

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: P775734

Luminaire Tested: HCDJBS510CSD-HCD61TRMB-1000lm-5000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P775734
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B038)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL510CSD-HCD61TRMB-1000lm-5000K
Description: 6 INCH ROUND SHALLOW-WIDE MATTE BLACK TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 5000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1088.7 lumens
Efficiency: N/A
Efficacy: 108.9 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.24 / 1.32
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

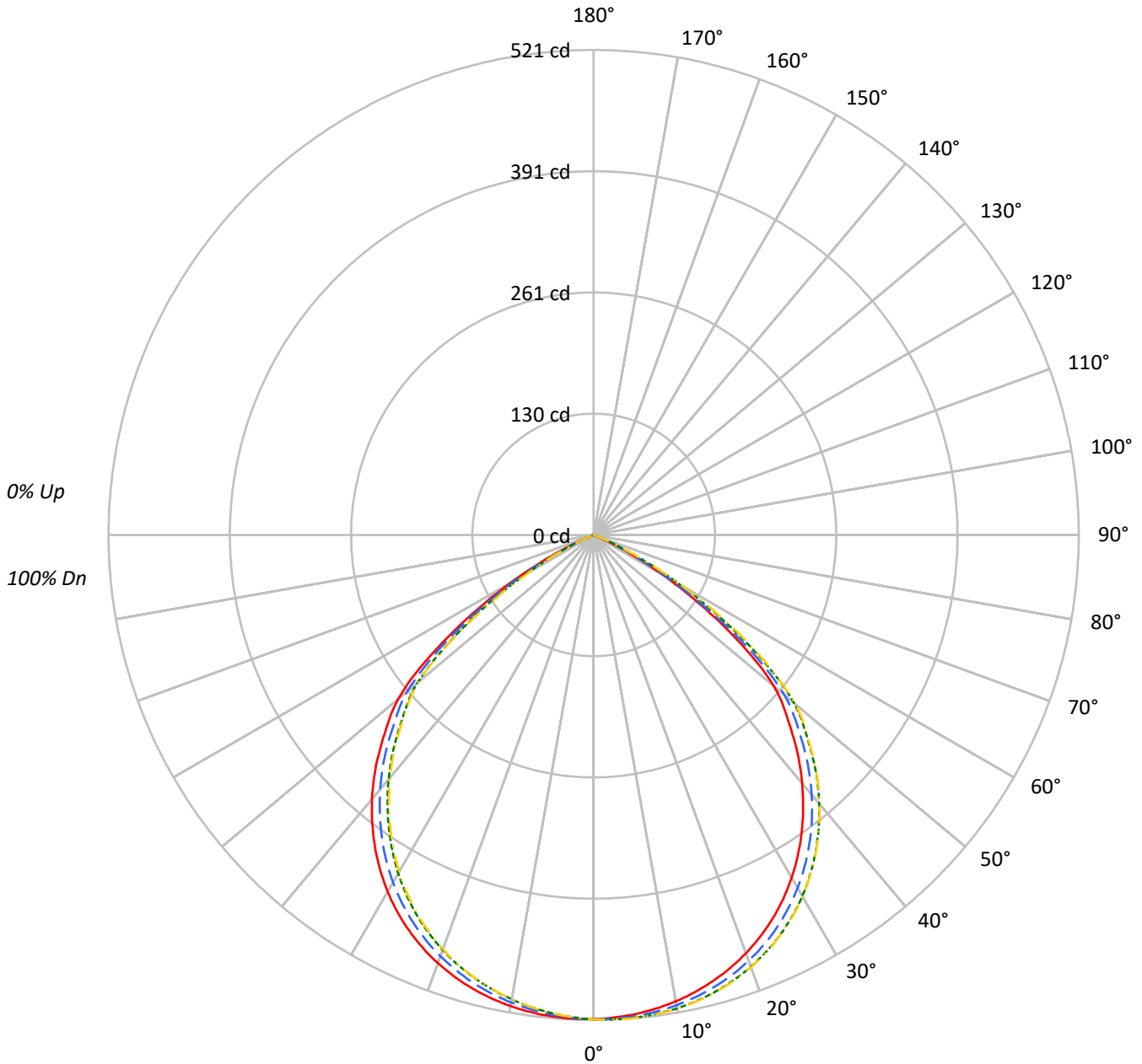
Input Watts (W): 10
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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									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	97	92	88	101	96	91	87	92	88	85	89	86	83	86	83	81	79																			
3	96	88	81	76	94	86	80	75	83	78	74	81	76	73	78	75	71	69																			
4	89	79	72	66	87	78	71	65	75	69	65	73	68	64	71	67	63	61																			
5	82	71	64	58	81	70	63	58	68	62	57	66	61	57	65	60	56	54																			
6	77	65	57	51	75	64	57	51	62	56	51	61	55	50	59	54	50	48																			
7	71	59	51	46	70	58	51	46	57	50	45	56	50	45	54	49	45	43																			
8	67	54	47	41	65	54	46	41	52	46	41	51	45	41	50	45	40	39																			
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35																			
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	28523	28523	28523	28523
5°	28434	28643	28566	28379
10°	28317	28751	28607	28206
15°	28150	28808	28615	27985
20°	27897	28802	28551	27682
25°	27510	28665	28369	27225
30°	26916	28359	28004	26574
35°	26067	27807	27398	25665
40°	24925	26958	26492	24503
45°	23390	25654	25134	22948
50°	21552	23940	23343	21057
55°	16296	18876	18255	15789
60°	9440	11808	11348	9254
65°	2906	4475	4112	3139
70°	48	80	48	48
75°	21	42	21	21
