

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

Report Number: P639475

Luminaire Tested: RL4LS9FSD2W1EWH -900LM -3000K

Issue Date: 1/25/2023

Test Information

Test Method: LM-79-2019
Report Number: P639475
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2206549A001)
Test Lab:
Issue Date: 1/25/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: RL4LS9FSD2W1EWH -900LM -3000K
Description: 4IN RETROFIT, SELECTABLE LUMEN AND CCT, MATTE WHITE BAFFLE
Light Source: (1) SELECTABLE LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

Summary

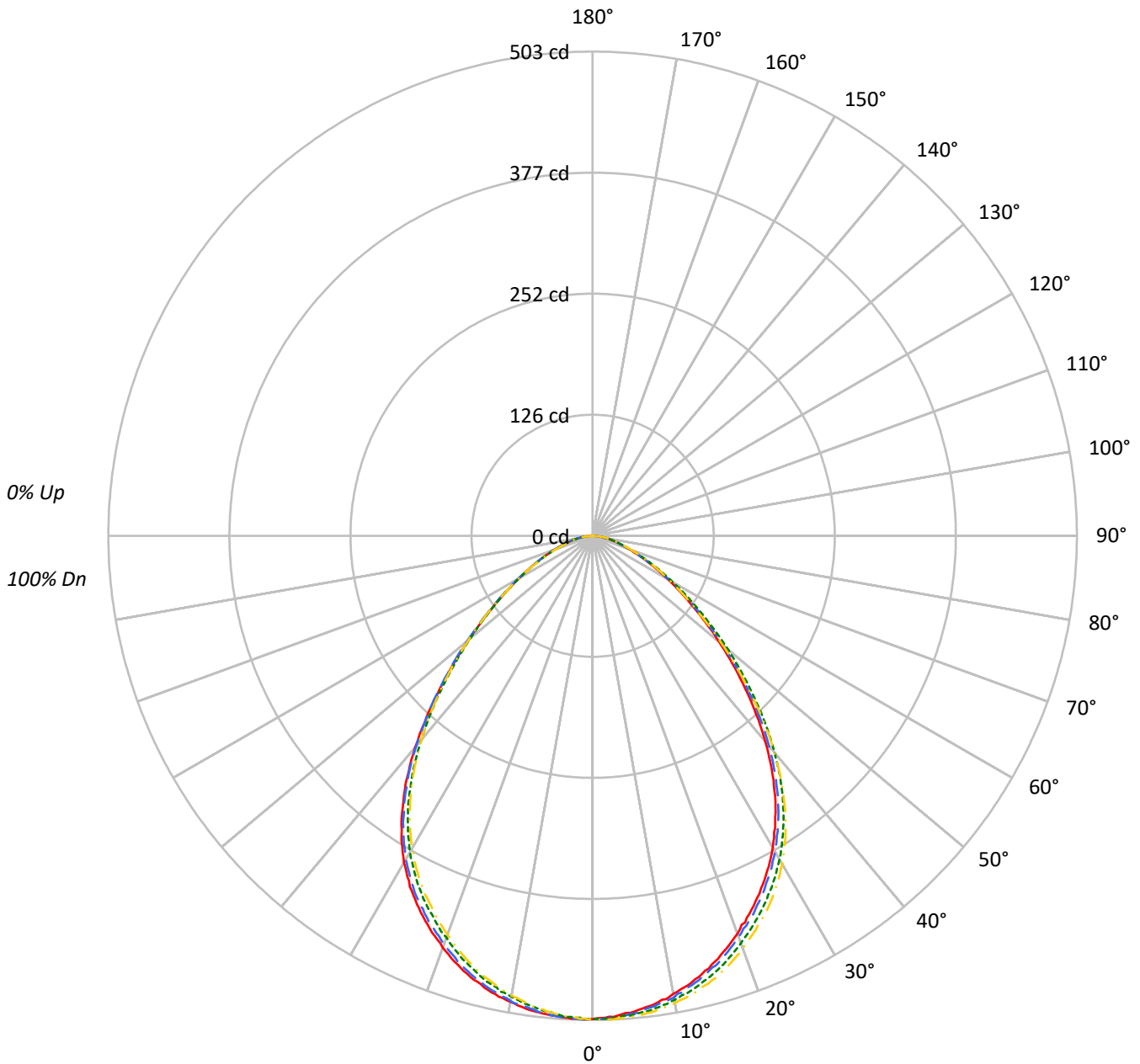
Lumens per Lamp: N/A
Luminaire Lumens: 970.0 lumens
Efficiency: N/A
Efficacy: 89.0 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.15 / 1.2
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 10.9
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					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				100				
1	111	107	103	100	108	105	101	99	101	98	96	97	95	93	93	91	90	88				88				
2	102	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77				77				
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67				67				
4	88	77	70	64	86	76	69	63	74	68	63	71	66	62	69	65	61	59				59				
5	81	70	62	56	80	69	62	56	67	60	55	65	59	55	63	58	54	52				52				
6	76	64	56	50	74	63	55	50	61	55	50	60	54	49	58	53	49	47				47				
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44	42				42				
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38				38				
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35				35				
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32				32				

