

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: P775689

Luminaire Tested: HCDJBS510CSD-HCD4TRMW-1000lm-5000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P775689
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-HCD4TRMW-1000lm-5000K
Description: 4 INCH ROUND MEDIUM MATTE WHITE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 5000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1083.4 lumens
Efficiency: N/A
Efficacy: 108.3 lumens/watt
Spacing Criteria (0/90/45): 1.03 / 1.03 / 1.02
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

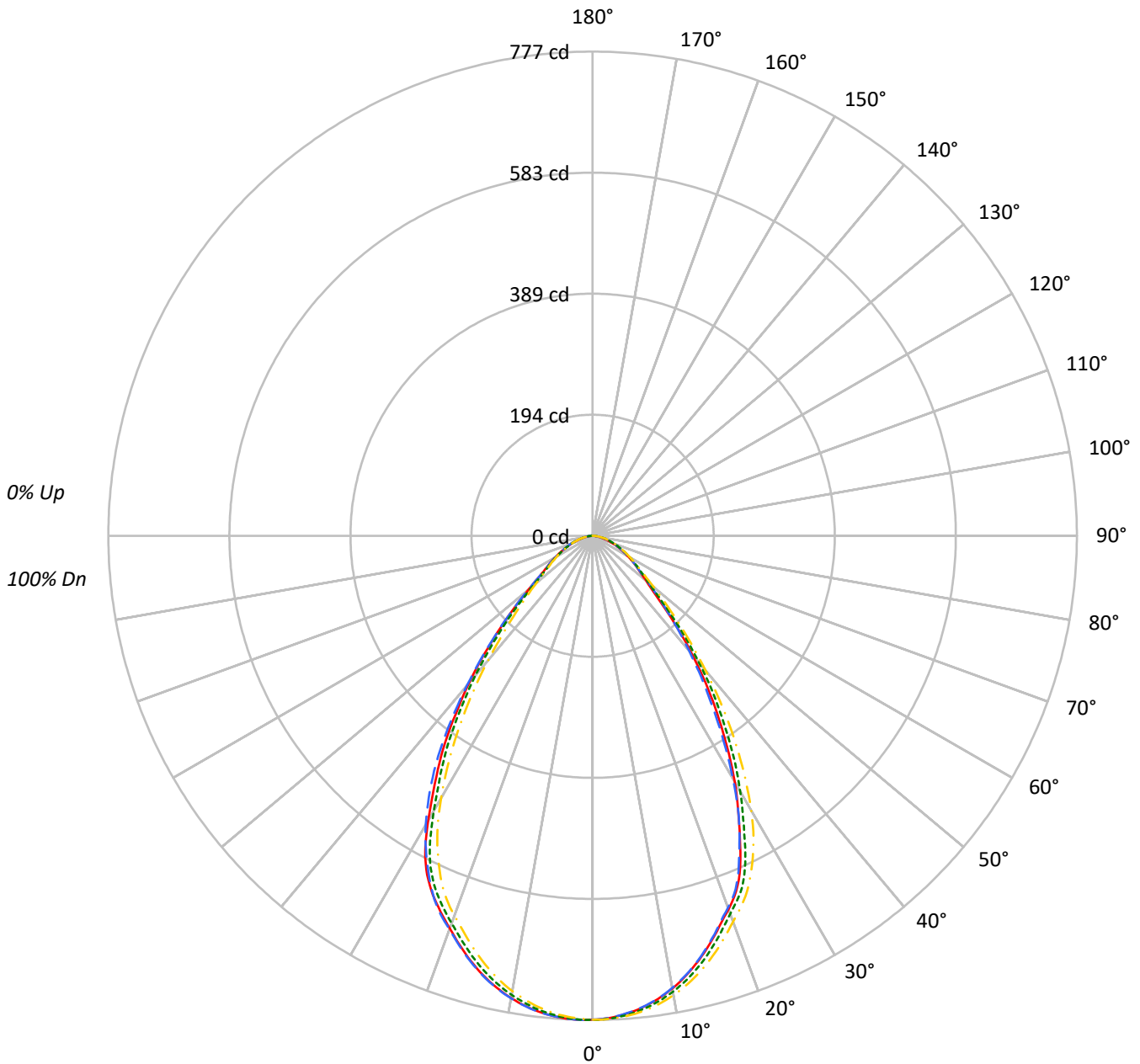
Input Watts (W): 10
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20										
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0					
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	95	93	92	90								
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	84	82	80								
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	76	73	72								
4	91	82	75	69	89	80	74	69	78	72	68	76	71	67	74	70	66	65								
5	85	75	68	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58								
6	80	69	62	56	78	68	61	56	66	60	56	65	60	55	64	59	55	53								
7	75	64	57	51	74	63	56	51	62	56	51	60	55	51	59	54	50	49								
8	71	59	52	47	69	59	52	47	57	51	47	56	51	47	55	50	46	45								
9	67	55	48	44	65	55	48	43	54	48	43	53	47	43	52	47	43	41								
10	63	52	45	40	62	51	45	40	50	44	40	49	44	40	49	44	40	38								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	97748	97748	97748	97748
5°	96693	97060	97590	97300
10°	94246	94923	96252	95613
15°	90199	91268	93600	92610
20°	85392	86490	89798	88619
25°	77873	80414	85899	84343
30°	66280	68823	76685	74011
35°	53511	56384	64296	61592
40°	40710	43651	50616	48086
45°	28761	31271	37269	34919
50°	21928	23220	26216	24415
55°	18694	19484	20142	19199
60°	16335	17216	17493	16738
65°	13966	15217	14949	14592
70°	11848	13541	12731	12952
75°	9530	12059	10697	11378
80°	6668	10509	8190	9712
85°	2310	8375	3754	7075