80°	32	32	0	32
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 112.5°
 Vertical Angle: 45°
 Luminance: 25747 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.2	4.5
10°-20°	141.2	13.0
20°-30°	212.6	19.5
30°-40°	249.4	22.9
40°-50°	241.5	22.2
50°-60°	160.7	14.8
60°-70°	33.9	3.1
70°-80°	0.2	0.0
80°-90°	0.0	0.0
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°	403.0	37.0
0°-40°	652.4	59.9
0°-60°	1054.6	96.9
0°-90°	1088.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1088.7	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	520	520	520	520	520	
5°	517	520	519	516	517	49
15°	496	508	504	493	496	140
25°	455	474	469	450	455	209
35°	390	416	409	384	390	243
45°	302	331	324	296	302	233
55°	170	198	191	165	170	151
65°	22	34	32	24	22	28
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
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°	520.3	520.3	520.3	520.3	520.3	520.3	520.3	520.3	520.3	520.3	520.3
0.5°	520.0	520.0	520.3	520.6	520.5	520.6	520.6	520.5	520.2	520.1	520.2
1°	519.8	520.0	520.3	520.7	520.7	520.8	520.8	520.6	520.3	520.0	520.0
1.5°	519.6	519.8	520.3	520.6	520.8	521.0	521.0	520.7	520.3	520.0	519.9
2°	519.2	519.6	520.2	520.6	521.0	521.2	521.2	520.7	520.3	519.8	519.7
2.5°	518.9	519.4	520.0	520.6	521.0	521.2	521.2	520.7	520.2	519.7	519.4
3°	518.5	519.1	519.9	520.5	521.0	521.2	521.2	520.7	520.1	519.5	519.0
3.5°	518.2	518.8	519.7	520.4	520.8	521.2	521.2	520.7	519.9	519.1	518.6
4°	517.6	518.4	519.5	520.2	520.8	521.1	521.1	520.5	519.7	518.9	518.3
4.5°	517.2	518.1	519.1	520.0	520.6	521.0	521.0	520.4	519.5	518.6	517.9
5°	516.7	517.6	518.7	519.8	520.5	520.8	520.7	520.2	519.1	518.2	517.3
5.5°	516.2	517.1	518.4	519.6	520.3	520.6	520.5	519.9	518.8	517.8	516.8
6°	515.4	516.6	518.1	519.2	520.0	520.4	520.3	519.6	518.5	517.2	516.2
6.5°	514.8	516.0	517.5	518.8	519.8	520.1	520.0	519.2	518.1	516.8	515.5
7°	514.0	515.4	517.0	518.4	519.4	519.8	519.7	518.8	517.6	516.2	514.9
7.5°	513.3	514.8	516.5	518.0	519.0	519.5	519.4	518.4	517.0	515.6	514.2