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	62056	62056	62056	62056
5°	61573	61908	62057	61610
10°	60641	61444	61695	60993
15°	59575	60611	61097	59997
20°	57858	59225	59909	58423
25°	55925	57575	58202	56716
30°	53374	55415	55929	54131
35°	49880	52068	51842	50167
40°	44965	47450	46223	44658
45°	39152	41564	39170	38278
50°	33052	35206	32283	31918
55°	27215	29154	26439	26396
60°	22222	23779	21826	21752
65°	17956	19097	18161	17956
70°	14491	15177	15141	14888
75°	12129	12320	12798	12654
80°	10320	10463	11317	11174
85°	6949	7232	9076	8934

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 41564 cd/sqm



TEST NUMBER: P639475
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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.3	4.9
10°-20°	132.7	13.7
20°-30°	192.5	19.8
30°-40°	210.4	21.7
40°-50°	174.8	18.0
50°-60°	114.4	11.8
60°-70°	62.9	6.5
70°-80°	28.4	2.9
80°-90°	6.8	0.7
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°	372.4	38.4
0°-40°	582.8	60.1
0°-60°	871.9	89.9
0°-90°	970.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	970.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	502	502	502	502	502	
5°	496	499	500	497	496	47
15°	466	474	478	469	466	131
25°	410	422	427	416	410	188
35°	331	345	344	332	331	205
45°	224	238	224	219	224	173
55°	126	135	123	122	126	114
65°	61	65	62	61	61	62
75°	25	26	27	26	25	28
85°	5	5	6	6	5	6
90°	0	0	0	0	0	



