

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: P775726

Luminaire Tested: HCDJBL510CSD-HCD61TRH-HCD61TRLWW-1000lm-3000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P775726
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B041)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL510CSD-HCD61TRH-HCD61TRLWW-1000lm-3000K
Description: 6 INCH ROUND SHALLOW-WIDE LENSED WALLWASH KIT
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3000K CCT
Ballast/Driver: -

Summary

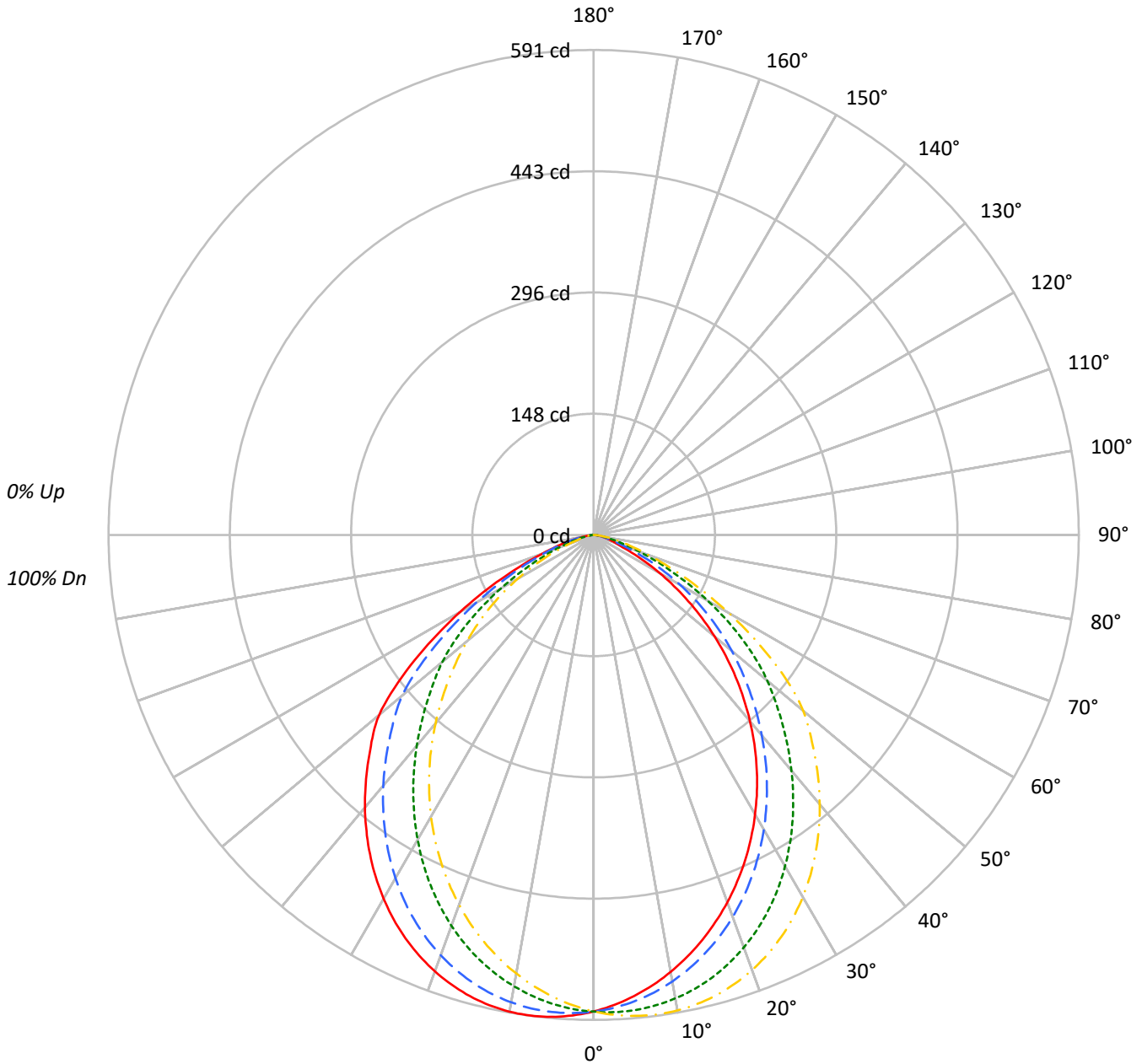
Lumens per Lamp: N/A
Luminaire Lumens: 1235.9 lumens
Efficiency: N/A
Efficacy: 123.6 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.16 / 1.25
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

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	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	103	100	108	105	101	99	100	98	95	97	94	93	93	91	90	88								
2	102	95	89	84	100	93	88	83	90	85	82	87	83	80	84	81	78	76								
3	94	85	78	72	92	83	77	71	81	75	70	78	73	69	75	71	68	66								
4	87	76	68	62	85	75	68	62	72	66	61	70	65	60	68	63	60	58								
5	80	69	61	55	78	68	60	54	66	59	54	64	58	53	62	57	53	51								
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45								
7	69	57	49	43	68	56	48	43	55	48	43	53	47	42	52	46	42	40								
8	65	52	44	39	63	51	44	39	50	43	38	49	43	38	48	42	38	36								
9	61	48	40	35	59	47	40	35	46	40	35	45	39	35	44	39	35	33								
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	31845	31845	31845	31845
5°	31042	31983	32440	31565
10°	30093	31924	32837	31095
15°	29007	31680	33031	30432
20°	27792	31205	33014	29560
25°	26427	30492	32808	28459
30°	24896	29517	32397	27150
35°	23162	28282	31788	25638
40°	21197	26829	31015	23981
45°	18963	25189	30081	22227
50°	16392	23530	29091	20520
55°	13467	21065	25461	17892
60°	10175	17597	20601	14352
65°	6680	13503	15423	10585
70°	4424	9457	10643	7133
75°	3537	6100	7392	4512
80°	2620	3725	4451	2683
85°	1384	2201	943	1510