8°	512.5	514.1	515.8	517.4	518.6	519.0	518.9	518.0	516.6	515.0	513.5
8.5°	511.6	513.4	515.2	516.9	518.1	518.6	518.5	517.4	515.9	514.2	512.6
9°	510.7	512.5	514.5	516.3	517.6	518.1	518.0	516.9	515.3	513.6	511.9
9.5°	509.8	511.7	513.7	515.6	517.0	517.5	517.4	516.3	514.7	512.7	510.9
10°	508.7	510.8	513.0	514.9	516.5	516.9	516.8	515.7	513.9	511.9	510.1
10.5°	507.7	509.9	512.1	514.1	515.7	516.3	516.2	515.0	513.2	511.0	509.1
11°	506.6	508.9	511.3	513.4	515.1	515.6	515.4	514.2	512.4	510.2	508.1
11.5°	505.5	507.8	510.3	512.4	514.3	514.9	514.7	513.4	511.5	509.2	507.1
12°	504.2	506.8	509.3	511.6	513.5	514.1	513.9	512.6	510.6	508.3	505.9
12.5°	503.0	505.6	508.3	510.6	512.6	513.3	513.1	511.8	509.8	507.2	504.9
13°	501.7	504.4	507.2	509.7	511.7	512.4	512.1	510.8	508.7	506.1	503.6
13.5°	500.4	503.2	506.1	508.6	510.8	511.5	511.3	509.9	507.6	505.0	502.3
14°	499.0	501.9	504.9	507.5	509.8	510.5	510.2	508.8	506.6	503.8	501.0
14.5°	497.5	500.6	503.7	506.5	508.7	509.4	509.1	507.7	505.4	502.5	499.7
15°	496.0	499.1	502.4	505.2	507.6	508.4	508.1	506.6	504.2	501.2	498.4
15.5°	494.4	497.7	501.1	504.0	506.5	507.2	507.0	505.5	502.9	500.0	497.0
16°	492.9	496.2	499.7	502.7	505.3	506.0	505.7	504.2	501.7	498.6	495.4
16.5°	491.2	494.6	498.2	501.4	504.0	504.7	504.4	502.9	500.4	497.1	493.8
17°	489.5	493.0	496.8	500.0	502.7	503.5	503.2	501.6	499.0	495.6	492.2
17.5°	487.8	491.4	495.3	498.5	501.3	502.2	501.9	500.3	497.5	494.0	490.5
18°	486.0	489.8	493.7	497.0	499.8	500.7	500.4	498.7	496.0	492.4	488.8
18.5°	484.1	488.0	492.1	495.5	498.5	499.2	498.9	497.2	494.4	490.8	487.1
19°	482.2	486.1	490.3	493.9	496.9	497.7	497.4	495.6	492.8	489.1	485.2
19.5°	480.2	484.3	488.5	492.2	495.4	496.2	495.8	494.0	491.1	487.4	483.4
20°	478.2	482.5	486.7	490.5	493.7	494.5	494.2	492.4	489.4	485.6	481.6
20.5°	476.1	480.4	484.8	488.8	492.0	492.8	492.5	490.6	487.7	483.6	479.5
21°	474.0	478.3	483.0	486.9	490.1	491.1	490.7	488.9	485.9	481.7	477.6