TEST NUMBER: P639475

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	502.1	502.1	502.1	502.1	502.1	502.1	502.1	502.1	502.1	502.1	502.1
0.5°	501.3	501.1	502.5	502.3	502.0	502.6	502.7	502.3	502.1	501.1	502.5
1°	501.0	500.3	502.3	502.6	502.0	503.0	503.1	502.5	502.7	501.2	502.5
1.5°	500.8	501.0	501.4	501.6	501.9	502.8	502.7	502.7	502.0	501.3	502.6
2°	499.9	499.9	501.7	501.3	501.6	501.8	502.9	502.3	501.9	501.3	502.0
2.5°	500.3	499.0	500.8	500.8	501.4	502.1	502.9	502.4	502.2	502.1	502.0
3°	499.2	498.9	500.3	500.5	501.8	502.5	502.0	502.6	501.3	500.7	501.4
3.5°	497.9	499.1	499.7	499.5	500.1	501.5	502.2	502.0	501.3	500.4	500.8
4°	496.8	498.0	499.4	499.3	499.5	501.3	501.9	501.7	500.8	500.3	500.9
4.5°	497.2	497.2	498.1	499.1	500.1	501.6	501.6	501.1	500.4	499.5	500.4
5°	496.3	496.0	498.6	499.0	499.0	499.8	500.9	501.5	500.2	499.8	499.8
5.5°	495.0	495.9	496.3	497.6	498.2	500.5	500.8	500.1	499.3	498.7	498.9
6°	493.8	493.7	495.8	496.6	497.7	498.9	500.1	499.9	499.0	498.5	498.8
6.5°	492.8	493.0	494.5	496.2	497.1	498.8	499.1	499.1	498.3	497.7	497.8
7°	492.1	492.0	493.8	495.5	496.5	497.9	498.9	498.6	497.6	497.1	496.4
7.5°	490.9	491.0	492.9	493.1	495.1	496.3	497.9	497.7	497.0	495.2	495.4
8°	489.3	489.2	491.3	492.2	494.5	496.0	496.1	497.4	496.3	494.7	494.4
8.5°	487.4	488.1	489.9	492.0	493.0	495.1	496.1	495.8	495.1	494.4	493.9
9°	487.3	487.0	489.5	490.5	492.4	493.8	495.0	495.3	494.3	492.3	492.7
9.5°	485.2	485.1	488.0	488.4	490.7	492.8	493.7	494.6	492.6	491.4	492.4
10°	483.2	484.4	487.0	488.0	489.6	491.6	493.1	493.0	491.6	491.7	490.7
10.5°	482.0	482.0	483.9	485.8	488.5	490.3	491.4	491.8	490.8	489.5	488.9
11°	479.8	480.2	483.6	484.4	486.1	489.5	490.4	491.2	489.3	488.7	487.9
11.5°	478.7	478.8	481.1	481.9	485.8	487.0	489.5	489.0	488.8	486.6	486.9
12°	477.2	477.8	479.3	481.8	484.3	486.4	487.4	487.9	486.7	485.7	484.8
12.5°	475.2	476.3	477.8	479.2	482.5	484.6	486.7	486.5	486.0	483.7	483.7
13°	472.9	473.5	476.0	477.9	480.8	483.3	484.8	485.2	483.9	482.7	482.1
13.5°	471.6	471.6	474.6	476.6	479.0	481.2	483.1	483.1	482.6	481.5	480.4
14°	469.3	469.8	471.6	474.8	476.9	479.4	481.4	482.0	480.1	478.4	478.2
14.5°	466.7	467.9	470.4	473.0	475.7	478.3	480.4	479.7	478.5	477.0	476.9
15°	465.6	465.6	467.8	470.8	473.7	476.4	478.2	478.8	477.5	475.7	474.6
15.5°	462.4	463.6	465.2	468.9	471.4	474.3	477.0	476.3	475.6	474.2	472.9
16°	460.3	460.5	464.5	465.1	469.6	472.5	474.9	474.8	473.3	472.2	470.4
16.5°	458.4	458.7	462.0	463.7	467.4	470.7	472.5	473.3	471.6	469.6	468.7
17°	455.4	456.5	458.8	461.0	465.3	467.9	470.4	470.6	469.1	466.7	466.0
17.5°	452.9	453.8	456.8	458.2	462.8	466.4	468.5	468.0	466.9	465.2	464.6
18°	450.6	452.0	454.3	456.6	460.2	463.5	466.0	466.6	465.1	462.6	461.1
18.5°	448.1	448.1	451.6	452.9	458.2	461.4	463.6	464.0	462.8	460.9	458.7
19°	445.2	446.2	449.0	451.3	455.6	459.1	461.2	461.2	459.8	457.9	456.6
19.5°	442.3	443.3	446.1	448.6	453.2	456.0	459.0	459.3	457.7	456.0	454.2
20°	439.9	440.8	443.5	445.8	450.3	453.8	456.2	456.4	455.5	453.5	451.6
20.5°	436.7	438.4	440.7	442.6	447.2	451.2	453.6	453.6	451.9	450.5	448.9
21°	432.6	434.2	437.2	440.0	445.1	448.4	451.1	451.2	449.6	447.0	445.6



