

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: P775733

Luminaire Tested: HCDJBL510CSD-HCD61TRMB-1000lm-4000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P775733
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-4000K
Description: 6 INCH ROUND SHALLOW-WIDE MATTE BLACK TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1072.8 lumens
Efficiency: N/A
Efficacy: 107.3 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

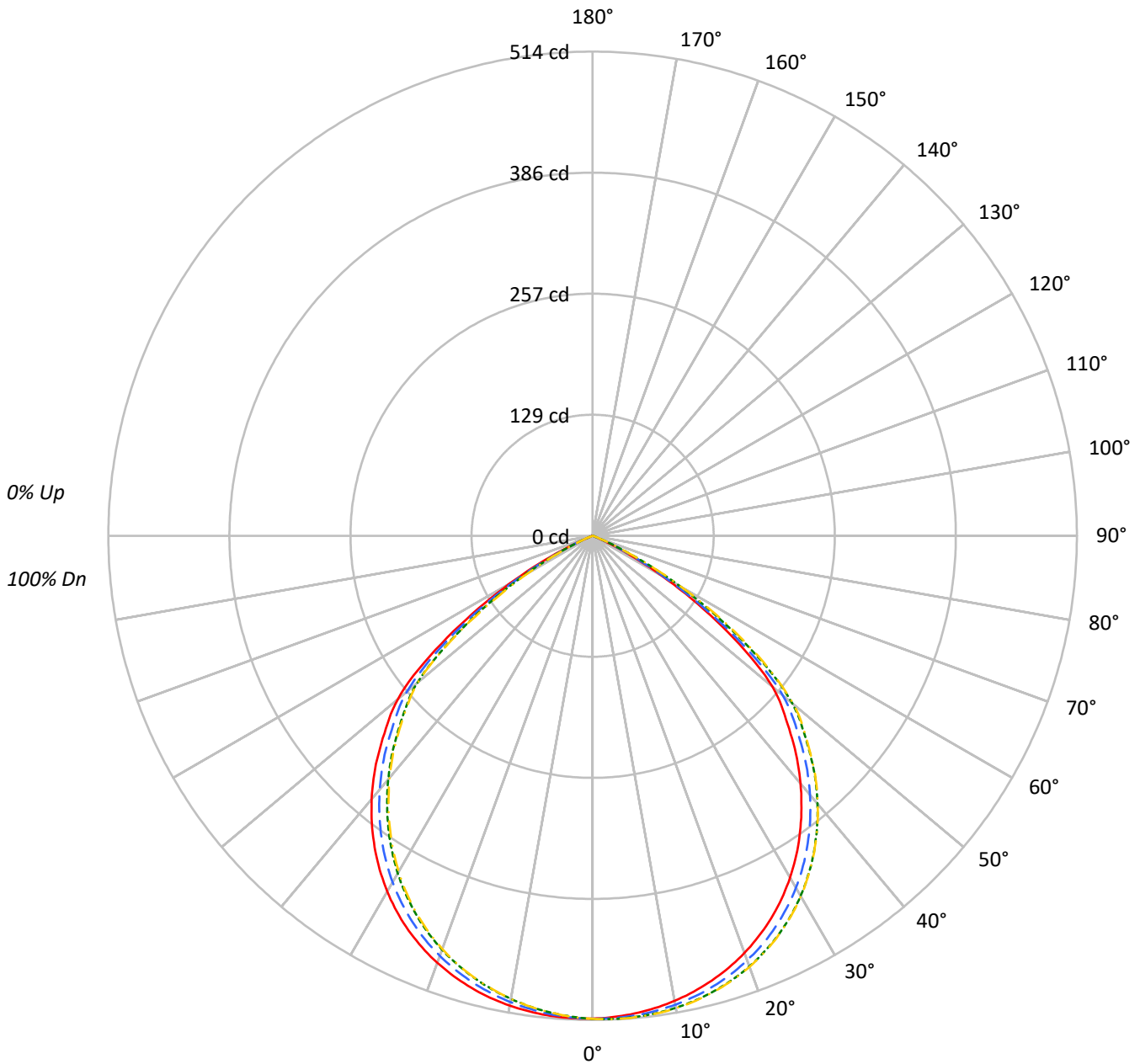
Input Watts (W): 10
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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	56	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°	28106	28106	28106	28106
5°	28016	28225	28153	27966
10°	27905	28328	28189	27794
15°	27741	28388	28201	27577
20°	27489	28382	28137	27279
25°	27104	28248	27957	26826
30°	26523	27947	27593	26188
35°	25685	27405	27003	25290
40°	24560	26564	26106	24145
45°	23049	25282	24762	22615
50°	21245	23590	23010	20750
55°	16057	18599	17987	15560
60°	9308	11633	11183	9122
65°	2867	4410	4047	3087
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: 25367 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.5	4.5
10°-20°	139.1	13.0
20°-30°	209.5	19.5
30°-40°	245.8	22.9
40°-50°	238.0	22.2
50°-60°	158.3	14.8
60°-70°	33.4	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°	397.2	37.0
0°-40°	642.9	59.9
0°-60°	1039.2	96.9
0°-90°	1072.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1072.8	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	513	513	513	513	513	
5°	509	513	512	508	509	48
15°	489	500	497	486	489	138