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 157.5°
 Vertical Angle: 45°
 Luminance: 30290 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.7	4.4
10°-20°	154.0	12.5
20°-30°	224.7	18.2
30°-40°	254.3	20.6
40°-50°	240.6	19.5
50°-60°	182.7	14.8
60°-70°	91.5	7.4
70°-80°	29.0	2.3
80°-90°	4.4	0.4
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°	433.4	35.1
0°-40°	687.7	55.6
0°-60°	1111.0	89.9
0°-90°	1235.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1235.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	581	581	581	581	581	
5°	564	581	590	574	564	53
15°	511	558	582	536	511	144
25°	437	504	542	470	437	201
35°	346	423	475	383	346	216
45°	245	325	388	287	245	188
55°	141	220	266	187	141	126
65°	52	104	119	82	52	53
75°	17	29	35	21	17	18
85°	2	4	2	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°	580.9	580.9	580.9	580.9	580.9	580.9	580.9	580.9	580.9	580.9	580.9
0.5°	579.4	579.8	580.2	580.5	581.5	581.6	581.8	581.9	582.0	582.0	581.6
1°	578.0	578.7	579.4	580.3	581.8	582.3	582.8	583.1	583.1	582.9	582.1
1.5°	576.6	577.5	578.6	579.9	582.0	583.0	583.8	584.2	584.2	583.7	582.6
2°	575.0	576.2	577.7	579.5	582.1	583.5	584.6	585.2	585.1	584.5	582.9
2.5°	573.3	574.7	576.7	579.0	582.1	584.0	585.4	586.2	586.2	585.2	583.3
3°	571.7	573.3	575.5	578.4	582.1	584.4	586.3	587.1	586.9	585.8	583.5
3.5°	569.9	571.8	574.4	577.7	582.0	584.8	586.9	587.9	587.7	586.3	583.6
4°	568.0	570.1	573.2	577.0	581.8	585.0	587.5	588.6	588.4	586.8	583.7
4.5°	566.2	568.4	571.9	576.2	581.6	585.2	588.0	589.3	589.0	587.1	583.7
5°	564.1	566.7	570.4	575.2	581.2	585.3	588.4	589.8	589.5	587.4	583.6
5.5°	562.1	564.7	569.0	574.2	580.8	585.4	588.7	590.3	589.9	587.6	583.5
6°	559.9	562.8	567.4	573.2	580.2	585.3	589.0	590.8	590.2	587.7	583.2
6.5°	557.8	560.9	565.9	572.1	579.7	585.2	589.2	591.1	590.5	587.7	582.9
7°	555.6	558.8	564.1	570.9	579.0	585.0	589.3	591.3	590.6	587.7	582.5
7.5°	553.2	556.7	562.4	569.5	578.3	584.7	589.3	591.4	590.8	587.5	582.0
8°	550.8	554.4	560.5	568.1	577.5	584.4	589.3	591.5	590.8	587.3	581.5
8.5°	548.3	552.2	558.6	566.7	576.7	584.0	589.2	591.5	590.6	587.0	580.8
9°	545.9	549.9	556.6	565.1	575.6	583.6	588.9	591.4	590.5	586.7	580.0
9.5°	543.2	547.5	554.5	563.6	574.6	583.0	588.7	591.2	590.2	586.2	579.3
10°	540.6	545.0	552.5	561.9	573.5	582.4	588.3	590.9	589.9	585.6	578.4
10.5°	537.9	542.5	550.2	560.1	572.4	581.6	587.9	590.5	589.5	584.9	577.5
11°	535.1	539.9	547.9	558.3	571.1	580.8	587.4	590.1	588.9	584.3	576.5
11.5°	532.3	537.3	545.6	556.4	569.7	579.9	586.8	589.5	588.4	583.5	575.3
12°	529.4	534.5	543.2	554.3	568.3	578.9	586.1	589.0	587.7	582.7	574.2
12.5°	526.5	531.8	540.7	552.4	566.9	577.9	585.2	588.3	587.0	581.8	572.9
13°	523.5	528.9	538.1	550.1	565.2	576.8	584.4	587.5	586.2	580.8	571.6
13.5°	520.5	526.1	535.5	548.0	563.6	575.6	583.5	586.7	585.1	579.6	570.2
14°	517.4	523.1	532.8	545.8	561.9	574.3	582.5	585.8	584.2	578.4	568.7
14.5°	514.2	520.1	530.0	543.4	560.0	573.0	581.4	584.7	583.1	577.2	567.2
15°	511.1	517.0	527.2	540.9	558.2	571.5	580.2	583.6	582.0	575.9	565.5
15.5°	507.8	513.8	524.2	538.4	556.2	570.0	579.0	582.5	580.8	574.4	563.8
16°	504.5	510.7	521.4	535.8	554.1	568.4	577.7	581.2	579.3	572.9	562.0
16.5°	501.2	507.4	518.3	533.2	552.1	566.8	576.3	579.8	578.0	571.4	560.1
17°	497.7	504.1	515.1	530.3	549.9	565.0	574.8	578.5	576.5	569.7	558.2
17.5°	494.3	500.8	512.0	527.6	547.6	563.2	573.2	577.0	574.9	568.0	556.3
18°	490.8	497.3	508.8	524.7	545.1	561.4	571.6	575.3	573.2	566.2	554.1
18.5°	487.3	493.9	505.5	521.8	542.8	559.3	569.8	573.7	571.6	564.2	552.0
19°	483.6	490.4	502.2	518.7	540.2	557.3	568.0	572.0	569.7	562.3	549.7
19.5°	479.9	486.9	498.7	515.6	537.7	555.1	566.2	570.1	567.8	560.3	547.4
20°	476.4	483.2	495.4	512.5	534.9	552.9	564.3	568.2	565.9	558.2	545.0
20.5°	472.5	479.5	491.8	509.2	532.2	550.6	562.3	566.3	563.8	556.0	542.5
21°	468.7	475.8	488.2	506.0	529.4	548.3	560.1	564.2	561.8	553.7	540.0