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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°	425.3	426.5	429.3	432.1	437.0	440.3	443.2	443.8	441.7	440.0	438.0
23°	422.2	423.4	427.0	428.6	434.1	437.4	439.6	440.6	438.9	436.6	435.4
23.5°	419.4	420.5	423.3	426.5	431.2	435.1	437.8	437.5	436.0	434.5	432.2
24°	415.9	417.0	420.1	422.4	428.2	432.5	434.3	435.9	432.8	431.0	429.4
24.5°	412.9	414.0	417.5	420.1	425.5	429.2	431.2	431.9	430.2	428.4	425.7
25°	410.1	411.2	414.0	417.8	422.2	426.5	428.8	428.6	426.8	425.7	424.1
25.5°	406.2	407.6	411.1	413.3	419.7	423.4	425.7	425.3	424.0	421.8	419.9
26°	402.9	404.1	407.5	411.0	415.6	419.8	422.4	422.7	420.3	418.4	417.2
26.5°	399.7	401.5	403.8	407.7	412.7	417.9	419.2	418.9	417.2	415.7	414.2
27°	396.4	397.6	400.7	403.9	409.9	413.6	415.3	415.4	414.1	411.5	410.3
27.5°	392.7	394.2	397.2	400.7	406.1	410.2	412.1	412.1	411.1	408.7	406.9
28°	389.4	390.5	394.1	397.6	403.0	406.6	408.5	408.9	406.0	404.9	403.3
28.5°	385.8	386.9	390.2	393.3	399.4	403.1	405.3	405.0	403.3	401.3	399.2
29°	382.2	382.8	386.2	389.4	395.2	399.6	401.3	400.5	399.1	397.8	395.6
29.5°	378.0	379.5	382.6	385.9	391.8	395.7	397.2	397.1	395.4	392.7	391.8
30°	374.0	374.4	378.9	382.2	388.3	391.8	394.1	393.2	391.9	389.8	388.1
30.5°	369.8	371.5	374.9	378.4	384.4	388.1	389.1	389.3	387.3	385.5	383.7
31°	365.9	367.9	370.7	374.0	380.4	383.9	385.4	385.3	383.2	381.3	379.1
31.5°	361.0	363.7	366.2	369.9	376.1	379.9	381.2	380.5	378.5	377.0	375.4
32°	357.8	358.9	362.4	365.6	371.7	375.0	376.8	375.6	374.4	372.7	370.6
32.5°	353.0	355.3	358.2	361.6	368.0	371.6	372.5	370.9	369.3	367.6	365.9
33°	348.2	350.4	353.6	356.9	363.1	366.3	368.1	366.8	364.1	363.1	360.9
33.5°	344.4	345.8	349.6	353.2	359.2	362.2	363.0	361.5	359.9	358.3	357.0
34°	339.8	341.3	345.0	348.5	354.4	358.0	358.4	356.4	355.1	352.8	351.1
34.5°	335.3	336.7	340.3	343.5	350.0	353.2	353.5	351.5	349.7	348.7	345.4
35°	330.6	331.5	335.6	338.5	345.1	348.7	348.8	346.1	343.6	343.1	341.8
35.5°	325.3	327.1	331.5	334.4	340.7	343.4	343.6	341.2	338.7	337.8	336.1
36°	320.2	322.3	325.8	330.0	335.8	338.6	338.0	335.8	333.5	332.4	331.1
36.5°	315.8	317.0	320.5	324.7	330.9	333.2	332.9	330.4	327.5	326.5	324.9
37°	310.4	312.2	316.5	319.4	325.9	328.2	327.6	324.6	322.7	321.8	319.7
37.5°	305.3	307.6	311.2	313.8	320.8	323.2	322.1	319.0	316.4	315.8	314.5
38°	300.3	302.3	305.9	308.5	316.0	317.4	316.6	313.2	310.3	310.2	308.7
38.5°	294.7	297.2	301.1	303.9	310.1	312.4	311.0	307.2	305.0	304.5	303.3
39°	289.7	291.5	295.4	299.2	305.1	306.2	305.1	301.0	298.9	298.0	297.1
39.5°	284.4	287.0	289.9	293.7	299.2	301.2	299.4	295.2	292.3	292.5	291.1
40°	278.7	281.5	285.0	288.1	294.1	295.7	293.2	289.0	286.5	286.2	284.9
40.5°	273.5	275.5	279.5	282.5	288.6	289.7	287.9	283.0	280.0	280.4	279.3
41°	268.0	270.6	274.2	277.4	283.1	284.2	281.7	276.7	273.9	274.3	273.3
41.5°	262.5	264.5	268.7	271.5	277.3	278.5	275.9	270.2	267.9	268.1	266.8
42°	257.3	259.4	263.2	265.6	271.7	272.5	269.4	263.8	260.9	261.3	260.5
42.5°	251.4	253.9	257.4	260.8	266.2	266.9	263.6	258.0	255.3	255.9	255.0