25°	448	467	462	444	448	206
35°	384	410	404	378	384	240
45°	297	326	319	292	297	229
55°	168	195	188	163	168	149
65°	22	34	31	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°	512.7	512.7	512.7	512.7	512.7	512.7	512.7	512.7	512.7	512.7	512.7
0.5°	512.4	512.4	512.7	513.0	512.9	513.0	513.0	512.9	512.6	512.5	512.6
1°	512.2	512.4	512.7	513.1	513.1	513.2	513.2	513.0	512.7	512.4	512.4
1.5°	512.0	512.2	512.7	513.0	513.2	513.4	513.4	513.1	512.7	512.4	512.3
2°	511.7	512.0	512.6	513.0	513.4	513.6	513.6	513.1	512.7	512.2	512.1
2.5°	511.4	511.8	512.4	513.0	513.4	513.6	513.6	513.1	512.6	512.1	511.8
3°	510.9	511.6	512.3	512.9	513.4	513.6	513.6	513.1	512.5	511.9	511.5
3.5°	510.6	511.3	512.1	512.8	513.2	513.6	513.6	513.1	512.3	511.6	511.0
4°	510.1	510.8	511.9	512.6	513.2	513.5	513.5	512.9	512.1	511.4	510.7
4.5°	509.7	510.5	511.6	512.4	513.0	513.4	513.4	512.8	511.9	511.0	510.3
5°	509.1	510.1	511.1	512.2	512.9	513.2	513.1	512.6	511.6	510.6	509.8
5.5°	508.6	509.6	510.8	512.0	512.7	513.0	512.9	512.3	511.3	510.2	509.3
6°	507.9	509.0	510.5	511.7	512.4	512.8	512.7	512.0	510.9	509.7	508.6
6.5°	507.3	508.5	510.0	511.3	512.2	512.5	512.4	511.7	510.5	509.3	508.0
7°	506.5	507.9	509.5	510.8	511.8	512.2	512.1	511.3	510.1	508.6	507.4
7.5°	505.8	507.3	508.9	510.4	511.5	511.9	511.8	510.8	509.5	508.1	506.7
8°	505.1	506.6	508.3	509.9	511.0	511.5	511.4	510.4	509.0	507.5	506.0
8.5°	504.1	505.9	507.7	509.4	510.5	511.0	510.9	509.9	508.4	506.7	505.2
9°	503.3	505.1	506.9	508.7	510.1	510.5	510.4	509.4	507.8	506.1	504.4
9.5°	502.3	504.2	506.2	508.1	509.5	510.0	509.9	508.7	507.2	505.3	503.5
10°	501.3	503.4	505.5	507.4	508.9	509.4	509.3	508.2	506.4	504.4	502.6