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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°	467.2	472.0	476.8	481.0	484.6	485.5	485.0	483.1	479.9	475.6	471.1
23°	464.9	469.8	474.7	479.0	482.6	483.5	483.0	481.1	477.9	473.4	468.7
23.5°	462.4	467.4	472.6	476.8	480.6	481.5	481.1	479.1	475.9	471.2	466.5
24°	460.0	465.1	470.2	474.7	478.4	479.4	478.8	476.8	473.6	468.9	464.1
24.5°	457.3	462.5	467.9	472.3	476.3	477.2	476.7	474.7	471.4	466.6	461.7
25°	454.8	460.0	465.4	470.0	473.9	474.9	474.4	472.5	469.0	464.2	459.1
25.5°	452.1	457.5	463.0	467.7	471.7	472.7	472.1	470.1	466.7	461.7	456.6
26°	449.4	454.9	460.5	465.2	469.4	470.2	469.8	467.7	464.2	459.1	454.0
26.5°	446.5	452.2	457.8	462.7	466.9	467.9	467.3	465.2	461.8	456.6	451.2
27°	443.8	449.4	455.2	460.2	464.3	465.4	464.8	462.7	459.1	453.9	448.6
27.5°	440.8	446.5	452.4	457.5	461.9	462.9	462.3	460.2	456.6	451.2	445.8
28°	437.8	443.7	449.6	454.8	459.2	460.1	459.7	457.5	453.8	448.4	442.9
28.5°	434.7	440.8	446.9	452.1	456.5	457.5	457.0	454.9	451.0	445.6	440.0
29°	431.6	437.7	443.9	449.3	453.7	454.6	454.2	452.1	448.4	442.7	437.1
29.5°	428.5	434.7	440.9	446.4	451.0	451.9	451.3	449.2	445.4	439.8	434.0
30°	425.2	431.5	437.9	443.5	448.0	449.0	448.5	446.3	442.4	436.6	430.9
30.5°	421.9	428.4	434.8	440.4	445.1	446.0	445.6	443.5	439.4	433.5	427.8
31°	418.6	425.1	431.6	437.3	442.1	442.9	442.5	440.4	436.3	430.4	424.5
31.5°	415.1	421.8	428.4	434.2	439.0	439.8	439.3	437.3	433.1	427.3	421.3
32°	411.7	418.4	425.1	431.1	435.8	436.7	436.2	434.1	429.9	423.9	417.9
32.5°	408.1	415.0	421.7	427.7	432.6	433.4	433.1	431.0	426.7	420.6	414.5
33°	404.5	411.5	418.4	424.4	429.4	430.2	429.8	427.6	423.4	417.2	411.0
33.5°	400.9	408.0	414.9	421.0	426.0	426.8	426.4	424.2	420.0	413.8	407.5
34°	397.2	404.3	411.4	417.6	422.6	423.5	423.0	420.9	416.5	410.3	403.9
34.5°	393.4	400.7	407.7	413.9	419.0	420.0	419.6	417.3	413.0	406.7	400.3
35°	389.5	397.0	404.0	410.4	415.5	416.4	416.0	413.8	409.4	402.9	396.6
35.5°	385.7	393.1	400.4	406.7	411.9	412.9	412.3	410.2	405.7	399.3	392.8
36°	381.6	389.2	396.6	403.1	408.3	409.1	408.7	406.6	402.0	395.7	389.0
36.5°	377.8	385.4	392.7	399.2	404.5	405.5	405.1	402.8	398.3	391.9	385.1
37°	373.6	381.4	388.8	395.3	400.8	401.7	401.2	399.1	394.4	387.9	381.2
37.5°	369.5	377.4	384.8	391.4	396.9	397.8	397.3	395.3	390.5	384.1	377.4
38°	365.2	373.3	380.8	387.4	393.0	393.9	393.5	391.2	386.6	379.9	373.3
38.5°	361.2	369.2	376.8	383.3	389.1	389.9	389.6	387.3	382.6	376.1	369.2
39°	357.0	365.1	372.7	379.4	385.0	385.9	385.6	383.3	378.4	371.9	365.1
39.5°	352.6	360.8	368.4	375.1	380.9	381.8	381.4	379.2	374.4	367.8	360.8
40°	348.3	356.5	364.3	370.9	376.7	377.7	377.3	375.1	370.2	363.5	356.7
40.5°	343.9	352.2	359.9	366.6	372.5	373.5	373.1	370.8	366.0	359.3	352.4
41°	339.4	347.7	355.5	362.1	368.2	369.3	368.8	366.5	361.7	355.0	348.0
41.5°	334.8	343.3	351.0	357.9	363.7	364.9	364.6	362.1	357.2	350.6	343.7
42°	330.4	338.7	346.6	353.3	359.3	360.5	360.1	357.7	352.8	346.1	339.2
42.5°	325.8	334.3	342.0	348.7	354.9	356.0	355.7	353.2	348.3	341.8	334.7
43°	321.0	329.6	337.3	344.0	350.3	351.4	351.1	348.6	343.7	337.0	330.1