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 202.5°
 Vertical Angle: 45°
 Luminance: 37785 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.6	6.7
10°-20°	197.9	18.3
20°-30°	268.3	24.8
30°-40°	238.3	22.0
40°-50°	145.9	13.5
50°-60°	80.9	7.5
60°-70°	49.6	4.6
70°-80°	24.5	2.3
80°-90°	5.3	0.5
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°	538.8	49.7
0°-40°	777.1	71.7
0°-60°	1003.9	92.7
0°-90°	1083.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1083.4	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	777	777	777	777	777	
5°	765	768	772	770	765	72
15°	692	700	718	711	692	194
25°	561	579	619	607	561	255
35°	348	367	418	401	348	217
45°	162	176	209	196	162	129
55°	85	89	92	88	85	77
65°	47	51	50	49	47	47
75°	20	25	22	23	20	21
85°	2	6	3	5	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°	776.7	776.7	776.7	776.7	776.7	776.7	776.7	776.7	776.7	776.7	776.7
0.5°	776.4	776.5	776.3	775.8	776.9	776.6	776.6	776.8	777.0	777.2	777.0
1°	775.8	775.9	775.7	775.3	776.6	776.5	776.5	776.9	777.1	777.3	777.1
1.5°	775.1	775.1	774.9	774.6	776.1	776.2	776.2	776.8	777.1	777.3	777.1
2°	774.2	774.1	773.9	773.7	775.4	775.6	775.8	776.4	776.9	777.2	776.9
2.5°	773.2	773.1	772.9	772.6	774.6	775.0	775.3	776.1	776.6	776.9	776.6
3°	771.9	771.9	771.7	771.5	773.6	774.1	774.7	775.5	776.1	776.4	776.1
3.5°	770.5	770.5	770.2	770.2	772.5	773.2	773.8	774.8	775.4	775.7	775.4
4°	769.0	768.9	768.6	768.7	771.3	772.1	772.8	773.9	774.7	775.0	774.7
4.5°	767.4	767.2	766.9	767.1	769.9	770.7	771.6	772.9	773.7	774.1	773.7
5°	765.4	765.3	765.1	765.3	768.3	769.3	770.3	771.7	772.5	773.1	772.6
5.5°	763.4	763.2	762.9	763.3	766.4	767.6	768.7	770.4	771.3	771.8	771.5
6°	761.2	760.9	760.7	761.0	764.4	765.9	767.2	768.9	769.9	770.4	770.2
6.5°	758.8	758.5	758.5	758.8	762.3	763.9	765.4	767.2	768.4	768.9	768.7
7°	756.3	756.0	755.9	756.3	760.1	761.8	763.5	765.4	766.8	767.3	767.0
7.5°	753.6	753.1	753.0	753.7	757.6	759.5	761.3	763.5	764.9	765.5	765.2
8°	750.8	750.4	750.2	750.8	754.8	757.1	759.1	761.3	762.7	763.5	763.2
8.5°	747.7	747.3	747.1	747.7	752.2	754.5	756.7	759.1	760.6	761.2	761.1
9°	744.5	744.0	743.8	744.6	749.2	751.8	754.1	756.5	758.4	759.1	758.9
9.5°	741.0	740.3	740.2	741.2	746.0	748.9	751.3	754.1	755.9	756.7	756.4
10°	737.5	736.7	736.6	737.6	742.8	745.8	748.4	751.3	753.2	754.2	753.9
10.5°	733.7	733.0	732.9	733.8	739.4	742.6	745.4	748.4	750.4	751.4	751.2
11°	729.8	729.0	728.8	730.0	735.6	739.1	742.1	745.5	747.5	748.6	748.3
11.5°	725.6	724.7	724.7	726.0	731.9	735.4	738.7	742.1	744.5	745.5	745.4
12°	721.4	720.5	720.4	721.7	728.0	731.7	735.1	738.7	741.3	742.4	742.1
12.5°	716.9	715.9	715.9	717.1	723.6	727.7	731.3	735.2	737.8	739.0	738.6
13°	712.3	711.4	711.1	712.6	719.4	723.6	727.5	731.6	734.3	735.6	735.2
13.5°	707.3	706.2	706.5	707.8	715.0	719.2	723.4	727.8	730.5	731.8	731.6
14°	702.6	701.4	701.3	702.8	710.3	714.8	719.0	723.6	726.7	728.0	727.6
14.5°	697.5	696.3	696.2	697.9	705.4	710.2	714.8	719.5	722.8	723.9	723.5
15°	692.3	690.9	690.8	692.6	700.5	705.4	710.3	715.1	718.4	719.8	719.4
15.5°	686.8	685.6	685.6	687.3	695.3	700.5	705.5	710.7	714.0	715.5	715.2
16°	681.3	680.0	679.9	681.7	690.0	695.5	700.7	706.2	709.7	711.1	710.7
16.5°	675.8	674.3	674.3	676.3	684.7	690.3	695.8	701.4	705.1	706.6	706.1
17°	670.2	668.5	668.6	670.6	679.2	684.9	690.8	696.6	700.3	701.9	701.6