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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°	457.2	464.3	477.1	495.6	520.6	540.7	553.3	557.7	555.0	546.6	532.1
23°	453.2	460.4	473.3	492.0	517.4	538.0	551.0	555.3	552.6	544.0	529.2
23.5°	449.2	456.5	469.5	488.3	514.2	535.2	548.5	552.9	550.1	541.4	526.4
24°	445.2	452.5	465.6	484.6	511.0	532.4	545.9	550.4	547.7	538.6	523.4
24.5°	441.0	448.4	461.5	480.8	507.6	529.4	543.2	547.9	544.9	535.9	520.3
25°	436.9	444.2	457.5	477.0	504.1	526.6	540.6	545.2	542.4	533.1	517.3
25.5°	432.7	440.2	453.5	473.1	500.7	523.4	537.8	542.6	539.5	530.2	514.1
26°	428.5	436.0	449.4	469.1	497.2	520.2	534.9	539.8	536.8	527.2	511.0
26.5°	424.2	431.8	445.1	465.1	493.5	517.1	532.0	536.9	533.8	524.2	507.7
27°	420.0	427.5	441.0	461.1	489.7	513.8	528.9	534.0	531.0	521.1	504.3
27.5°	415.6	423.1	436.7	456.9	486.1	510.5	526.0	531.1	527.9	518.0	501.0
28°	411.2	418.7	432.4	452.7	482.2	507.0	522.8	528.0	524.7	514.8	497.4
28.5°	406.8	414.3	427.9	448.4	478.3	503.5	519.5	524.8	521.6	511.5	493.9
29°	402.4	410.1	423.5	444.2	474.4	500.0	516.3	521.8	518.3	508.1	490.4
29.5°	397.9	405.6	419.1	440.0	470.4	496.3	513.0	518.4	515.0	504.7	486.7
30°	393.3	401.0	414.7	435.6	466.3	492.7	509.5	515.1	511.8	501.3	482.9
30.5°	388.7	396.5	410.1	431.1	462.2	488.8	506.0	511.8	508.4	497.7	479.1
31°	384.1	391.9	405.6	426.7	458.0	484.9	502.4	508.4	504.9	494.1	475.4
31.5°	379.5	387.3	400.9	422.1	453.7	481.0	498.8	504.8	501.3	490.5	471.4
32°	374.9	382.7	396.3	417.5	449.3	477.2	495.1	501.3	497.8	486.8	467.5
32.5°	370.2	378.0	391.6	413.0	445.1	473.1	491.5	497.6	494.2	483.0	463.5
33°	365.4	373.2	387.0	408.4	440.8	468.9	487.6	493.9	490.5	479.2	459.5
33.5°	360.7	368.5	382.2	403.6	436.3	464.8	483.7	490.3	486.7	475.4	455.6
34°	355.9	363.8	377.5	399.0	431.8	460.7	479.7	486.5	482.8	471.4	451.3
34.5°	351.0	359.0	372.6	394.2	427.1	456.3	475.8	482.5	478.9	467.4	447.1
35°	346.1	354.1	367.9	389.4	422.6	452.0	471.8	478.6	475.0	463.4	442.9
35.5°	341.3	349.3	362.9	384.8	418.0	447.7	467.6	474.6	471.2	459.4	438.7
36°	336.4	344.5	358.2	380.0	413.3	443.2	463.5	470.7	467.2	455.3	434.3
36.5°	331.5	339.6	353.3	375.1	408.6	438.7	459.3	466.6	463.0	451.3	430.1
37°	326.5	334.6	348.2	370.2	403.8	434.2	455.1	462.4	458.9	447.0	425.7
37.5°	321.5	329.7	343.4	365.3	399.0	429.6	450.7	458.2	454.7	442.8	421.2
38°	316.4	324.7	338.5	360.4	394.3	425.1	446.4	454.0	450.6	438.4	416.7
38.5°	311.5	319.8	333.5	355.5	389.4	420.4	441.9	449.7	446.4	434.2	412.4
39°	306.6	314.7	328.6	350.5	384.7	415.7	437.5	445.5	442.0	429.8	407.8
39.5°	301.4	309.8	323.6	345.6	379.9	411.0	433.0	441.1	437.8	425.5	403.3
40°	296.2	304.7	318.7	340.6	374.9	406.2	428.4	436.7	433.4	421.1	398.6
40.5°	291.2	299.6	313.5	335.6	369.8	401.5	423.8	432.2	428.9	416.7	394.1
41°	286.1	294.5	308.6	330.6	364.9	396.5	419.1	427.7	424.5	412.1	389.4
41.5°	280.9	289.5	303.5	325.5	360.1	391.7	414.5	423.2	420.2	407.7	384.9
42°	275.7	284.3	298.5	320.6	354.9	386.8	409.9	418.6	415.6	403.1	380.2
42.5°	270.6	279.3	293.6	315.6	350.1	382.0	405.2	414.0	411.1	398.6	375.5
43°	265.5	274.2	288.5	310.6	345.0	377.1	400.4	409.4	406.5	393.9	370.8