43.5°	316.3	324.7	332.6	339.2	345.5	346.8	346.4	343.9	339.0	332.3	325.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	301.7	310.1	317.8	324.4	330.9	332.1	332.0	329.2	324.2	317.6	310.7
45.5°	296.8	305.1	312.9	319.4	325.9	327.3	327.0	324.2	319.2	312.6	305.7
46°	292.0	300.3	308.0	314.5	321.0	322.5	322.1	319.4	314.3	307.5	300.9
46.5°	287.3	295.6	303.2	309.7	316.2	317.9	317.6	314.6	309.2	302.7	296.0
47°	282.7	290.9	298.5	304.9	311.4	313.1	312.9	309.8	304.4	297.8	291.2
47.5°	278.1	286.3	293.8	300.2	306.7	308.4	308.2	305.1	299.8	293.1	286.6
48°	273.5	281.6	289.0	295.4	302.0	303.8	303.6	300.5	295.1	288.5	282.1
48.5°	269.1	276.9	284.4	290.7	297.3	299.4	299.0	295.8	290.3	283.9	277.5
49°	264.2	271.9	279.1	285.4	292.1	294.2	293.9	290.7	285.2	278.7	272.3
49.5°	258.8	266.6	273.5	279.6	286.5	288.6	288.2	285.0	279.5	273.0	266.8
50°	252.7	260.7	267.5	273.2	280.7	282.7	282.5	279.2	273.7	267.2	260.8
50.5°	246.0	253.5	260.7	266.7	274.2	276.0	275.5	272.6	267.4	260.5	254.1
51°	238.7	246.0	253.3	259.5	267.0	268.7	268.3	265.6	260.3	253.3	246.8
51.5°	230.8	238.1	245.3	251.8	259.5	261.1	260.8	257.9	253.0	245.8	239.0
52°	222.4	230.0	237.1	243.5	251.3	253.3	253.1	250.0	244.9	237.8	231.2
52.5°	214.2	221.7	228.5	234.4	242.8	245.4	245.2	241.8	236.2	229.5	223.1
53°	205.6	213.0	219.7	225.2	234.1	236.9	236.9	233.3	227.4	221.0	214.8
53.5°	197.0	204.2	210.7	216.0	225.0	228.5	228.7	224.5	218.2	212.2	206.3
54°	188.1	195.4	201.4	206.5	215.9	219.9	220.0	215.7	209.1	203.4	197.4
54.5°	179.4	186.5	192.0	197.0	206.6	211.1	211.3	206.5	199.9	194.0	188.8
55°	170.5	177.5	182.5	187.4	197.5	202.4	202.6	197.4	191.0	185.1	180.0
55.5°	161.5	168.2	173.0	177.9	188.3	193.1	193.6	188.0	181.8	175.7	171.0
56°	152.8	159.3	163.4	168.2	178.8	183.9	184.4	179.0	172.8	166.3	162.2
56.5°	144.0	150.2	153.9	159.3	169.5	174.6	175.1	169.7	163.4	157.1	153.3
57°	135.1	141.1	144.4	149.9	160.3	165.3	166.0	160.8	154.7	147.9	144.4
57.5°	126.5	132.1	135.3	140.7	151.3	156.0	156.7	151.7	145.6	139.0	135.6
58°	118.1	123.2	126.1	131.9	142.2	146.7	147.4	142.7	137.0	129.9	126.9
58.5°	109.9	114.4	117.0	123.1	133.4	137.5	138.3	134.0	128.5	121.3	118.3
59°	101.8	105.7	108.5	114.6	124.6	128.3	129.1	125.5	119.9	112.8	110.0
59.5°	93.7	97.0	100.1	106.2	116.1	119.5	119.8	116.8	111.4	104.6	101.9
60°	86.1	88.8	92.1	97.9	107.7	110.8	110.9	108.4	103.5	96.9	93.9
60.5°	78.5	80.7	84.0	89.8	99.8	102.4	102.7	100.4	95.6	89.2	85.9
61°	71.0	72.9	76.3	82.0	91.9	94.2	94.3	92.4	87.8	81.5	78.0
61.5°	63.7	65.5	69.1	74.5	84.0	85.9	86.0	84.4	79.9	73.9	70.0
62°	56.8	58.4	61.8	67.2	76.1	77.7	77.7	76.4	72.1	66.8	63.1
62.5°	50.2	51.7	55.1	60.1	68.2	69.5	69.4	68.4	64.8	59.9	56.2
63°	43.9	45.2	48.5	53.6	60.8	61.8	61.7	61.0	57.9	53.4	49.7
63.5°	37.7	39.2	42.4	47.1	53.7	54.7	54.6	53.9	51.3	47.1	43.6
64°	32.6	34.4	36.6	41.0	47.0	47.8	47.8	47.1	44.6	41.1	37.9
64.5°	27.5	29.7	31.9	35.7	40.6	41.3	41.1	40.5	38.1	35.6	32.5
65°	22.4	24.9	27.1	30.7	34.5	35.1	35.1	34.4	31.7	30.2	27.6
65.5°	17.4	20.3	22.3	25.6	28.7	29.4	29.4	28.6	25.6	25.2	23.0
66°	12.3	15.5	17.6	20.6	23.3	24.0	24.0	23.1	19.9	20.5	18.8