17.5°	664.6	662.8	662.8	664.9	673.5	679.6	685.6	691.6	695.5	697.2	696.6
18°	658.6	656.9	656.8	659.0	668.0	674.1	680.3	686.5	690.6	692.3	691.9
18.5°	653.1	651.1	650.9	653.3	662.2	668.4	674.9	681.4	685.6	687.3	686.8
19°	647.7	645.7	645.4	647.6	656.5	663.0	669.5	676.2	680.6	682.4	681.8
19.5°	642.6	640.5	640.2	642.4	651.0	657.5	664.0	671.1	675.3	677.4	676.9
20°	637.6	635.4	635.1	637.3	645.8	652.4	659.1	666.0	670.5	672.5	672.2
20.5°	632.3	630.0	629.8	632.1	640.7	647.3	654.0	660.9	665.5	667.8	667.5
21°	626.9	624.7	624.6	626.9	635.6	642.5	649.1	655.9	660.7	663.2	663.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	607.8	604.6	604.3	608.0	619.5	626.7	633.8	641.0	645.9	648.5	648.2
23°	599.9	596.6	595.8	600.2	613.1	620.5	627.8	635.8	640.9	643.2	642.4
23.5°	591.4	588.0	586.7	592.0	605.7	613.7	621.6	630.4	635.7	637.5	636.4
24°	582.0	578.7	576.8	583.0	597.5	606.5	614.9	624.5	630.2	631.5	629.9
24.5°	571.7	569.1	567.0	573.5	588.8	598.7	607.8	618.4	624.5	625.1	623.2
25°	560.8	558.9	557.0	563.6	579.1	590.4	600.3	611.8	618.6	618.4	616.1
25.5°	550.0	548.3	547.3	553.3	569.0	581.1	592.4	605.0	612.3	611.3	608.5
26°	539.1	537.4	537.7	542.6	558.4	571.5	584.4	597.6	605.4	603.9	600.9
26.5°	528.2	525.9	528.0	531.8	547.1	561.5	575.9	589.6	597.9	595.9	593.2
27°	517.5	514.7	518.0	520.9	536.0	551.2	567.6	581.4	590.1	587.9	585.6
27.5°	507.2	503.4	507.8	509.6	525.4	540.7	558.9	572.9	581.4	579.6	577.9
28°	497.1	491.9	496.8	498.5	514.7	529.9	549.9	563.8	572.0	571.5	569.8
28.5°	487.1	481.0	485.5	487.6	504.4	519.8	540.4	554.7	561.7	562.9	561.8
29°	476.7	470.2	473.9	476.7	494.1	509.9	530.2	544.9	550.8	554.0	553.6
29.5°	466.5	459.4	462.3	465.7	483.9	500.1	519.7	534.6	539.5	544.9	544.9
30°	456.1	448.5	450.4	454.7	473.6	490.3	508.8	524.0	527.7	535.5	535.9
30.5°	445.5	438.0	438.4	443.6	463.4	480.6	497.9	512.4	515.7	525.3	526.2
31°	434.6	427.0	426.7	432.5	453.2	470.6	486.5	500.5	503.7	515.1	516.5
31.5°	423.7	416.1	415.0	421.7	442.5	460.5	474.9	488.2	492.2	504.6	506.2
32°	412.2	405.5	403.3	410.8	432.1	450.2	463.9	475.7	481.3	493.7	496.1
32.5°	401.1	394.5	391.6	399.8	421.5	439.8	452.8	463.3	470.7	482.2	485.9
33°	390.2	383.6	380.3	389.1	410.4	428.8	441.1	450.9	460.1	470.5	475.8
33.5°	379.4	373.3	369.0	378.6	399.3	417.8	429.3	438.9	449.7	458.9	465.0
34°	369.0	362.4	357.8	367.9	388.3	406.5	417.6	427.8	439.6	447.4	454.7
34.5°	358.6	351.7	346.8	357.3	377.6	394.9	406.1	416.2	429.0	435.9	443.3
35°	348.3	340.9	335.7	346.7	367.0	383.3	394.5	404.5	418.5	425.0	432.0
35.5°	338.3	330.7	325.3	336.2	356.9	372.2	383.1	393.3	407.4	414.2	420.2
36°	328.4	320.0	315.3	325.5	346.3	360.8	371.2	382.0	395.9	403.4	408.5
36.5°	318.3	309.5	305.5	314.6	336.4	349.8	360.0	370.7	384.5	392.6	396.5
37°	308.0	299.5	295.9	304.2	326.3	338.7	348.2	359.2	372.8	381.6	384.5
37.5°	297.8	289.5	286.3	293.8	316.2	328.1	336.8	347.8	361.3	371.0	372.6
38°	287.6	279.7	276.8	283.5	306.3	317.4	325.2	336.6	350.3	359.8	360.7
38.5°	277.3	269.8	267.3	274.0	296.3	307.0	314.1	325.6	340.0	348.9	348.5
39°	267.5	260.6	258.3	264.7	285.4	296.5	303.0	314.6	329.0	337.7	336.8
39.5°	257.5	251.4	249.3	255.5	275.5	286.1	292.7	304.3	318.7	326.6	325.1
40°	247.8	242.4	240.2	246.3	265.7	275.6	281.7	294.0	308.1	315.4	313.6
40.5°	238.4	233.5	231.8	237.6	255.5	264.8	271.3	284.1	298.7	304.4	302.1