43.5°	260.3	269.1	283.5	305.6	340.1	372.2	395.7	404.9	402.0	389.3	366.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	244.6	253.6	268.4	290.6	324.9	357.3	381.1	390.7	388.0	375.5	351.9
45.5°	239.4	248.6	263.6	285.7	320.2	352.3	376.3	386.0	383.4	370.8	347.2
46°	234.2	243.4	258.5	280.7	315.0	347.2	371.4	381.3	378.7	366.3	342.6
46.5°	228.7	238.4	253.6	275.8	310.0	342.4	366.7	376.7	374.3	361.8	338.1
47°	223.4	233.2	248.6	270.9	305.0	337.5	362.0	372.1	370.0	357.4	333.6
47.5°	218.3	228.1	243.7	266.0	300.3	332.7	357.4	367.7	365.5	352.9	329.0
48°	213.1	223.1	238.7	261.1	295.3	328.0	352.7	363.2	361.1	348.5	324.7
48.5°	207.9	218.0	233.9	256.4	290.6	323.3	348.2	358.7	356.6	343.9	320.0
49°	202.6	213.0	229.0	251.6	285.7	318.4	343.4	354.0	351.9	339.0	315.2
49.5°	197.5	208.0	224.2	246.8	280.8	313.6	338.6	349.3	346.9	333.8	309.9
50°	192.2	202.9	219.4	241.8	275.9	308.6	333.4	343.8	341.1	328.1	304.6
50.5°	187.0	197.9	214.4	237.1	271.0	303.2	327.7	337.9	335.0	321.7	298.5
51°	181.6	193.0	209.6	232.1	265.8	297.5	321.8	331.4	327.7	315.0	292.5
51.5°	176.6	188.0	204.8	227.1	260.4	291.9	315.6	324.6	320.8	308.0	285.9
52°	171.4	183.0	199.9	222.1	255.1	285.8	308.8	317.2	313.5	300.8	279.1
52.5°	166.3	178.1	195.1	216.9	249.4	279.6	301.9	309.7	305.8	293.2	272.0
53°	161.2	173.2	190.2	211.8	243.5	273.2	294.7	302.0	298.3	285.7	265.1
53.5°	156.1	168.3	185.2	206.6	237.9	266.7	287.3	294.4	290.3	277.9	257.8
54°	150.9	163.5	180.3	201.2	232.0	260.0	280.1	286.7	282.2	270.2	250.7
54.5°	145.9	158.6	175.4	196.1	226.4	253.4	272.5	278.7	274.3	262.4	243.4
55°	140.9	153.8	170.5	191.0	220.4	246.7	265.1	271.0	266.4	254.7	236.3
55.5°	135.8	149.0	165.4	185.7	214.6	240.0	257.3	263.1	258.2	246.7	228.9
56°	131.0	144.1	160.5	180.4	208.5	232.9	249.8	255.2	250.1	238.6	221.6
56.5°	126.0	139.2	155.6	175.1	202.6	226.0	242.0	247.2	242.2	230.9	214.3
57°	121.1	134.4	150.6	169.8	196.5	219.1	234.6	239.2	234.2	223.2	207.1
57.5°	116.2	129.6	145.6	164.5	190.7	212.2	226.8	231.3	226.3	215.3	199.8
58°	111.5	124.9	140.8	159.2	184.6	205.2	219.6	223.4	218.6	207.5	192.6
58.5°	106.8	120.1	135.8	154.0	178.6	198.3	211.9	215.7	210.8	200.0	185.6
59°	102.0	115.5	131.0	148.6	172.4	191.4	204.4	207.9	203.0	192.6	178.4
59.5°	97.4	110.8	126.1	143.4	166.6	184.6	197.0	200.2	195.4	185.1	171.4
60°	92.8	106.2	121.4	138.2	160.5	177.8	189.7	192.6	187.9	177.8	164.8
60.5°	88.3	101.5	116.6	133.0	154.6	171.0	182.2	185.2	180.6	170.7	157.9
61°	83.8	97.1	111.8	127.8	148.6	164.5	175.1	177.8	173.2	163.9	151.4
61.5°	79.5	92.6	107.2	122.7	142.8	158.0	168.0	170.5	166.1	157.0	145.1
62°	75.1	88.3	102.7	117.7	136.9	151.7	161.3	163.5	159.1	150.4	138.9
62.5°	70.8	83.9	98.1	112.7	131.3	145.3	154.1	156.3	152.1	143.9	132.6
63°	66.7	79.7	93.6	107.7	125.6	138.9	147.3	149.4	145.5	137.3	126.6
63.5°	62.7	75.4	89.1	102.8	120.1	132.9	140.7	142.6	138.6	131.2	120.9
64°	58.8	71.3	84.6	97.9	114.6	126.7	134.5	136.1	131.7	125.5	115.4
64.5°	55.1	67.3	80.2	93.2	109.3	120.8	128.0	129.6	125.2	119.6	110.0
65°	51.5	63.5	75.9	88.5	104.1	115.1	121.8	123.5	118.9	114.0	104.7
65.5°	48.0	59.5	71.6	84.0	99.1	109.5	115.9	117.3	112.3	108.4	99.7
66°	44.7	55.8	67.3	79.3	94.1	103.9	110.2	111.3	106.2	103.0	94.8