43°	246.2	248.5	252.4	255.1	260.5	260.8	257.5	251.5	249.3	249.6	249.1
43.5°	240.6	243.0	246.3	249.5	254.7	255.3	251.4	245.2	242.4	243.5	242.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	224.0	226.7	229.5	232.9	237.8	237.5	233.1	226.5	224.1	225.1	225.1
45.5°	218.7	221.4	224.3	227.1	231.9	231.3	227.2	220.5	218.3	219.2	219.2
46°	213.1	215.5	219.1	221.8	226.4	226.0	220.7	214.6	211.9	213.6	213.7
46.5°	208.1	210.5	213.6	216.3	220.8	220.0	215.4	208.6	206.1	208.0	207.4
47°	202.5	205.2	208.2	210.9	215.0	214.5	209.1	202.6	200.7	202.0	202.2
47.5°	197.3	199.5	202.7	205.3	209.7	208.6	203.4	196.9	194.8	196.2	196.6
48°	192.2	194.5	197.5	199.8	204.2	203.0	197.8	191.3	189.2	190.6	190.9
48.5°	186.6	189.0	192.4	194.5	198.8	198.1	192.1	185.8	183.6	185.2	185.7
49°	181.8	184.1	186.9	189.8	193.8	191.9	186.6	180.4	178.2	179.7	180.7
49.5°	176.6	178.8	181.8	184.2	188.2	186.9	181.2	174.8	172.8	174.4	175.3
50°	171.9	174.0	176.6	178.9	183.1	181.6	175.9	170.0	167.9	169.3	170.0
50.5°	166.8	168.8	171.9	173.8	177.6	176.5	170.6	164.5	162.6	164.3	165.3
51°	162.1	164.1	166.7	168.8	172.9	171.3	165.7	159.5	157.6	159.4	160.1
51.5°	157.4	159.5	161.8	164.0	167.9	166.3	160.7	154.7	152.8	154.3	155.4
52°	152.7	154.5	157.0	159.1	163.0	161.3	155.7	150.2	148.3	149.8	150.7
52.5°	148.0	149.8	152.4	154.3	158.0	156.4	150.7	145.3	143.9	145.1	146.2
53°	143.2	145.3	147.9	149.5	153.4	151.7	146.1	140.9	139.2	140.4	141.6
53.5°	139.0	141.1	143.4	145.0	148.6	147.1	141.7	136.5	134.9	136.1	137.3
54°	134.6	136.6	138.4	140.3	144.1	142.3	137.0	132.3	130.7	131.8	132.9
54.5°	130.6	132.2	134.3	136.0	139.7	137.9	132.8	128.0	126.6	127.5	128.9
55°	126.3	128.2	130.2	132.1	135.3	134.0	128.6	124.2	122.7	123.6	124.7
55.5°	122.2	124.1	125.7	127.6	130.9	129.3	124.5	120.1	118.6	119.7	120.8
56°	118.4	120.0	121.9	123.6	126.7	125.1	120.5	116.5	115.0	115.8	117.1
56.5°	114.5	116.3	117.9	119.3	122.5	121.0	116.7	112.6	111.2	112.1	113.1
57°	110.7	112.4	113.9	115.5	118.5	117.1	112.8	109.2	107.5	108.4	109.5
57.5°	107.3	108.5	110.3	111.6	114.6	113.1	109.2	105.6	104.2	105.0	105.9
58°	103.5	105.0	106.6	107.9	110.6	109.5	105.7	102.1	100.6	101.5	102.5
58.5°	100.2	101.3	102.8	104.1	106.8	105.8	102.2	99.1	97.6	98.1	99.3
59°	96.7	97.8	99.1	100.4	103.3	102.0	98.6	95.7	94.4	94.9	95.9
59.5°	93.0	94.4	95.9	97.1	99.7	98.5	95.3	92.4	91.0	91.8	92.7
60°	89.9	91.0	92.5	93.5	96.2	95.2	92.0	89.4	88.3	88.7	89.5
60.5°	86.8	87.9	89.2	90.2	92.7	91.6	88.9	86.5	85.3	85.6	86.5
61°	83.5	84.5	85.7	87.1	89.5	88.5	85.9	83.5	82.5	82.7	83.7
61.5°	80.6	81.6	82.6	83.7	86.3	85.2	82.9	80.8	79.8	79.9	81.0
62°	77.7	78.4	79.7	80.7	83.0	82.3	80.0	78.0	77.0	77.1	78.2
62.5°	74.8	75.5	76.6	77.5	80.0	79.2	77.2	75.4	74.4	74.4	75.6
63°	71.8	72.7	73.7	74.6	77.0	76.3	74.4	72.6	71.6	71.7	72.8
63.5°	69.2	69.9	70.7	71.7	74.0	73.3	71.5	70.0	69.3	69.4	70.1
64°	66.5	67.1	68.0	69.0	71.0	70.3	69.0	67.6	66.9	66.9	67.5
64.5°	63.8	64.5	65.4	66.1	68.2	67.7	66.3	65.1	64.4	64.5	65.1
65°	61.4	62.0	62.9	63.4	65.3	64.9	63.8	62.8	62.1	62.2	62.8
65.5°	58.9	59.5	60.2	60.9	62.8	62.5	61.5	60.5	59.8	59.8	60.4
66°	56.5	56.9	57.7	58.3	60.1	59.8	59.1	58.2	57.6	57.6	58.1