41°	229.4	224.9	223.7	228.9	245.8	254.4	260.9	274.1	288.2	293.6	291.2
41.5°	220.2	216.4	215.7	220.6	236.4	244.3	251.2	264.7	277.6	283.0	280.5
42°	211.1	208.3	208.4	212.4	227.5	234.4	241.5	255.5	267.1	272.4	270.1
42.5°	202.5	200.5	201.0	204.4	218.3	224.6	232.4	246.3	257.4	262.2	260.0
43°	193.9	192.9	193.9	196.8	209.4	215.3	223.4	237.2	247.1	251.8	249.7
43.5°	185.4	185.5	186.7	189.3	200.6	206.4	215.0	228.4	237.2	241.6	239.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	161.6	165.1	167.2	168.7	175.7	181.7	190.1	202.3	209.4	212.3	211.5
45.5°	154.8	158.8	161.2	162.4	168.0	174.2	182.8	194.0	200.9	203.0	202.4
46°	148.4	152.8	155.5	156.5	160.6	166.7	175.4	185.9	192.4	194.0	193.7
46.5°	142.3	147.1	149.8	150.6	153.7	160.0	168.3	178.1	184.3	185.1	185.2
47°	136.8	141.5	144.5	145.0	147.4	153.3	161.6	170.6	176.3	176.4	177.0
47.5°	131.7	136.2	139.3	139.6	141.5	147.0	155.2	163.3	168.5	168.4	169.4
48°	127.3	131.4	134.3	134.6	136.0	141.2	149.2	156.5	161.2	160.7	161.7
48.5°	123.0	126.7	129.5	129.8	131.0	135.8	143.5	150.0	153.9	153.5	154.4
49°	119.2	122.4	125.2	125.2	126.5	130.9	137.8	143.7	146.9	146.4	147.4
49.5°	115.4	118.2	120.9	120.9	122.4	126.1	132.7	137.8	140.3	139.9	140.9
50°	112.0	114.3	116.7	116.7	118.6	121.7	127.7	132.2	133.9	133.8	134.5
50.5°	108.8	110.5	112.6	112.9	114.9	117.7	123.0	126.8	128.1	128.1	128.5
51°	105.7	107.1	108.9	109.1	111.4	113.9	118.5	121.8	122.7	122.8	123.0
51.5°	102.6	103.7	105.3	105.7	108.2	110.4	114.3	117.1	117.7	117.9	117.7
52°	99.8	100.5	101.9	102.3	105.2	107.0	110.3	112.8	113.0	113.2	112.8
52.5°	96.9	97.4	98.6	99.2	102.1	103.8	106.5	108.5	108.7	108.8	108.2
53°	94.1	94.6	95.5	96.1	99.1	100.7	103.0	104.6	104.9	104.8	103.9
53.5°	91.6	92.0	92.6	93.3	96.2	97.7	99.6	101.0	101.2	101.0	100.2
54°	89.2	89.5	90.0	90.6	93.6	95.1	96.4	97.6	97.7	97.5	96.8
54.5°	87.2	87.4	87.7	88.4	90.9	92.2	93.4	94.4	94.6	94.2	93.6
55°	85.2	85.4	85.7	86.2	88.8	90.1	91.0	91.6	91.8	91.5	91.2
55.5°	83.1	83.4	83.7	84.2	86.7	87.8	88.8	89.3	89.5	89.2	88.9
56°	81.1	81.3	81.6	82.1	84.5	85.7	86.5	87.1	87.2	86.9	86.5
56.5°	79.0	79.3	79.6	80.2	82.4	83.5	84.2	84.8	84.8	84.6	84.3
57°	77.0	77.3	77.6	78.0	80.5	81.3	82.0	82.5	82.5	82.3	82.0
57.5°	74.9	75.2	75.5	76.0	78.3	79.2	79.8	80.4	80.6	80.2	79.7
58°	72.9	73.2	73.4	74.0	76.3	77.2	77.7	78.2	78.3	78.0	77.5
58.5°	70.9	71.2	71.5	72.1	74.3	75.0	75.6	76.2	76.1	75.9	75.4
59°	69.0	69.3	69.6	70.1	72.3	73.0	73.5	74.1	73.9	73.7	73.2
59.5°	66.9	67.4	67.7	68.1	70.3	71.0	71.4	71.9	71.7	71.5	71.1
60°	64.9	65.6	65.8	66.3	68.4	69.2	69.5	69.9	69.5	69.5	69.1
60.5°	63.0	63.6	64.0	64.4	66.6	67.1	67.6	67.9	67.4	67.4	67.0
61°	61.1	61.7	62.1	62.6	64.7	65.3	65.7	66.0	65.3	65.3	65.1
61.5°	59.3	59.9	60.4	60.9	62.9	63.5	63.7	64.1	63.3	63.3	63.2
62°	57.3	58.1	58.7	59.0	61.1	61.7	61.9	62.2	61.3	61.4	61.4
62.5°	55.5	56.4	56.9	57.3	59.3	59.9	60.2	60.3	59.4	59.5	59.6
63°	53.7	54.6	55.3	55.7	57.6	58.2	58.4	58.5	57.4	57.6	57.8
63.5°	52.0	52.9	53.6	54.0	55.9	56.5	56.7	56.6	55.5	55.7	56.1
64°	50.3	51.2	52.1	52.4	54.3	54.8	55.0	54.8	53.7	53.9	54.4
64.5°	48.6	49.6	50.5	50.9	52.7	53.2	53.4	53.1	51.9	52.2	52.8
65°	46.9	47.9	49.0	49.3	51.1	51.6	51.8	51.4	50.2	50.5	51.1
65.5°	45.3	46.3	47.4	47.9	49.6	50.0	50.3	49.7	48.4	48.8	49.5
66°	43.7	44.8	45.9	46.4	48.0	48.5	48.7	48.1	46.8	47.2	48.0