TEST NUMBER: P775734

CATALOG NUMBER: HCDJBL510CSD-HCD61TRMB-1000lm-5000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	3.9	6.6	7.7	8.4	12.2	12.6	12.6	11.9	9.0	10.8	9.9
68°	3.0	4.6	5.3	5.6	9.0	9.3	9.3	8.8	5.3	8.1	6.9
68.5°	2.1	3.7	3.3	3.5	5.8	6.0	6.0	5.6	1.7	5.3	4.1
69°	1.2	2.9	2.6	2.7	2.7	2.8	2.7	2.7	0.5	2.6	2.3
69.5°	0.3	2.0	1.8	1.9	1.3	1.3	1.3	1.3	0.3	1.3	1.2
70°	0.3	1.2	1.1	1.1	0.5	0.5	0.5	0.5	0.3	0.5	0.5
70.5°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
71°	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
71.5°	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2
72°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
72.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
73°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
73.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
74°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
74.5°	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2
75°	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1
75.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
76°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
76.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
77°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
77.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
78°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
78.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
79°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
79.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
80°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1
80.5°	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1
81°	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
81.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
83°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
83.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
84°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
84.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P775734

CATALOG NUMBER: HCDJBL510CSD-HCD61TRMB-1000lm-5000K

CANDELA DISTRIBUTION (continued):

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



TEST NUMBER: P775734

CATALOG NUMBER: HCDJBL510CSD-HCD61TRMB-1000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	520.3	520.3	520.3	520.3	520.3	520.3
0.5°	520.2	520.1	520.1	520.2	520.1	520.0
1°	520.0	519.8	519.8	519.9	519.9	519.8
1.5°	519.8	519.5	519.4	519.6	519.6	519.6
2°	519.5	519.0	518.9	519.1	519.1	519.2
2.5°	519.1	518.5	518.5	518.6	518.7	518.9
3°	518.7	518.1	518.0	518.2	518.3	518.5
3.5°	518.3	517.5	517.4	517.6	517.9	518.2
4°	517.8	517.0	516.8	517.0	517.3	517.6
4.5°	517.2	516.4	516.2	516.4	516.7	517.2
5°	516.7	515.7	515.5	515.7	516.0	516.7
5.5°	516.0	515.0	514.8	515.0	515.4	516.2
6°	515.4	514.2	514.0	514.2	514.7	515.4
6.5°	514.7	513.5	513.2	513.4	514.0	514.8
7°	513.9	512.6	512.3	512.6	513.2	514.0
7.5°	513.2	511.7	511.5	511.7	512.3	513.3
8°	512.3	510.8	510.4	510.7	511.5	512.5
8.5°	511.4	509.9	509.4	509.8	510.5	511.6
9°	510.5	508.8	508.4	508.7	509.4	510.7
9.5°	509.4	507.8	507.4	507.6	508.5	509.8
10°	508.5	506.7	506.2	506.6	507.4	508.7
10.5°	507.4	505.5	505.1	505.4	506.2	507.7
11°	506.3	504.3	503.8	504.2	505.1	506.6
11.5°	505.2	503.2	502.5	502.8	503.9	505.5
12°	504.0	501.8	501.2	501.6	502.6	504.2
12.5°	502.7	500.5	499.8	500.2	501.3	503.0
13°	501.4	499.1	498.5	498.8	500.0	501.7
13.5°	500.1	497.7	497.0	497.3	498.5	500.4
14°	498.8	496.2	495.5	495.8	497.1	499.0
14.5°	497.3	494.6	494.0	494.3	495.5	497.5
15°	495.8	493.1	492.3	492.7	494.0	496.0
15.5°	494.3	491.4	490.6	491.0	492.3	494.4
16°	492.6	489.8	488.9	489.3	490.7	492.9
16.5°	491.1	488.0	487.2	487.6	489.0	491.2
17°	489.4	486.2	485.3	485.7	487.2	489.5
17.5°	487.6	484.4	483.4	483.9	485.3	487.8
18°	485.9	482.5	481.5	481.9	483.4	486.0
18.5°	484.0	480.6	479.5	479.9	481.5	484.1
19°	482.0	478.6	477.5	477.9	479.5	482.2
19.5°	480.1	476.6	475.3	475.8	477.6	480.2
20°	478.1	474.5	473.2	473.6	475.4	478.2
20.5°	476.1	472.2	471.0	471.4	473.2	476.1
21°	473.9	470.0	468.7	469.0	471.0	474.0