TEST NUMBER: P775726

CATALOG NUMBER: HCDJBL510CSD-HCD61TRH-HCD61TRLWW-1000lm-3000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	36.1	45.0	55.3	66.3	80.0	88.9	94.0	94.8	89.8	88.5	81.6
68°	34.3	41.6	51.5	62.3	75.3	84.2	89.3	89.9	84.9	83.8	77.2
68.5°	32.3	38.5	47.9	58.3	71.1	79.5	84.6	85.1	79.9	79.1	72.8
69°	30.5	35.9	44.4	54.5	66.9	74.8	79.9	80.3	74.9	74.5	69.0
69.5°	28.6	33.5	41.0	50.6	62.9	70.3	75.1	75.5	70.5	70.3	65.1
70°	27.6	31.0	38.0	47.2	59.0	66.2	70.9	71.4	66.4	66.3	61.4
70.5°	26.6	28.5	35.5	43.9	55.3	62.3	67.0	67.4	62.5	62.6	58.1
71°	25.5	26.0	33.1	40.6	51.8	58.6	63.2	63.6	58.9	59.0	54.7
71.5°	24.4	24.9	30.5	37.6	48.4	54.9	59.4	59.8	55.3	55.5	51.4
72°	23.2	23.9	28.1	35.2	45.1	51.6	55.9	56.4	51.9	52.1	48.4
72.5°	22.0	22.9	25.6	32.8	41.9	48.3	52.6	53.1	48.8	49.1	45.4
73°	20.9	21.7	23.7	30.3	39.1	45.2	49.5	50.0	45.7	45.9	42.5
73.5°	19.8	20.7	21.9	27.8	36.3	42.2	46.3	46.9	43.0	43.2	39.9
74°	18.8	19.7	20.4	25.3	33.7	39.5	43.6	44.1	40.1	40.4	37.3
74.5°	17.7	18.7	19.1	23.4	31.1	36.7	40.8	41.3	37.4	37.8	34.9
75°	16.7	17.7	17.9	21.5	28.8	34.2	38.3	38.7	34.9	35.3	32.4
75.5°	15.7	16.7	16.8	19.8	26.6	31.8	35.7	36.2	32.4	32.9	30.2
76°	14.8	15.7	15.8	18.3	24.5	29.5	33.3	33.8	30.0	30.5	28.1
76.5°	13.9	14.8	15.0	16.7	22.5	27.3	31.0	31.4	27.8	28.4	26.0
77°	13.0	13.9	14.1	15.4	20.7	25.3	28.8	29.3	25.5	26.2	24.1
77.5°	12.1	13.1	13.3	14.2	19.0	23.4	26.7	27.1	23.5	24.2	22.2
78°	11.2	12.1	12.4	13.1	17.3	21.5	24.7	25.1	21.4	22.2	20.4
78.5°	10.5	11.3	11.6	11.9	15.8	19.7	22.8	23.2	19.4	20.5	18.7
79°	9.7	10.5	10.9	10.9	14.4	18.1	20.9	21.2	17.5	18.7	17.0
79.5°	9.0	9.7	10.2	10.0	13.1	16.4	19.2	19.5	15.8	17.0	15.5
80°	8.3	9.0	9.5	9.2	11.8	14.9	17.4	17.8	14.1	15.4	14.0
80.5°	7.6	8.3	8.8	8.4	10.7	13.5	15.8	16.1	12.3	13.9	12.5
81°	6.8	7.6	8.1	7.7	9.7	12.1	14.3	14.6	10.9	12.4	11.2
81.5°	6.2	6.9	7.4	7.0	8.8	10.9	12.8	13.1	9.6	11.1	10.1
82°	5.6	6.2	6.8	6.4	7.9	9.8	11.3	11.7	8.2	10.0	9.0
82.5°	5.0	5.6	6.2	5.8	6.9	8.8	10.2	10.5	6.7	8.9	7.9
83°	4.4	5.0	5.6	5.3	6.0	7.8	9.1	9.4	5.4	7.8	6.7
83.5°	3.8	4.4	5.0	4.8	5.3	6.7	8.0	8.3	4.3	6.5	5.6
84°	3.3	3.8	4.5	4.3	4.6	5.7	6.7	7.0	3.2	5.4	4.8
84.5°	2.8	3.3	4.0	3.8	4.0	4.9	5.6	5.9	2.2	4.5	4.0
85°	2.2	2.8	3.5	3.4	3.5	4.1	4.7	4.8	1.5	3.7	3.3
85.5°	1.7	2.2	3.1	3.0	3.0	3.5	3.9	3.9	1.0	2.9	2.6
86°	1.3	1.8	2.6	2.6	2.4	2.8	3.2	3.0	0.7	2.1	1.9
86.5°	1.1	1.4	2.0	2.0	2.0	2.2	2.4	2.2	0.6	1.5	1.4
87°	0.8	1.1	1.6	1.6	1.6	1.7	1.8	1.6	0.4	1.0	1.0
87.5°	0.6	0.8	1.2	1.2	1.3	1.3	1.3	1.1	0.3	0.6	0.6
88°	0.4	0.6	0.8	0.9	1.0	0.9	0.8	0.6	0.2	0.3	0.3
88.5°	0.2	0.3	0.5	0.5	0.6	0.5	0.4	0.3	0.1	0.1	0.1