TEST NUMBER: P775689

CATALOG NUMBER: HCDJBL510CSD-HCD4TRMW-1000lm-5000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	39.1	40.2	41.6	42.1	43.6	44.0	44.2	43.3	42.0	42.4	43.4
68°	37.7	38.7	40.2	40.7	42.2	42.6	42.8	41.8	40.5	40.9	41.9
68.5°	36.3	37.4	38.9	39.3	40.8	41.2	41.4	40.3	38.9	39.4	40.5
69°	35.0	36.0	37.5	38.1	39.4	39.9	40.0	38.8	37.5	38.1	39.1
69.5°	33.6	34.6	36.2	36.8	38.2	38.6	38.6	37.4	36.0	36.7	37.7
70°	32.2	33.3	35.0	35.6	36.8	37.2	37.3	36.0	34.6	35.3	36.3
70.5°	30.8	31.9	33.7	34.3	35.6	35.9	36.0	34.6	33.3	33.9	35.1
71°	29.5	30.6	32.4	33.0	34.3	34.6	34.6	33.3	32.0	32.5	33.8
71.5°	28.2	29.3	31.1	31.9	33.0	33.5	33.4	31.9	30.6	31.2	32.5
72°	26.9	28.0	29.8	30.6	31.8	32.2	32.1	30.6	29.3	30.0	31.2
72.5°	25.6	26.8	28.7	29.4	30.6	31.0	30.9	29.3	28.0	28.7	30.1
73°	24.3	25.5	27.4	28.2	29.4	29.7	29.6	28.0	26.8	27.4	28.8
73.5°	23.1	24.2	26.2	27.1	28.2	28.6	28.4	26.8	25.5	26.1	27.6
74°	22.0	23.0	25.0	26.0	27.1	27.5	27.3	25.6	24.3	24.9	26.4
74.5°	20.8	21.9	23.9	24.8	25.9	26.3	26.0	24.4	23.1	23.8	25.3
75°	19.6	20.7	22.7	23.8	24.8	25.2	24.9	23.1	22.0	22.6	24.1
75.5°	18.4	19.5	21.6	22.6	23.8	24.1	23.8	22.1	20.8	21.4	23.0
76°	17.4	18.4	20.5	21.6	22.6	23.0	22.6	20.8	19.6	20.3	22.0
76.5°	16.3	17.3	19.4	20.5	21.5	22.0	21.5	19.7	18.5	19.2	20.8
77°	15.2	16.2	18.3	19.5	20.5	20.9	20.5	18.5	17.4	18.0	19.7
77.5°	14.2	15.1	17.3	18.4	19.5	19.9	19.4	17.5	16.3	16.9	18.7
78°	13.1	14.1	16.3	17.5	18.4	18.9	18.3	16.4	15.2	16.0	17.6
78.5°	12.0	13.0	15.2	16.4	17.5	17.8	17.3	15.3	14.3	14.9	16.6
79°	11.1	11.9	14.3	15.5	16.4	16.8	16.3	14.3	13.2	13.9	15.7
79.5°	10.1	11.0	13.2	14.5	15.5	15.9	15.3	13.3	12.3	12.8	14.6
80°	9.2	10.0	12.3	13.5	14.5	14.9	14.3	12.3	11.3	11.8	13.6
80.5°	8.2	9.1	11.4	12.7	13.6	14.0	13.4	11.3	10.3	10.9	12.7
81°	7.2	8.1	10.4	11.7	12.7	13.0	12.5	10.3	9.4	10.0	11.8
81.5°	6.4	7.1	9.6	10.8	11.7	12.2	11.5	9.5	8.5	9.1	10.9
82°	5.4	6.3	8.7	9.9	10.9	11.2	10.7	8.6	7.6	8.1	10.0
82.5°	4.6	5.4	7.9	9.1	9.9	10.3	9.8	7.8	6.7	7.2	9.3
83°	3.7	4.7	7.1	8.2	9.2	9.5	9.1	6.9	5.8	6.3	8.5
83.5°	3.2	3.9	6.3	7.4	8.3	8.6	8.2	6.0	4.9	5.5	7.7
84°	2.7	3.5	5.6	6.6	7.5	7.8	7.4	5.2	4.1	4.8	6.9
84.5°	2.1	3.1	4.9	5.8	6.6	6.9	6.6	4.6	3.3	4.1	6.2
85°	1.6	2.6	4.2	4.9	5.8	6.1	5.8	3.9	2.6	3.5	5.4
85.5°	1.3	2.1	3.5	4.2	4.9	5.3	5.1	3.4	2.1	3.1	4.7
86°	1.0	1.7	2.9	3.4	4.2	4.6	4.4	3.0	1.8	2.7	4.1
86.5°	0.7	1.3	2.2	2.7	3.4	3.7	3.7	2.5	1.5	2.2	3.4
87°	0.4	0.9	1.5	1.9	2.7	3.0	3.0	2.0	1.2	1.8	2.8
87.5°	0.2	0.5	0.9	1.2	1.9	2.3	2.3	1.6	1.0	1.4	2.1
88°	0.1	0.2	0.3	0.5	1.3	1.6	1.7	1.2	0.6	1.1	1.5
88.5°	0.0	0.1	0.1	0.2	0.6	0.9	1.1	0.7	0.4	0.6	0.9