10.5°	500.3	502.4	504.6	506.6	508.2	508.7	508.6	507.5	505.7	503.6	501.7
11°	499.2	501.5	503.8	505.9	507.6	508.1	507.9	506.7	504.9	502.7	500.6
11.5°	498.1	500.4	502.8	504.9	506.8	507.4	507.2	505.9	504.0	501.8	499.7
12°	496.9	499.4	501.9	504.1	506.0	506.6	506.4	505.2	503.2	500.9	498.5
12.5°	495.7	498.2	500.9	503.2	505.2	505.8	505.6	504.3	502.3	499.8	497.5
13°	494.3	497.1	499.8	502.2	504.2	504.9	504.6	503.4	501.3	498.8	496.2
13.5°	493.1	495.8	498.8	501.2	503.4	504.0	503.8	502.4	500.2	497.6	495.0
14°	491.7	494.5	497.5	500.1	502.3	503.1	502.7	501.4	499.2	496.4	493.7
14.5°	490.2	493.3	496.3	499.1	501.3	502.0	501.7	500.3	498.0	495.2	492.4
15°	488.8	491.8	495.1	497.8	500.2	501.0	500.6	499.2	496.9	493.9	491.1
15.5°	487.2	490.5	493.8	496.6	499.1	499.8	499.6	498.1	495.6	492.7	489.7
16°	485.7	489.0	492.4	495.4	497.9	498.6	498.3	496.9	494.3	491.3	488.1
16.5°	484.0	487.4	491.0	494.1	496.6	497.4	497.1	495.6	493.1	489.8	486.6
17°	482.4	485.8	489.5	492.7	495.4	496.1	495.8	494.2	491.7	488.4	485.0
17.5°	480.7	484.3	488.0	491.2	494.0	494.9	494.5	493.0	490.2	486.8	483.3
18°	478.9	482.7	486.5	489.7	492.6	493.4	493.1	491.4	488.8	485.2	481.6
18.5°	477.0	480.9	484.9	488.2	491.2	491.9	491.6	489.9	487.2	483.6	479.9
19°	475.1	479.0	483.1	486.7	489.6	490.5	490.1	488.4	485.6	481.9	478.2
19.5°	473.2	477.2	481.4	485.0	488.1	489.0	488.6	486.8	483.9	480.3	476.4
20°	471.2	475.4	479.6	483.3	486.5	487.3	487.0	485.2	482.3	478.5	474.6
20.5°	469.1	473.4	477.7	481.6	484.8	485.6	485.3	483.4	480.6	476.6	472.5
21°	467.1	471.3	476.0	479.8	483.0	483.9	483.5	481.7	478.8	474.7	470.6