TEST NUMBER: P775726

CATALOG NUMBER: HCDJBL510CSD-HCD61TRH-HCD61TRLWW-1000lm-3000K

CANDELA DISTRIBUTION (continued):

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



TEST NUMBER: P775726

CATALOG NUMBER: HCDJBL510CSD-HCD61TRH-HCD61TRLWW-1000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	580.9	580.9	580.9	580.9	580.9	580.9
0.5°	581.0	580.8	579.9	579.4	579.2	579.4
1°	581.1	580.2	578.9	578.2	577.8	578.0
1.5°	581.0	579.6	578.0	576.8	576.3	576.6
2°	581.0	579.0	576.9	575.3	574.6	575.0
2.5°	580.8	578.3	575.6	573.9	573.0	573.3
3°	580.5	577.5	574.4	572.3	571.3	571.7
3.5°	580.2	576.6	573.1	570.7	569.5	569.9
4°	579.8	575.6	571.8	568.9	567.7	568.0
4.5°	579.3	574.6	570.3	567.1	565.7	566.2
5°	578.8	573.6	568.8	565.2	563.6	564.1
5.5°	578.2	572.4	567.2	563.3	561.6	562.1
6°	577.5	571.2	565.4	561.3	559.4	559.9
6.5°	576.7	569.8	563.7	559.2	557.2	557.8
7°	575.9	568.5	562.0	557.1	554.8	555.6
7.5°	574.8	567.0	560.0	554.8	552.5	553.2
8°	573.9	565.4	558.1	552.6	550.1	550.8
8.5°	572.8	563.9	556.0	550.2	547.6	548.3
9°	571.7	562.2	553.9	547.9	545.0	545.9
9.5°	570.4	560.3	551.7	545.3	542.4	543.2
10°	569.1	558.6	549.4	542.8	539.7	540.6
10.5°	567.7	556.7	547.1	540.2	537.1	537.9
11°	566.3	554.7	544.7	537.6	534.3	535.1
11.5°	564.7	552.6	542.3	534.8	531.5	532.3
12°	563.2	550.4	539.7	532.1	528.5	529.4
12.5°	561.5	548.3	537.1	529.1	525.6	526.5
13°	559.7	546.1	534.4	526.3	522.6	523.5
13.5°	557.9	543.6	531.8	523.3	519.4	520.5
14°	556.0	541.3	528.9	520.3	516.4	517.4
14.5°	554.0	538.7	526.1	517.3	513.2	514.2
15°	551.9	536.2	523.2	514.1	509.9	511.1
15.5°	549.7	533.6	520.1	510.9	506.7	507.8
16°	547.6	530.9	517.1	507.6	503.4	504.5
16.5°	545.3	528.1	513.9	504.3	499.9	501.2
17°	543.0	525.2	510.8	501.0	496.6	497.7
17.5°	540.6	522.4	507.5	497.5	493.0	494.3
18°	538.0	519.3	504.2	494.0	489.5	490.8
18.5°	535.5	516.3	500.8	490.5	486.0	487.3
19°	532.8	513.1	497.4	486.9	482.3	483.6
19.5°	530.0	509.9	493.9	483.2	478.6	479.9
20°	527.3	506.7	490.4	479.6	474.9	476.4
20.5°	524.4	503.4	486.7	475.9	471.2	472.5
21°	521.5	499.9	483.0	472.0	467.3	468.7