TEST NUMBER: P775689

CATALOG NUMBER: HCDJBL510CSD-HCD4TRMW-1000lm-5000K

CANDELA DISTRIBUTION (continued):

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



TEST NUMBER: P775689

CATALOG NUMBER: HCDJBL510CSD-HCD4TRMW-1000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	776.7	776.7	776.7	776.7	776.7	776.7
0.5°	776.5	777.0	776.6	776.2	776.3	776.4
1°	776.6	776.9	776.3	775.7	775.7	775.8
1.5°	776.4	776.6	775.8	775.2	775.1	775.1
2°	776.2	776.2	775.3	774.5	774.2	774.2
2.5°	775.7	775.5	774.7	773.7	773.3	773.2
3°	775.2	774.8	773.7	772.8	772.1	771.9
3.5°	774.6	773.9	772.8	771.6	770.8	770.5
4°	773.7	773.0	771.5	770.4	769.4	769.0
4.5°	772.8	771.6	770.2	768.8	767.8	767.4
5°	771.7	770.2	768.6	767.2	766.0	765.4
5.5°	770.3	768.7	767.0	765.4	764.1	763.4
6°	768.8	767.1	765.1	763.5	762.1	761.2
6.5°	767.3	765.4	763.2	761.5	759.7	758.8
7°	765.6	763.4	761.0	759.1	757.3	756.3
7.5°	763.8	761.1	758.8	756.7	754.7	753.6
8°	761.7	759.0	756.3	754.0	752.0	750.8
8.5°	759.5	756.5	753.8	751.3	749.1	747.7
9°	757.2	753.9	751.0	748.2	745.8	744.5
9.5°	754.7	751.2	748.1	745.3	742.6	741.0
10°	752.1	748.2	745.0	742.1	739.2	737.5
10.5°	749.3	745.3	741.7	738.6	735.7	733.7
11°	746.2	742.1	738.3	735.0	731.8	729.8
11.5°	743.1	738.7	734.8	731.3	727.7	725.6
12°	739.8	735.1	731.1	727.1	723.6	721.4
12.5°	736.4	731.4	727.1	723.0	719.2	716.9
13°	732.8	727.6	723.2	718.8	714.9	712.3
13.5°	729.0	723.7	718.9	714.4	710.1	707.3
14°	725.1	719.6	714.7	709.9	705.2	702.6
14.5°	721.1	715.3	710.2	705.2	700.3	697.5
15°	716.8	710.8	705.5	700.2	695.2	692.3
15.5°	712.4	706.1	700.7	695.3	690.0	686.8
16°	707.9	701.6	695.8	690.1	684.8	681.3
16.5°	703.4	696.8	690.8	685.0	679.3	675.8
17°	698.6	691.6	685.7	679.8	673.8	670.2
17.5°	693.8	686.8	680.4	674.3	668.2	664.6
18°	688.9	681.7	675.3	668.9	662.6	658.6
18.5°	683.9	676.5	670.1	663.6	657.2	653.1
19°	678.6	671.7	665.0	658.5	652.1	647.7
19.5°	673.8	666.6	660.0	653.6	647.1	642.6
20°	669.1	661.7	655.3	648.6	642.1	637.6
20.5°	664.5	657.0	650.2	643.6	636.9	632.3
21°	659.7	652.0	645.3	638.5	631.6	626.9