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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°	460.4	465.1	469.9	474.0	477.5	478.4	478.0	476.1	472.9	468.7	464.2
23°	458.1	462.9	467.8	472.0	475.5	476.5	476.0	474.1	470.9	466.5	461.9
23.5°	455.7	460.6	465.7	469.9	473.5	474.5	474.1	472.1	468.9	464.3	459.7
24°	453.3	458.3	463.4	467.8	471.4	472.4	471.9	469.9	466.7	462.1	457.4
24.5°	450.6	455.8	461.0	465.5	469.3	470.3	469.8	467.8	464.5	459.8	454.9
25°	448.1	453.3	458.6	463.1	467.0	468.0	467.4	465.6	462.2	457.5	452.4
25.5°	445.5	450.9	456.2	460.8	464.8	465.8	465.2	463.2	459.9	454.9	449.9
26°	442.9	448.2	453.8	458.4	462.5	463.4	462.9	460.8	457.5	452.4	447.4
26.5°	440.0	445.6	451.2	456.0	460.1	461.0	460.5	458.4	455.1	449.9	444.7
27°	437.3	442.9	448.5	453.5	457.6	458.6	458.0	456.0	452.4	447.3	442.0
27.5°	434.4	440.0	445.8	450.9	455.2	456.1	455.6	453.5	449.9	444.7	439.3
28°	431.4	437.2	443.1	448.1	452.5	453.4	453.0	450.9	447.2	441.8	436.5
28.5°	428.4	434.4	440.3	445.5	449.8	450.9	450.3	448.2	444.4	439.1	433.6
29°	425.3	431.3	437.4	442.8	447.1	448.0	447.6	445.5	441.8	436.2	430.7
29.5°	422.3	428.4	434.5	439.9	444.4	445.3	444.8	442.7	438.9	433.4	427.6
30°	419.0	425.2	431.5	437.0	441.5	442.4	441.9	439.8	435.9	430.3	424.6
30.5°	415.8	422.2	428.5	433.9	438.6	439.5	439.1	437.0	433.0	427.2	421.5
31°	412.5	418.9	425.3	430.9	435.6	436.5	436.0	433.9	429.9	424.2	418.3
31.5°	409.0	415.7	422.2	427.8	432.6	433.4	432.9	430.9	426.8	421.0	415.1
32°	405.7	412.3	418.9	424.8	429.4	430.4	429.8	427.7	423.6	417.8	411.8
32.5°	402.1	408.9	415.6	421.4	426.3	427.1	426.8	424.7	420.5	414.5	408.4
33°	398.6	405.5	412.3	418.2	423.1	424.0	423.5	421.3	417.2	411.1	405.1
33.5°	395.1	402.0	408.8	414.8	419.8	420.6	420.2	418.0	413.9	407.8	401.6
34°	391.4	398.4	405.4	411.5	416.4	417.3	416.8	414.7	410.4	404.3	398.0
34.5°	387.6	394.9	401.8	407.9	412.9	413.9	413.5	411.2	406.9	400.7	394.4
35°	383.8	391.2	398.1	404.4	409.5	410.3	409.9	407.8	403.5	397.1	390.8
35.5°	380.1	387.4	394.5	400.7	405.9	406.8	406.3	404.2	399.8	393.5	387.1
36°	376.1	383.5	390.8	397.2	402.3	403.2	402.7	400.6	396.1	389.9	383.3
36.5°	372.3	379.7	387.0	393.4	398.6	399.6	399.2	397.0	392.4	386.1	379.5
37°	368.2	375.8	383.1	389.5	395.0	395.8	395.4	393.3	388.7	382.3	375.6
37.5°	364.1	371.9	379.2	385.7	391.1	392.0	391.5	389.5	384.8	378.5	371.9
38°	359.9	367.9	375.2	381.7	387.3	388.1	387.7	385.5	381.0	374.4	367.9
38.5°	355.9	363.8	371.3	377.7	383.4	384.3	383.9	381.6	377.0	370.6	363.8
39°	351.8	359.8	367.2	373.9	379.4	380.3	379.9	377.7	372.9	366.5	359.8
39.5°	347.5	355.6	363.0	369.7	375.3	376.3	375.8	373.6	368.9	362.4	355.6
40°	343.2	351.3	358.9	365.4	371.2	372.2	371.8	369.7	364.8	358.2	351.5
40.5°	338.9	347.1	354.6	361.2	367.0	368.1	367.7	365.3	360.6	354.1	347.3
41°	334.5	342.7	350.3	356.8	362.8	363.9	363.5	361.1	356.4	349.8	343.0
41.5°	329.9	338.2	345.9	352.6	358.4	359.6	359.3	356.8	352.0	345.5	338.7
42°	325.5	333.7	341.5	348.1	354.1	355.3	354.8	352.5	347.7	341.1	334.3
42.5°	321.0	329.4	337.0	343.6	349.7	350.8	350.5	348.0	343.2	336.8	329.8
43°	316.3	324.8	332.4	339.0	345.2	346.2	346.0	343.5	338.7	332.0	325.3