TEST NUMBER: P775726

CATALOG NUMBER: HCDJBL510CSD-HCD61TRH-HCD61TRLWW-1000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	512.3	489.4	471.6	460.4	455.7	457.2
23°	509.0	485.7	467.7	456.4	451.7	453.2
23.5°	505.9	482.1	463.8	452.4	447.7	449.2
24°	502.5	478.2	459.7	448.3	443.5	445.2
24.5°	499.0	474.4	455.8	444.2	439.3	441.0
25°	495.6	470.5	451.6	440.1	435.3	436.9
25.5°	492.0	466.6	447.5	435.8	431.1	432.7
26°	488.4	462.7	443.2	431.5	426.8	428.5
26.5°	484.6	458.5	439.1	427.3	422.5	424.2
27°	481.0	454.3	434.7	423.0	418.2	420.0
27.5°	477.3	450.3	430.5	418.6	413.8	415.6
28°	473.4	446.1	426.0	414.1	409.3	411.2
28.5°	469.6	441.9	421.7	409.8	405.1	406.8
29°	465.6	437.5	417.2	405.3	400.5	402.4
29.5°	461.6	433.2	412.7	400.8	396.0	397.9
30°	457.5	428.9	408.2	396.2	391.4	393.3
30.5°	453.5	424.4	403.6	391.6	386.9	388.7
31°	449.3	420.0	398.9	387.0	382.2	384.1
31.5°	445.1	415.5	394.4	382.3	377.6	379.5
32°	440.8	410.9	389.8	377.6	372.8	374.9
32.5°	436.6	406.4	385.1	372.9	368.2	370.2
33°	432.2	401.9	380.4	368.2	363.4	365.4
33.5°	427.8	397.2	375.7	363.4	358.7	360.7
34°	423.4	392.5	370.9	358.6	353.9	355.9
34.5°	418.9	387.8	366.0	353.8	349.1	351.0
35°	414.4	383.1	361.2	348.9	344.1	346.1
35.5°	410.0	378.3	356.5	344.0	339.5	341.3
36°	405.5	373.7	351.6	339.2	334.6	336.4
36.5°	400.9	368.8	346.8	334.4	329.6	331.5
37°	396.2	364.0	341.8	329.4	324.7	326.5
37.5°	391.6	359.3	337.0	324.5	319.8	321.5
38°	386.9	354.5	332.0	319.5	314.8	316.4
38.5°	382.2	349.6	327.2	314.6	309.8	311.5
39°	377.5	344.9	322.3	309.7	304.8	306.6
39.5°	372.8	340.0	317.4	304.7	299.8	301.4
40°	368.0	335.1	312.4	299.6	294.7	296.2
40.5°	363.3	330.3	307.5	294.7	289.7	291.2
41°	358.5	325.3	302.6	289.7	284.5	286.1
41.5°	353.7	320.5	297.6	284.7	279.4	280.9
42°	348.9	315.7	292.7	279.7	274.4	275.7
42.5°	344.1	310.9	287.9	274.7	269.3	270.6
43°	339.5	306.1	283.0	269.7	264.2	265.5
43.5°	334.6	301.1	278.2	264.7	259.1	260.3



TEST NUMBER: P775726

CATALOG NUMBER: HCDJBL510CSD-HCD61TRH-HCD61TRLWW-1000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	320.3	286.7	263.5	249.8	243.7	244.6
45.5°	315.5	281.9	258.7	244.8	238.5	239.4
46°	310.8	277.3	254.1	240.0	233.4	234.2
46.5°	306.2	272.7	249.4	235.0	228.3	228.7
47°	301.6	268.1	244.6	230.1	223.2	223.4
47.5°	297.0	263.4	239.9	225.2	218.2	218.3
48°	292.6	259.2	235.3	220.3	213.1	213.1
48.5°	288.1	254.6	230.6	215.5	207.9	207.9
49°	283.4	250.0	226.1	210.8	202.9	202.6
49.5°	278.4	245.4	221.6	206.0	197.9	197.5
50°	273.3	240.6	217.0	201.2	192.8	192.2
50.5°	267.9	235.6	212.2	196.5	187.9	187.0
51°	262.4	230.6	207.6	191.8	182.8	181.6
51.5°	256.7	225.4	202.9	187.1	177.9	176.6
52°	250.9	220.2	198.1	182.5	173.0	171.4
52.5°	244.8	214.8	193.2	177.7	168.0	166.3
53°	238.7	209.4	188.3	173.0	163.2	161.2
53.5°	232.3	203.9	183.4	168.2	158.3	156.1
54°	225.9	198.3	178.4	163.7	153.6	150.9
54.5°	219.5	192.8	173.4	158.9	148.8	145.9
55°	213.1	187.2	168.3	154.1	144.1	140.9
55.5°	206.5	181.4	163.3	149.3	139.2	135.8
56°	200.0	175.8	158.2	144.6	134.5	131.0
56.5°	193.5	170.2	153.2	139.8	129.8	126.0
57°	187.1	164.5	148.0	135.1	125.1	121.1
57.5°	180.6	158.8	142.9	130.2	120.4	116.2
58°	174.3	153.1	137.9	125.6	115.9	111.5
58.5°	168.0	147.5	132.9	120.8	111.2	106.8
59°	161.6	141.9	127.9	116.1	106.6	102.0
59.5°	155.5	136.3	122.9	111.5	102.1	97.4
60°	149.4	130.9	118.0	106.9	97.6	92.8
60.5°	143.4	125.5	113.2	102.3	93.2	88.3
61°	137.3	120.2	108.4	97.8	88.8	83.8
61.5°	131.5	115.1	103.6	93.5	84.5	79.5
62°	126.0	110.0	98.9	89.1	80.3	75.1
62.5°	120.3	105.0	94.3	84.7	76.1	70.8
63°	114.8	100.0	89.8	80.4	72.0	66.7
63.5°	109.4	95.3	85.3	76.2	68.0	62.7
64°	104.2	90.6	80.9	72.0	64.1	58.8
64.5°	99.2	86.1	76.6	68.0	60.2	55.1
65°	94.3	81.6	72.4	64.0	56.6	51.5
65.5°	89.7	77.3	68.4	60.0	53.0	48.0
66°	85.2	73.1	64.3	56.2	49.5	44.7