TEST NUMBER: P775689

CATALOG NUMBER: HCDJBL510CSD-HCD4TRMW-1000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	645.0	636.9	629.4	620.8	612.9	607.8
23°	639.5	631.6	623.8	614.3	605.7	599.9
23.5°	633.8	626.0	617.8	607.1	597.7	591.4
24°	627.5	620.4	611.3	599.7	589.2	582.0
24.5°	621.0	613.9	604.5	591.7	580.1	571.7
25°	614.0	607.4	597.1	583.6	570.8	560.8
25.5°	606.8	600.3	589.4	575.2	560.9	550.0
26°	599.2	592.9	581.3	566.9	550.6	539.1
26.5°	591.0	584.3	572.6	558.1	540.1	528.2
27°	583.0	575.6	563.5	548.9	529.7	517.5
27.5°	574.9	565.7	554.1	539.5	519.3	507.2
28°	566.5	555.2	544.3	529.6	509.2	497.1
28.5°	557.9	544.1	534.0	519.3	499.1	487.1
29°	548.9	532.9	523.2	508.5	489.2	476.7
29.5°	540.0	521.1	512.0	497.5	479.4	466.5
30°	530.3	509.3	500.4	486.4	469.6	456.1
30.5°	520.2	497.8	488.3	475.2	459.5	445.5
31°	509.8	486.5	475.6	463.9	448.9	434.6
31.5°	499.0	475.6	463.4	452.1	438.5	423.7
32°	488.1	464.9	451.4	440.6	427.9	412.2
32.5°	476.7	454.5	439.6	429.0	417.1	401.1
33°	465.0	444.1	428.3	417.5	405.3	390.2
33.5°	453.3	433.8	416.8	405.8	394.0	379.4
34°	441.9	423.4	405.8	394.3	382.2	369.0
34.5°	430.6	412.1	394.6	382.4	370.6	358.6
35°	419.5	400.9	383.4	370.8	358.8	348.3
35.5°	408.7	389.6	372.1	359.4	347.8	338.3
36°	397.8	378.2	360.7	348.2	336.6	328.4
36.5°	386.9	367.0	349.4	337.0	325.8	318.3
37°	376.1	355.5	338.1	325.5	315.2	308.0
37.5°	365.0	344.5	327.0	314.4	305.0	297.8
38°	353.9	333.8	316.0	303.3	294.4	287.6
38.5°	342.9	323.5	305.3	292.6	284.1	277.3
39°	332.0	313.3	295.1	281.7	273.5	267.5
39.5°	320.7	302.9	285.0	271.2	262.8	257.5
40°	309.7	292.7	275.2	260.7	252.4	247.8
40.5°	298.7	282.5	265.6	250.6	242.2	238.4
41°	288.4	272.0	256.0	240.7	232.0	229.4
41.5°	277.6	262.0	246.7	231.4	222.3	220.2
42°	267.2	251.8	237.4	222.1	213.2	211.1
42.5°	256.8	241.8	228.8	213.6	204.4	202.5
43°	247.0	232.0	219.7	205.1	195.9	193.9
43.5°	236.6	222.8	210.9	196.8	187.7	185.4



TEST NUMBER: P775689

CATALOG NUMBER: HCDJBL510CSD-HCD4TRMW-1000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	208.2	196.2	185.7	173.9	165.2	161.6
45.5°	198.8	187.9	177.9	167.0	158.5	154.8
46°	190.0	179.9	170.4	160.5	152.0	148.4
46.5°	181.3	171.9	163.1	154.1	145.9	142.3
47°	173.0	164.4	156.0	147.8	140.2	136.8
47.5°	165.1	156.9	149.5	142.1	134.8	131.7
48°	157.4	149.9	143.0	136.8	129.9	127.3
48.5°	150.5	142.9	137.1	131.6	125.2	123.0
49°	143.5	136.5	131.5	126.7	121.0	119.2
49.5°	137.2	130.5	126.2	122.0	117.0	115.4
50°	131.2	124.7	121.1	117.6	113.3	112.0
50.5°	125.6	119.3	116.3	113.4	109.8	108.8
51°	120.2	114.5	111.9	109.5	106.4	105.7
51.5°	115.4	110.0	107.8	105.8	103.2	102.6
52°	110.8	105.8	104.0	102.2	100.2	99.8
52.5°	106.6	102.1	100.4	98.9	97.2	96.9
53°	102.6	98.6	97.0	95.7	94.4	94.1
53.5°	98.9	95.4	93.8	92.8	91.8	91.6
54°	95.5	92.4	91.0	90.2	89.4	89.2
54.5°	92.5	89.9	88.7	87.9	87.3	87.2
55°	90.3	87.5	86.5	85.9	85.3	85.2
55.5°	87.9	85.5	84.4	83.8	83.1	83.1
56°	85.7	83.4	82.3	81.8	81.1	81.1
56.5°	83.5	81.2	80.3	79.6	79.0	79.0
57°	81.1	79.0	78.1	77.5	77.0	77.0
57.5°	79.0	76.7	75.9	75.4	74.9	74.9
58°	76.8	74.7	73.9	73.3	72.9	72.9
58.5°	74.7	72.6	71.7	71.3	70.9	70.9
59°	72.5	70.6	69.7	69.3	69.0	69.0
59.5°	70.5	68.4	67.7	67.4	67.0	66.9
60°	68.4	66.5	65.8	65.4	65.1	64.9
60.5°	66.4	64.5	63.8	63.6	63.3	63.0
61°	64.5	62.7	62.0	61.7	61.5	61.1
61.5°	62.6	60.9	60.2	59.9	59.6	59.3
62°	60.8	59.0	58.5	58.2	57.9	57.3
62.5°	58.9	57.2	56.6	56.5	56.1	55.5
63°	57.1	55.5	55.0	54.8	54.4	53.7
63.5°	55.5	53.8	53.3	53.2	52.7	52.0
64°	53.8	52.2	51.7	51.6	50.9	50.3
64.5°	52.1	50.6	50.1	50.0	49.3	48.6
65°	50.5	49.0	48.6	48.5	47.8	46.9
65.5°	48.9	47.5	47.1	46.9	46.2	45.3
66°	47.4	46.0	45.6	45.5	44.6	43.7