43.5°	311.7	320.0	327.7	334.3	340.4	341.7	341.4	338.9	334.0	327.4	320.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	297.3	305.6	313.1	319.6	326.1	327.2	327.1	324.4	319.4	312.9	306.2
45.5°	292.4	300.6	308.3	314.7	321.1	322.5	322.3	319.4	314.5	308.0	301.3
46°	287.7	295.9	303.5	309.9	316.3	317.8	317.4	314.7	309.7	303.1	296.5
46.5°	283.1	291.3	298.7	305.2	311.6	313.2	312.9	310.0	304.7	298.3	291.7
47°	278.6	286.7	294.1	300.4	306.8	308.5	308.3	305.3	300.0	293.5	287.0
47.5°	274.1	282.1	289.5	295.8	302.2	303.9	303.7	300.6	295.4	288.9	282.5
48°	269.5	277.5	284.8	291.1	297.6	299.4	299.2	296.1	290.8	284.2	277.9
48.5°	265.1	272.9	280.3	286.5	293.0	295.1	294.6	291.5	286.0	279.7	273.4
49°	260.3	268.0	275.0	281.2	287.8	289.9	289.6	286.5	281.0	274.6	268.3
49.5°	255.0	262.7	269.5	275.5	282.4	284.4	284.0	280.9	275.4	269.0	262.9
50°	249.1	256.9	263.6	269.2	276.6	278.6	278.4	275.1	269.8	263.3	257.0
50.5°	242.4	249.8	256.9	262.8	270.2	272.0	271.4	268.6	263.5	256.7	250.4
51°	235.2	242.4	249.6	255.7	263.1	264.8	264.4	261.8	256.5	249.6	243.2
51.5°	227.4	234.7	241.7	248.1	255.7	257.3	257.0	254.1	249.3	242.2	235.5
52°	219.1	226.7	233.6	239.9	247.6	249.6	249.4	246.3	241.3	234.4	227.8
52.5°	211.0	218.5	225.2	231.0	239.3	241.8	241.6	238.2	232.8	226.2	219.9
53°	202.6	209.9	216.5	222.0	230.7	233.4	233.4	229.9	224.1	217.8	211.7
53.5°	194.1	201.3	207.7	212.8	221.7	225.2	225.3	221.2	215.0	209.1	203.3
54°	185.4	192.5	198.4	203.5	212.7	216.7	216.8	212.5	206.1	200.4	194.5
54.5°	176.8	183.8	189.2	194.1	203.6	208.0	208.2	203.5	197.0	191.2	186.0
55°	168.0	174.9	179.8	184.7	194.6	199.5	199.7	194.5	188.2	182.4	177.4
55.5°	159.1	165.8	170.5	175.3	185.5	190.2	190.8	185.3	179.1	173.1	168.5
56°	150.5	156.9	161.0	165.8	176.2	181.2	181.7	176.4	170.3	163.9	159.9
56.5°	141.9	148.0	151.7	156.9	167.0	172.1	172.6	167.2	161.0	154.8	151.1
57°	133.1	139.1	142.3	147.7	158.0	162.9	163.6	158.4	152.4	145.7	142.3
57.5°	124.7	130.1	133.3	138.7	149.1	153.7	154.4	149.5	143.5	137.0	133.6
58°	116.4	121.4	124.3	129.9	140.1	144.5	145.3	140.7	135.0	128.0	125.0
58.5°	108.3	112.7	115.3	121.3	131.4	135.5	136.2	132.0	126.6	119.5	116.6
59°	100.3	104.2	106.9	112.9	122.8	126.5	127.2	123.6	118.2	111.1	108.4
59.5°	92.3	95.6	98.6	104.6	114.4	117.8	118.1	115.1	109.8	103.0	100.4
60°	84.9	87.5	90.8	96.4	106.1	109.1	109.2	106.8	102.0	95.5	92.5
60.5°	77.3	79.5	82.8	88.4	98.3	100.9	101.2	99.0	94.2	87.9	84.7
61°	70.0	71.9	75.2	80.8	90.5	92.9	93.0	91.1	86.6	80.4	76.9
61.5°	62.8	64.5	68.1	73.4	82.8	84.7	84.8	83.2	78.8	72.8	69.0
62°	56.0	57.6	60.9	66.2	75.0	76.6	76.6	75.3	71.0	65.9	62.2
62.5°	49.5	50.9	54.3	59.2	67.2	68.5	68.4	67.4	63.9	59.0	55.4
63°	43.3	44.5	47.8	52.8	59.9	60.9	60.8	60.1	57.0	52.6	49.0
63.5°	37.2	38.7	41.8	46.4	52.9	53.9	53.8	53.2	50.5	46.4	43.0
64°	32.1	33.9	36.0	40.4	46.3	47.1	47.1	46.4	43.9	40.5	37.4
64.5°	27.1	29.3	31.4	35.2	40.0	40.7	40.5	39.9	37.5	35.1	32.0
65°	22.1	24.6	26.7	30.3	34.0	34.6	34.6	33.9	31.2	29.7	27.2
65.5°	17.1	20.0	22.0	25.2	28.3	29.0	29.0	28.2	25.2	24.8	22.7
66°	12.1	15.2	17.3	20.3	23.0	23.6	23.6	22.8	19.6	20.2	18.5