TEST NUMBER: P639475

CATALOG NUMBER: RL4LS9FSD2W1EWH -900LM -3000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	49.9	50.2	50.7	51.2	52.8	52.6	52.3	51.7	51.3	51.4	51.7
68°	47.7	48.1	48.5	49.1	50.4	50.4	50.2	49.7	49.3	49.5	49.7
68.5°	45.7	46.0	46.5	46.8	48.3	48.3	48.2	47.8	47.4	47.5	47.7
69°	43.8	44.0	44.4	44.7	46.1	46.1	46.2	45.8	45.6	45.6	45.8
69.5°	42.0	42.2	42.5	42.8	44.0	44.1	44.2	43.9	43.6	43.7	43.9
70°	40.1	40.3	40.5	40.7	42.0	42.2	42.3	42.2	41.9	42.1	42.2
70.5°	38.4	38.5	38.8	39.0	40.1	40.3	40.6	40.4	40.2	40.3	40.5
71°	36.7	36.8	36.9	37.1	38.2	38.5	38.8	38.7	38.4	38.6	38.8
71.5°	35.1	35.2	35.3	35.4	36.5	36.7	37.0	37.0	36.8	36.9	37.1
72°	34.1	33.8	33.8	33.6	34.8	35.0	35.4	35.4	35.4	35.5	35.6
72.5°	32.5	32.3	32.3	32.1	33.1	33.4	33.8	33.9	33.8	33.9	34.0
73°	31.0	30.8	30.8	30.7	31.4	31.8	32.3	32.3	32.3	32.4	32.5
73.5°	29.5	29.4	29.4	29.3	30.0	30.2	30.7	30.8	30.8	31.0	31.0
74°	28.0	27.9	27.9	27.8	28.6	28.9	29.3	29.5	29.5	29.6	29.7
74.5°	26.6	26.6	26.5	26.4	27.2	27.5	27.9	28.1	28.1	28.2	28.4
75°	25.4	25.3	25.2	25.1	25.8	26.2	26.6	26.8	26.8	26.9	27.0
75.5°	24.2	24.1	24.0	24.0	24.6	24.9	25.3	25.5	25.5	25.6	25.7
76°	23.1	23.0	22.9	22.9	23.5	23.7	24.1	24.2	24.2	24.4	24.5
76.5°	22.0	21.9	21.8	21.8	22.5	22.6	23.0	23.1	23.2	23.3	23.4
77°	20.9	20.8	20.7	20.7	21.3	21.6	21.9	22.0	22.1	22.3	22.4
77.5°	19.9	19.7	19.6	19.6	20.2	20.5	20.9	21.0	21.1	21.3	21.4
78°	18.7	18.6	18.5	18.5	19.1	19.4	19.8	20.0	20.0	20.3	20.4
78.5°	17.6	17.5	17.4	17.3	18.0	18.3	18.7	18.8	19.0	19.2	19.3
79°	16.6	16.5	16.3	16.3	16.9	17.2	17.6	17.7	17.9	18.1	18.2
79.5°	15.5	15.4	15.3	15.2	15.9	16.2	16.6	16.7	16.8	17.1	17.1
80°	14.5	14.3	14.2	14.1	14.7	15.1	15.5	15.8	15.9	16.2	16.3
80.5°	13.4	13.3	13.2	13.1	13.7	14.0	14.4	14.7	14.9	15.1	15.3
81°	12.5	12.3	12.1	12.0	12.7	13.0	13.4	13.7	13.8	14.1	14.2
81.5°	11.4	11.2	11.1	10.9	11.6	12.0	12.4	12.7	12.8	13.1	13.2
82°	10.4	10.3	10.1	10.0	10.6	10.9	11.4	11.6	11.8	12.1	12.2
82.5°	9.6	9.4	9.2	9.1	9.8	10.0	10.4	10.6	10.8	11.1	11.2
83°	8.5	8.4	8.2	8.2	8.8	9.1	9.6	9.8	10.0	10.1	10.3
83.5°	7.6	7.5	7.3	7.2	7.9	8.2	8.7	8.9	9.1	9.4	9.5
84°	6.8	6.6	6.4	6.4	7.0	7.3	7.7	8.0	8.2	8.5	8.6
84.5°	5.9	5.7	5.5	5.4	6.0	6.4	6.8	7.1	7.3	7.6	7.7
85°	4.9	4.8	4.6	4.6	5.1	5.5	5.9	6.2	6.4	6.7	6.8
85.5°	4.2	4.0	3.8	3.8	4.3	4.6	5.0	5.3	5.5	5.7	5.9
86°	3.4	3.3	3.3	3.2	3.5	3.8	4.2	4.4	4.6	4.8	5.0
86.5°	2.8	2.6	2.6	2.4	2.8	3.1	3.4	3.7	3.9	4.0	4.1
87°	2.1	2.0	1.9	1.7	2.0	2.3	2.7	3.0	3.2	3.3	3.4
87.5°	1.4	1.3	1.2	1.0	1.4	1.6	1.9	2.2	2.4	2.6	2.7
88°	0.7	0.6	0.5	0.5	0.8	1.0	1.4	1.6	1.7	1.9	2.0
88.5°	0.3	0.4	0.3	0.2	0.3	0.5	0.8	1.0	1.1	1.3	1.4