TEST NUMBER: P775734

CATALOG NUMBER: HCDJBL510CSD-HCD61TRMB-1000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	467.1	463.0	461.5	461.9	463.9	467.2
23°	464.9	460.5	458.9	459.3	461.5	464.9
23.5°	462.4	458.1	456.5	456.8	459.0	462.4
24°	460.0	455.5	453.8	454.1	456.4	460.0
24.5°	457.4	452.7	451.1	451.5	453.7	457.3
25°	454.9	450.1	448.4	448.7	451.0	454.8
25.5°	452.2	447.4	445.5	445.9	448.3	452.1
26°	449.5	444.5	442.6	443.0	445.5	449.4
26.5°	446.7	441.5	439.6	440.0	442.5	446.5
27°	443.8	438.6	436.7	437.1	439.6	443.8
27.5°	441.0	435.7	433.8	434.0	436.6	440.8
28°	438.0	432.6	430.6	430.9	433.5	437.8
28.5°	434.9	429.4	427.4	427.7	430.3	434.7
29°	431.9	426.3	424.2	424.6	427.3	431.6
29.5°	428.9	423.0	420.9	421.2	424.1	428.5
30°	425.5	419.8	417.6	417.9	420.6	425.2
30.5°	422.3	416.4	414.0	414.4	417.3	421.9
31°	419.0	412.9	410.6	410.9	413.8	418.6
31.5°	415.6	409.4	407.0	407.3	410.3	415.1
32°	412.1	405.9	403.5	403.8	406.8	411.7
32.5°	408.7	402.3	399.9	400.1	403.3	408.1
33°	405.1	398.7	396.1	396.4	399.5	404.5
33.5°	401.6	395.1	392.4	392.8	395.8	400.9
34°	397.8	391.3	388.7	388.9	392.1	397.2
34.5°	394.2	387.4	384.7	385.0	388.2	393.4
35°	390.3	383.5	380.8	381.2	384.3	389.5
35.5°	386.5	379.6	376.9	377.3	380.3	385.7
36°	382.7	375.8	373.0	373.3	376.5	381.6
36.5°	378.9	371.7	369.0	369.3	372.6	377.8
37°	374.8	367.7	365.0	365.2	368.4	373.6
37.5°	370.8	363.6	360.7	361.2	364.4	369.5
38°	366.7	359.5	356.7	357.0	360.1	365.2
38.5°	362.4	355.3	352.5	352.8	355.9	361.2
39°	358.4	351.0	348.4	348.6	351.8	357.0
39.5°	354.1	346.9	344.1	344.4	347.5	352.6
40°	349.9	342.4	339.8	340.1	343.0	348.3
40.5°	345.6	338.1	335.5	335.8	338.7	343.9
41°	341.1	333.7	331.1	331.4	334.3	339.4
41.5°	336.7	329.2	326.5	326.9	329.8	334.8
42°	332.3	324.7	322.1	322.5	325.3	330.4
42.5°	327.8	320.1	317.7	317.9	320.8	325.8
43°	323.2	315.4	312.9	313.3	316.0	321.0
43.5°	318.4	310.6	308.2	308.5	311.2	316.3



TEST NUMBER: P775734

CATALOG NUMBER: HCDJBL510CSD-HCD61TRMB-1000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	303.9	296.0	293.8	294.0	296.6	301.7
45.5°	299.0	291.2	288.9	289.2	291.7	296.8
46°	294.2	286.4	284.1	284.4	287.0	292.0
46.5°	289.3	281.8	279.5	279.7	282.3	287.3
47°	284.7	277.3	275.0	275.2	277.6	282.7
47.5°	280.1	272.7	270.4	270.8	273.0	278.1
48°	275.7	268.2	265.9	266.3	268.5	273.5
48.5°	271.1	263.6	261.4	261.6	263.9	269.1
49°	266.2	258.6	256.4	256.7	259.1	264.2
49.5°	260.8	253.2	251.1	251.5	253.8	258.8
50°	255.0	246.9	245.0	245.6	248.1	252.7
50.5°	248.1	239.8	238.1	238.9	241.1	246.0
51°	240.7	232.3	230.7	231.3	233.9	238.7
51.5°	232.9	224.6	222.8	223.3	226.2	230.8
52°	225.1	216.4	214.6	215.1	217.9	222.4
52.5°	216.9	208.1	206.3	206.6	209.3	214.2
53°	208.7	199.4	197.4	197.7	200.6	205.6
53.5°	200.2	191.0	188.6	189.0	191.9	197.0
54°	192.0	182.5	179.7	180.0	182.9	188.1
54.5°	183.2	173.9	171.1	171.2	174.2	179.4
55°	174.8	165.2	162.1	162.2	165.2	170.5
55.5°	166.0	156.9	153.4	153.2	156.4	161.5
56°	157.6	148.5	144.7	144.1	147.7	152.8
56.5°	148.8	140.2	136.1	135.5	139.2	144.0
57°	140.3	131.7	127.6	126.7	130.6	135.1
57.5°	131.9	123.5	119.2	118.3	122.2	126.5
58°	123.5	115.4	111.1	110.2	114.0	118.1
58.5°	115.2	107.6	103.1	102.0	105.6	109.9
59°	107.0	99.7	95.3	94.2	98.0	101.8
59.5°	99.2	91.9	87.8	86.7	90.3	93.7
60°	91.4	84.4	80.3	79.4	82.7	86.1
60.5°	83.6	77.1	73.2	72.4	75.5	78.5
61°	75.8	69.8	66.4	65.7	68.4	71.0
61.5°	68.7	63.1	60.0	59.3	61.6	63.7
62°	61.6	56.4	53.8	53.4	55.1	56.8
62.5°	54.8	49.9	48.0	47.5	48.8	50.2
63°	48.2	43.9	42.4	42.1	42.7	43.9
63.5°	42.0	38.2	37.0	36.8	37.1	37.7
64°	36.1	33.5	32.6	32.4	32.5	32.6
64.5°	30.7	28.8	28.2	28.1	27.9	27.5
65°	25.7	24.2	23.9	23.8	23.3	22.4
65.5°	21.1	19.5	19.5	19.5	18.8	17.4
66°	16.7	14.9	15.8	16.0	14.9	12.3