TEST NUMBER: P775733

CATALOG NUMBER: HCDJBL510CSD-HCD61TRMB-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	3.9	6.5	7.6	8.3	12.0	12.4	12.4	11.8	8.8	10.6	9.8
68°	2.9	4.5	5.3	5.6	8.8	9.1	9.1	8.7	5.3	8.0	6.8
68.5°	2.1	3.7	3.3	3.5	5.7	5.9	5.9	5.6	1.7	5.3	4.0
69°	1.2	2.8	2.5	2.6	2.6	2.7	2.6	2.6	0.5	2.5	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: P775733

CATALOG NUMBER: HCDJBL510CSD-HCD61TRMB-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: P775733

CATALOG NUMBER: HCDJBL510CSD-HCD61TRMB-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	512.7	512.7	512.7	512.7	512.7	512.7
0.5°	512.6	512.5	512.5	512.6	512.5	512.4
1°	512.4	512.2	512.2	512.3	512.3	512.2
1.5°	512.2	511.9	511.8	512.0	512.0	512.0
2°	511.9	511.5	511.4	511.6	511.6	511.7
2.5°	511.6	510.9	510.9	511.0	511.1	511.4
3°	511.1	510.5	510.4	510.6	510.7	510.9
3.5°	510.7	510.0	509.9	510.1	510.3	510.6
4°	510.2	509.5	509.3	509.5	509.8	510.1
4.5°	509.7	508.8	508.6	508.8	509.1	509.7
5°	509.1	508.2	508.0	508.2	508.5	509.1
5.5°	508.5	507.5	507.3	507.5	507.9	508.6
6°	507.9	506.7	506.5	506.7	507.2	507.9
6.5°	507.2	506.0	505.7	505.9	506.5	507.3
7°	506.4	505.2	504.8	505.2	505.7	506.5
7.5°	505.7	504.2	504.0	504.2	504.8	505.8
8°	504.8	503.4	503.0	503.3	504.0	505.1
8.5°	503.9	502.4	502.0	502.3	503.1	504.1
9°	503.1	501.4	501.0	501.3	502.0	503.3
9.5°	502.0	500.4	500.0	500.2	501.1	502.3
10°	501.1	499.3	498.9	499.2	500.0	501.3
10.5°	500.0	498.1	497.7	498.0	498.9	500.3
11°	499.0	497.0	496.4	496.9	497.7	499.2
11.5°	497.8	495.8	495.2	495.5	496.5	498.1
12°	496.6	494.4	493.9	494.2	495.3	496.9
12.5°	495.4	493.2	492.6	492.9	494.0	495.7
13°	494.1	491.8	491.2	491.5	492.7	494.3
13.5°	492.8	490.5	489.7	490.0	491.2	493.1
14°	491.5	489.0	488.2	488.6	489.8	491.7
14.5°	490.0	487.4	486.8	487.1	488.2	490.2
15°	488.6	485.9	485.1	485.5	486.8	488.8
15.5°	487.1	484.3	483.4	483.8	485.1	487.2
16°	485.4	482.7	481.7	482.2	483.5	485.7
16.5°	483.9	480.9	480.1	480.5	481.8	484.0
17°	482.3	479.1	478.3	478.6	480.1	482.4
17.5°	480.5	477.3	476.4	476.8	478.3	480.7
18°	478.8	475.4	474.5	474.9	476.4	478.9
18.5°	476.9	473.5	472.5	472.9	474.5	477.0
19°	475.0	471.6	470.5	470.9	472.5	475.1
19.5°	473.1	469.7	468.4	468.8	470.6	473.2
20°	471.1	467.6	466.3	466.7	468.5	471.2
20.5°	469.1	465.3	464.1	464.5	466.3	469.1
21°	467.0	463.1	461.9	462.2	464.1	467.1