TEST NUMBER: P775689

CATALOG NUMBER: HCDJBL510CSD-HCD4TRMW-1000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	43.1	41.7	41.4	41.1	40.0	39.1
68°	41.6	40.3	40.0	39.9	38.4	37.7
68.5°	40.3	39.0	38.5	38.4	37.1	36.3
69°	38.9	37.7	37.3	37.1	35.8	35.0
69.5°	37.5	36.5	36.0	35.8	34.4	33.6
70°	36.2	35.2	34.9	34.6	33.1	32.2
70.5°	35.0	34.0	33.6	33.4	31.8	30.8
71°	33.8	32.7	32.3	32.1	30.5	29.5
71.5°	32.5	31.4	31.1	30.8	29.2	28.2
72°	31.3	30.3	30.0	29.6	27.9	26.9
72.5°	30.1	29.1	28.8	28.4	26.6	25.6
73°	28.9	27.9	27.6	27.2	25.5	24.3
73.5°	27.7	26.8	26.4	26.0	24.2	23.1
74°	26.6	25.7	25.4	24.8	23.0	22.0
74.5°	25.5	24.5	24.2	23.8	21.9	20.8
75°	24.4	23.4	23.1	22.6	20.7	19.6
75.5°	23.3	22.4	22.1	21.5	19.6	18.4
76°	22.3	21.3	21.0	20.4	18.4	17.4
76.5°	21.2	20.3	19.9	19.3	17.3	16.3
77°	20.1	19.3	19.0	18.2	16.2	15.2
77.5°	19.2	18.2	17.9	17.3	15.1	14.2
78°	18.1	17.3	16.9	16.2	14.1	13.1
78.5°	17.2	16.3	16.0	15.2	13.1	12.0
79°	16.2	15.3	15.0	14.2	12.0	11.1
79.5°	15.2	14.4	14.1	13.2	11.1	10.1
80°	14.3	13.4	13.1	12.4	10.1	9.2
80.5°	13.3	12.6	12.3	11.4	9.2	8.2
81°	12.5	11.6	11.3	10.4	8.2	7.2
81.5°	11.5	10.8	10.4	9.6	7.4	6.4
82°	10.7	9.9	9.6	8.7	6.5	5.4
82.5°	9.8	9.1	8.7	8.0	5.6	4.6
83°	9.1	8.2	7.9	7.1	4.9	3.7
83.5°	8.2	7.4	7.0	6.4	4.3	3.2
84°	7.4	6.5	6.2	5.6	3.7	2.7
84.5°	6.5	5.8	5.4	4.9	3.3	2.1
85°	5.8	4.9	4.7	4.2	2.8	1.6
85.5°	4.9	4.2	3.8	3.5	2.2	1.3
86°	4.2	3.5	3.2	2.8	1.8	1.0
86.5°	3.4	2.8	2.5	2.1	1.4	0.7
87°	2.8	2.0	1.7	1.4	1.0	0.4
87.5°	2.0	1.3	1.0	0.7	0.5	0.2
88°	1.3	0.6	0.4	0.3	0.2	0.1
88.5°	0.6	0.2	0.1	0.1	0.1	0.0



TEST NUMBER: P775689

CATALOG NUMBER: HCDJBL510CSD-HCD4TRMW-1000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.0	0.0	0.0	0.0	0.1	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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— 0°-180° - - 45°-225° - - - - 90°-270° - · - 135°-315°

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21.5°	621.4	618.5	618.7	621.3	630.6	637.4	644.2	651.0	655.7	658.3	658.2
22°	615.0	611.8	612.0	614.9	625.3	632.4	639.4	646.0	650.9	653.6	653.4



44°	177.0	178.4	180.1	182.3	192.0	197.9	206.4	219.5	227.6	231.7	230.1
44.5°	169.3	171.6	173.3	175.4	183.8	189.7	197.9	210.9	218.6	221.8	220.6



66.5°	42.2	43.2	44.6	44.9	46.5	47.0	47.1	46.4	45.1	45.5	46.4
67°	40.6	41.7	43.1	43.5	45.1	45.5	45.7	44.9	43.6	44.0	44.9



89°	0.0	0.1	0.0	0.0	0.2	0.3	0.4	0.4	0.2	0.3	0.3
89.5°	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1

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21.5°	654.8	646.9	640.2	633.0	625.9	621.4
22°	650.1	642.1	634.9	627.0	619.7	615.0



44°	227.0	213.5	202.4	188.9	179.8	177.0
44.5°	217.3	204.8	194.1	181.2	172.3	169.3



66.5°	45.9	44.6	44.1	44.0	43.0	42.2
67°	44.4	43.1	42.7	42.6	41.5	40.6

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

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(END OF REPORT)