TEST NUMBER: P775734

CATALOG NUMBER: HCDJBL510CSD-HCD61TRMB-1000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	8.7	6.2	7.0	7.2	6.3	3.9
68°	6.1	4.3	4.9	5.0	4.4	3.0
68.5°	3.5	3.3	3.1	3.2	3.3	2.1
69°	2.1	2.3	2.3	2.5	2.3	1.2
69.5°	1.1	1.3	1.7	1.7	1.3	0.3
70°	0.5	0.3	1.0	1.0	0.3	0.3
70.5°	0.3	0.3	0.3	0.3	0.3	0.3
71°	0.2	0.2	0.2	0.2	0.2	0.2
71.5°	0.2	0.2	0.2	0.2	0.2	0.2
72°	0.2	0.2	0.2	0.2	0.2	0.2
72.5°	0.2	0.2	0.2	0.2	0.2	0.2
73°	0.2	0.2	0.2	0.2	0.2	0.2
73.5°	0.2	0.2	0.2	0.2	0.2	0.2
74°	0.2	0.2	0.2	0.2	0.2	0.2
74.5°	0.2	0.1	0.1	0.1	0.1	0.1
75°	0.1	0.1	0.1	0.1	0.1	0.1
75.5°	0.1	0.1	0.1	0.1	0.1	0.1
76°	0.1	0.1	0.1	0.1	0.1	0.1
76.5°	0.1	0.1	0.1	0.1	0.1	0.1
77°	0.1	0.1	0.1	0.1	0.1	0.1
77.5°	0.1	0.1	0.1	0.1	0.1	0.1
78°	0.1	0.1	0.1	0.1	0.1	0.1
78.5°	0.1	0.1	0.1	0.1	0.1	0.1
79°	0.1	0.1	0.1	0.1	0.1	0.1
79.5°	0.1	0.1	0.1	0.1	0.1	0.1
80°	0.1	0.1	0.1	0.1	0.1	0.1
80.5°	0.1	0.1	0.1	0.1	0.0	0.0
81°	0.0	0.0	0.0	0.0	0.0	0.0
81.5°	0.0	0.0	0.0	0.0	0.0	0.0
82°	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0
83°	0.0	0.0	0.0	0.0	0.0	0.0
83.5°	0.0	0.0	0.0	0.0	0.0	0.0
84°	0.0	0.0	0.0	0.0	0.0	0.0
84.5°	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0
85.5°	0.0	0.0	0.0	0.0	0.0	0.0
86°	0.0	0.0	0.0	0.0	0.0	0.0
86.5°	0.0	0.0	0.0	0.0	0.0	0.0
87°	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0
88°	0.0	0.0	0.0	0.0	0.0	0.0
88.5°	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P775734

CATALOG NUMBER: HCDJBL510CSD-HCD61TRMB-1000lm-5000K

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°	471.7	476.3	481.0	485.0	488.4	489.3	488.9	487.1	484.0	479.7	475.4
22°	469.6	474.2	479.0	483.1	486.5	487.5	486.9	485.0	482.0	477.7	473.3



44°	311.4	319.8	327.5	334.4	340.6	341.9	341.7	339.0	334.0	327.5	320.5
44.5°	306.5	315.0	322.7	329.4	335.8	337.3	336.6	334.2	329.1	322.6	315.6



66.5°	8.8	12.0	13.9	15.6	18.5	19.2	19.2	18.2	16.3	16.3	15.8
67°	6.1	9.1	10.6	11.7	15.4	15.9	15.9	15.0	12.7	13.5	12.9



89°	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0

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21.5°	471.7	467.8	466.4	466.7	468.7	471.7
22°	469.5	465.4	464.0	464.3	466.4	469.6



44°	313.6	305.7	303.4	303.6	306.4	311.4
44.5°	308.8	300.9	298.6	298.8	301.5	306.5



66.5°	14.1	11.4	12.6	12.6	11.6	8.8
67°	11.4	8.5	9.6	9.7	8.7	6.1

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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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(END OF REPORT)