TEST NUMBER: P775733

CATALOG NUMBER: HCDJBL510CSD-HCD61TRMB-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	460.3	456.2	454.7	455.2	457.2	460.4
23°	458.1	453.8	452.2	452.6	454.7	458.1
23.5°	455.7	451.4	449.8	450.1	452.3	455.7
24°	453.3	448.9	447.2	447.5	449.7	453.3
24.5°	450.7	446.1	444.5	444.9	447.1	450.6
25°	448.2	443.5	441.8	442.1	444.4	448.1
25.5°	445.6	440.9	439.0	439.4	441.7	445.5
26°	443.0	438.0	436.1	436.6	439.0	442.9
26.5°	440.1	435.1	433.2	433.6	436.0	440.0
27°	437.3	432.2	430.4	430.7	433.2	437.3
27.5°	434.6	429.3	427.4	427.6	430.3	434.4
28°	431.6	426.3	424.3	424.6	427.2	431.4
28.5°	428.6	423.1	421.1	421.4	424.1	428.4
29°	425.6	420.1	418.0	418.4	421.0	425.3
29.5°	422.6	416.8	414.7	415.0	417.9	422.3
30°	419.3	413.7	411.5	411.8	414.5	419.0
30.5°	416.2	410.3	408.0	408.3	411.2	415.8
31°	412.9	406.8	404.6	404.9	407.8	412.5
31.5°	409.6	403.5	401.1	401.4	404.3	409.0
32°	406.1	400.0	397.6	397.9	400.8	405.7
32.5°	402.7	396.4	394.0	394.2	397.4	402.1
33°	399.2	392.9	390.3	390.7	393.7	398.6
33.5°	395.7	389.3	386.7	387.1	390.0	395.1
34°	392.0	385.6	383.0	383.2	386.4	391.4
34.5°	388.5	381.7	379.1	379.4	382.6	387.6
35°	384.6	377.9	375.2	375.6	378.7	383.8
35.5°	380.9	374.1	371.4	371.8	374.8	380.1
36°	377.1	370.3	367.6	367.9	371.0	376.1
36.5°	373.3	366.3	363.7	363.9	367.1	372.3
37°	369.3	362.3	359.7	359.9	363.0	368.2
37.5°	365.3	358.3	355.5	355.9	359.0	364.1
38°	361.4	354.2	351.5	351.8	354.8	359.9
38.5°	357.2	350.1	347.4	347.7	350.7	355.9
39°	353.2	345.9	343.3	343.5	346.6	351.8
39.5°	349.0	341.8	339.1	339.4	342.4	347.5
40°	344.8	337.4	334.9	335.1	338.0	343.2
40.5°	340.6	333.2	330.6	330.9	333.7	338.9
41°	336.1	328.8	326.3	326.6	329.4	334.5
41.5°	331.8	324.4	321.8	322.2	325.0	329.9
42°	327.4	320.0	317.4	317.8	320.6	325.5
42.5°	323.0	315.4	313.0	313.2	316.1	321.0
43°	318.5	310.8	308.3	308.7	311.4	316.3
43.5°	313.8	306.1	303.7	304.0	306.6	311.7



