
76°	3.8	3.6	3.8	3.7	3.5	3.0
76.5°	3.6	3.4	3.6	3.5	3.3	2.8
77°	3.4	3.2	3.4	3.2	3.0	2.7
77.5°	3.2	2.9	3.2	3.0	2.7	2.5
78°	2.9	2.7	2.9	2.8	2.5	2.3
78.5°	2.8	2.6	2.7	2.6	2.4	2.1
79°	2.6	2.4	2.5	2.4	2.2	2.0
79.5°	2.4	2.2	2.4	2.2	2.0	1.8
80°	2.2	2.1	2.2	2.1	1.8	1.6
80.5°	2.1	2.0	2.1	1.9	1.6	1.5
81°	1.9	1.8	1.9	1.8	1.5	1.3
81.5°	1.8	1.7	1.7	1.6	1.3	1.2
82°	1.6	1.5	1.6	1.5	1.1	1.1
82.5°	1.5	1.4	1.5	1.3	0.9	0.8
83°	1.4	1.3	1.3	1.2	0.8	0.7
83.5°	1.2	1.2	1.2	1.1	0.7	0.5
84°	1.1	1.1	1.1	0.9	0.5	0.4
84.5°	0.9	0.9	0.8	0.8	0.4	0.4
85°	0.8	0.7	0.7	0.6	0.4	0.3
85.5°	0.6	0.6	0.6	0.5	0.3	0.2
86°	0.5	0.5	0.5	0.4	0.2	0.2
86.5°	0.4	0.4	0.4	0.3	0.2	0.2
87°	0.3	0.3	0.3	0.2	0.1	0.1
87.5°	0.2	0.2	0.2	0.1	0.1	0.0
88°	0.1	0.1	0.1	0.1	0.0	0.0
88.5°	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P775698
CATALOG NUMBER: HCDJBL510CSD-HCD4TSQH-1000lm-4000K

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

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Report Generated By 670245859 / DESKTOP-T8S5UU9

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Scaled Data Report





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

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Scaled Data Report





21.5°	688.1	685.7	690.6	686.1	680.7	681.2	685.8	685.7	687.1	693.2	691.8
22°	681.8	679.4	684.4	679.5	674.2	674.6	679.4	679.1	680.6	686.7	685.8



44°	171.0	196.5	247.5	205.3	166.1	196.6	244.1	212.7	179.7	210.6	246.2
44.5°	160.3	185.7	235.0	194.0	155.8	186.0	232.2	201.5	169.2	199.3	233.5



66.5°	8.4	8.8	9.6	10.7	10.5	10.7	10.0	10.5	10.7	10.9	9.3
67°	8.0	8.4	9.1	10.2	10.1	10.3	9.6	10.1	10.2	10.5	9.0



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

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21.5°	691.7	693.3	694.8	694.9	692.1	688.1
22°	685.5	687.1	688.5	688.7	685.8	681.8



44°	212.1	182.2	208.6	254.6	210.0	171.0
44.5°	201.4	170.9	197.4	242.0	199.0	160.3



66.5°	9.0	8.6	9.0	8.9	8.9	8.4
67°	8.7	8.3	8.7	8.6	8.5	8.0



89°	0.0	0.0	0.0	0.0	0.0	0.0
89.5°	0.0	0.0	0.0	0.0	0.0	0.0

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Scaled Data Report



(END OF REPORT)