TEST NUMBER: P639475

CATALOG NUMBER: RL4LS9FSD2W1EWH -900LM -3000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2



TEST NUMBER: P639475

CATALOG NUMBER: RL4LS9FSD2W1EWH -900LM -3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	502.1	502.1	502.1	502.1	502.1	502.1
0.5°	501.6	502.1	502.4	502.3	501.8	501.3
1°	502.0	501.5	501.3	501.6	502.0	501.0
1.5°	503.2	500.8	501.8	501.9	501.7	500.8
2°	501.1	500.9	501.2	500.7	500.6	499.9
2.5°	502.3	500.4	500.4	500.5	500.7	500.3
3°	501.3	500.5	500.0	499.9	500.1	499.2
3.5°	500.1	500.2	499.6	499.7	498.9	497.9
4°	500.1	498.8	499.0	498.9	498.2	496.8
4.5°	499.8	498.8	498.3	498.2	497.1	497.2
5°	498.9	496.6	497.2	497.1	496.6	496.3
5.5°	497.9	496.7	495.9	496.2	495.5	495.0
6°	497.6	496.0	495.6	494.8	494.6	493.8
6.5°	496.7	494.9	494.7	494.1	494.2	492.8
7°	495.9	493.5	492.8	493.5	492.1	492.1
7.5°	494.5	492.6	492.2	491.7	491.5	490.9
8°	493.5	491.5	490.8	490.7	490.0	489.3
8.5°	492.9	490.7	489.6	488.6	488.2	487.4
9°	490.5	488.8	488.3	487.4	487.6	487.3
9.5°	489.1	487.8	486.7	486.0	485.5	485.2
10°	488.9	486.0	485.6	485.1	483.8	483.2
10.5°	488.1	485.1	483.9	483.0	481.6	482.0
11°	487.2	483.2	482.3	481.7	480.8	479.8
11.5°	484.4	483.4	480.8	480.2	479.1	478.7
12°	483.6	479.6	479.1	478.4	477.1	477.2
12.5°	480.7	478.8	477.0	476.2	475.3	475.2
13°	480.2	476.9	474.7	474.3	474.2	472.9
13.5°	478.8	475.9	473.4	472.7	471.5	471.6
14°	476.5	473.1	472.0	470.8	469.7	469.3
14.5°	474.2	471.4	469.6	469.0	468.0	466.7
15°	473.2	468.9	466.8	466.4	465.3	465.6
15.5°	470.4	466.5	465.3	463.5	462.7	462.4
16°	468.4	464.7	463.1	461.9	461.1	460.3
16.5°	466.1	462.2	460.5	459.6	458.6	458.4
17°	464.3	460.4	458.6	456.8	455.8	455.4
17.5°	461.7	457.9	456.4	454.4	453.5	452.9
18°	459.3	455.1	453.3	452.0	451.3	450.6
18.5°	457.4	452.9	451.1	449.3	448.0	448.1
19°	454.8	450.0	448.2	446.6	445.2	445.2
19.5°	451.3	447.4	445.4	443.8	442.9	442.3
20°	449.4	444.2	443.3	440.7	440.0	439.9
20.5°	446.2	442.2	439.9	438.3	437.4	436.7
21°	443.8	439.7	437.3	435.4	434.3	432.6