TEST NUMBER: P775733

CATALOG NUMBER: HCDJBL510CSD-HCD61TRMB-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	299.5	291.7	289.5	289.7	292.2	297.3
45.5°	294.6	287.0	284.7	285.0	287.4	292.4
46°	289.9	282.3	279.9	280.3	282.8	287.7
46.5°	285.1	277.7	275.4	275.6	278.2	283.1
47°	280.6	273.2	271.0	271.2	273.5	278.6
47.5°	276.1	268.7	266.5	266.8	269.0	274.1
48°	271.6	264.3	262.0	262.4	264.6	269.5
48.5°	267.1	259.8	257.6	257.8	260.1	265.1
49°	262.3	254.8	252.6	252.9	255.4	260.3
49.5°	257.0	249.5	247.5	247.8	250.1	255.0
50°	251.3	243.3	241.4	242.0	244.4	249.1
50.5°	244.4	236.3	234.7	235.4	237.6	242.4
51°	237.2	228.9	227.3	227.9	230.5	235.2
51.5°	229.5	221.3	219.5	220.1	222.9	227.4
52°	221.9	213.2	211.5	212.0	214.7	219.1
52.5°	213.8	205.0	203.3	203.6	206.2	211.0
53°	205.7	196.5	194.5	194.9	197.7	202.6
53.5°	197.3	188.2	185.8	186.2	189.1	194.1
54°	189.2	179.8	177.1	177.4	180.3	185.4
54.5°	180.6	171.3	168.6	168.7	171.6	176.8
55°	172.3	162.8	159.8	159.9	162.8	168.0
55.5°	163.6	154.6	151.2	150.9	154.1	159.1
56°	155.3	146.3	142.5	142.0	145.6	150.5
56.5°	146.6	138.1	134.1	133.5	137.2	141.9
57°	138.2	129.7	125.7	124.9	128.7	133.1
57.5°	129.9	121.7	117.4	116.6	120.4	124.7
58°	121.7	113.8	109.5	108.6	112.3	116.4
58.5°	113.6	106.0	101.6	100.5	104.1	108.3
59°	105.5	98.2	93.9	92.9	96.5	100.3
59.5°	97.8	90.5	86.6	85.4	89.0	92.3
60°	90.0	83.2	79.1	78.3	81.5	84.9
60.5°	82.4	75.9	72.2	71.3	74.4	77.3
61°	74.7	68.8	65.4	64.7	67.4	70.0
61.5°	67.6	62.2	59.1	58.4	60.7	62.8
62°	60.7	55.6	53.0	52.6	54.3	56.0
62.5°	54.0	49.2	47.3	46.8	48.1	49.5
63°	47.5	43.3	41.8	41.5	42.1	43.3
63.5°	41.4	37.6	36.5	36.2	36.6	37.2
64°	35.6	33.0	32.1	31.9	32.0	32.1
64.5°	30.3	28.4	27.8	27.7	27.5	27.1
65°	25.3	23.8	23.5	23.4	23.0	22.1
65.5°	20.8	19.2	19.2	19.2	18.5	17.1
66°	16.5	14.7	15.5	15.8	14.7	12.1



TEST NUMBER: P775733

CATALOG NUMBER: HCDJBL510CSD-HCD61TRMB-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	8.6	6.1	6.9	7.1	6.2	3.9
68°	6.0	4.2	4.8	4.9	4.3	2.9
68.5°	3.5	3.3	3.0	3.2	3.3	2.1
69°	2.1	2.3	2.3	2.4	2.3	1.2
69.5°	1.1	1.3	1.7	1.7	1.3	0.3
70°	0.5	0.3	0.9	0.9	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: P775733

CATALOG NUMBER: HCDJBL510CSD-HCD61TRMB-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

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Cooper Lighting Solutions Photometric Lab
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Peachtree City, GA 30269

Scaled Data Report



Report Generated By 670245859 / DESKTOP-T8S5UU9

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

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21.5°	464.8	469.3	474.0	478.0	481.3	482.2	481.7	479.9	476.9	472.7	468.5
22°	462.7	467.2	472.0	476.1	479.4	480.4	479.8	478.0	475.0	470.7	466.4



44°	306.8	315.1	322.7	329.5	335.6	336.9	336.7	334.0	329.1	322.7	315.9
44.5°	302.0	310.4	318.0	324.6	330.9	332.4	331.7	329.3	324.3	317.9	311.0



66.5°	8.7	11.9	13.7	15.3	18.3	18.9	18.9	18.0	16.1	16.1	15.5
67°	6.0	8.9	10.4	11.6	15.1	15.7	15.7	14.8	12.5	13.3	12.7



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°	464.8	460.9	459.6	459.9	461.9	464.8
22°	462.6	458.6	457.3	457.6	459.6	462.7



44°	309.0	301.3	299.0	299.2	301.9	306.8
44.5°	304.3	296.5	294.2	294.4	297.1	302.0



66.5°	13.9	11.2	12.4	12.4	11.4	8.7
67°	11.2	8.4	9.5	9.6	8.6	6.0

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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)