TEST NUMBER: P775726

CATALOG NUMBER: HCDJBL510CSD-HCD61TRH-HCD61TRLWW-1000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	72.1	61.3	53.1	45.4	39.7	36.1
68°	68.2	57.6	49.5	42.2	36.8	34.3
68.5°	64.4	54.2	46.2	39.1	34.6	32.3
69°	60.7	50.8	42.9	36.0	32.4	30.5
69.5°	57.2	47.6	39.8	33.7	30.3	28.6
70°	53.9	44.5	37.0	31.3	28.1	27.6
70.5°	50.7	41.5	34.7	29.0	25.9	26.6
71°	47.5	38.8	32.3	26.6	24.9	25.5
71.5°	44.7	36.0	30.0	24.8	24.0	24.4
72°	41.8	33.8	27.6	23.2	23.0	23.2
72.5°	39.2	31.5	25.3	21.6	21.8	22.0
73°	36.5	29.3	23.4	20.2	20.7	20.9
73.5°	34.1	26.9	21.6	19.0	19.7	19.8
74°	31.7	25.0	20.0	18.0	18.7	18.8
74.5°	29.6	23.1	18.5	17.0	17.7	17.7
75°	27.4	21.3	17.1	16.2	16.7	16.7
75.5°	25.4	19.6	15.8	15.3	15.7	15.7
76°	23.5	18.1	14.7	14.5	14.8	14.8
76.5°	21.7	16.5	13.6	13.7	13.9	13.9
77°	20.0	15.1	12.5	12.9	13.1	13.0
77.5°	18.4	13.9	11.6	12.0	12.2	12.1
78°	16.7	12.5	10.7	11.3	11.4	11.2
78.5°	15.3	11.4	9.9	10.6	10.6	10.5
79°	13.9	10.4	9.2	9.9	9.8	9.7
79.5°	12.7	9.4	8.5	9.2	9.1	9.0
80°	11.4	8.5	7.9	8.5	8.4	8.3
80.5°	10.2	7.7	7.3	7.9	7.7	7.6
81°	9.3	6.8	6.7	7.2	6.9	6.8
81.5°	8.4	6.1	6.2	6.6	6.3	6.2
82°	7.3	5.5	5.6	6.0	5.6	5.6
82.5°	6.4	4.9	5.1	5.4	5.0	5.0
83°	5.4	4.3	4.6	4.9	4.4	4.4
83.5°	4.7	3.8	4.1	4.4	3.8	3.8
84°	4.0	3.3	3.7	3.9	3.4	3.3
84.5°	3.4	2.9	3.2	3.4	2.9	2.8
85°	2.8	2.4	2.8	2.9	2.3	2.2
85.5°	2.2	1.9	2.2	2.4	1.8	1.7
86°	1.7	1.6	1.8	1.9	1.5	1.3
86.5°	1.3	1.2	1.4	1.5	1.2	1.1
87°	0.9	0.9	1.0	1.1	0.9	0.8
87.5°	0.6	0.5	0.6	0.7	0.6	0.6
88°	0.4	0.2	0.3	0.4	0.4	0.4
88.5°	0.1	0.1	0.1	0.1	0.2	0.2



TEST NUMBER: P775726

CATALOG NUMBER: HCDJBL510CSD-HCD61TRH-HCD61TRLWW-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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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°	464.9	472.0	484.5	502.5	526.5	545.8	557.9	562.2	559.6	551.5	537.4
22°	461.1	468.2	480.9	499.0	523.6	543.2	555.8	559.9	557.3	548.9	534.7



44°	254.9	263.8	278.5	300.6	335.0	367.1	390.8	400.1	397.3	384.8	361.4
44.5°	249.8	258.7	273.5	295.7	330.0	362.2	386.0	395.4	392.7	380.2	356.7



66.5°	41.5	52.1	63.3	74.9	89.4	98.6	104.6	105.6	100.3	97.7	90.4
67°	38.6	48.6	59.3	70.5	84.7	93.6	99.3	100.1	94.8	93.1	86.0



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

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21.5°	518.5	496.5	479.3	468.1	463.4	464.9
22°	515.4	493.0	475.5	464.3	459.5	461.1



44°	329.8	296.3	273.2	259.7	253.8	254.9
44.5°	324.9	291.5	268.4	254.7	248.8	249.8



66.5°	80.6	69.1	60.4	52.3	46.1	41.5
67°	76.1	65.0	56.6	49.0	42.9	38.6

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

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(END OF REPORT)