TEST NUMBER: P639475

CATALOG NUMBER: RL4LS9FSD2W1EWH -900LM -3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	436.4	430.6	428.4	427.1	425.3	425.3
23°	432.4	427.3	425.3	423.5	422.7	422.2
23.5°	429.4	425.1	422.4	420.0	419.4	419.4
24°	425.9	421.9	419.8	417.2	416.3	415.9
24.5°	424.0	418.6	416.7	414.0	413.0	412.9
25°	419.8	415.9	413.1	411.6	410.6	410.1
25.5°	416.5	412.1	410.3	407.4	406.7	406.2
26°	414.5	409.0	407.0	404.6	403.0	402.9
26.5°	410.2	406.0	403.6	400.8	400.1	399.7
27°	407.1	402.4	399.8	397.8	396.4	396.4
27.5°	404.1	398.4	395.8	393.9	392.9	392.7
28°	400.0	394.7	391.9	390.7	389.6	389.4
28.5°	396.7	391.1	388.5	386.5	385.4	385.8
29°	391.9	387.0	384.3	382.8	382.0	382.2
29.5°	388.5	383.8	380.9	378.4	377.9	378.0
30°	384.8	379.3	377.1	374.8	374.6	374.0
30.5°	380.6	375.4	372.6	370.7	370.1	369.8
31°	376.6	370.5	368.3	366.4	365.5	365.9
31.5°	372.6	366.5	364.4	362.3	361.4	361.0
32°	367.1	361.9	359.7	357.9	357.0	357.8
32.5°	362.4	357.0	355.0	353.2	353.0	353.0
33°	358.1	352.5	350.6	348.5	348.2	348.2
33.5°	352.7	347.7	345.6	344.3	343.9	344.4
34°	349.0	342.8	340.5	339.2	339.3	339.8
34.5°	343.2	338.1	335.6	334.5	334.0	335.3
35°	338.2	332.5	330.5	329.5	329.4	330.6
35.5°	333.1	327.4	325.3	324.1	324.7	325.3
36°	327.5	321.8	320.3	319.5	319.7	320.2
36.5°	322.7	316.8	314.9	314.4	314.5	315.8
37°	316.6	311.1	309.6	308.8	309.2	310.4
37.5°	311.5	305.7	304.2	304.0	304.3	305.3
38°	305.8	299.9	298.6	298.4	298.9	300.3
38.5°	300.1	294.0	293.3	292.8	293.5	294.7
39°	294.0	288.7	287.2	287.4	288.8	289.7
39.5°	288.5	282.8	282.2	282.3	283.0	284.4
40°	282.9	276.8	275.9	276.4	277.4	278.7
40.5°	276.5	271.2	270.7	271.1	272.6	273.5
41°	270.8	265.0	264.7	265.2	266.4	268.0
41.5°	264.8	259.4	259.0	259.7	260.8	262.5
42°	258.5	254.1	253.5	254.4	255.4	257.3
42.5°	252.5	247.7	247.7	248.8	250.1	251.4
43°	246.4	241.9	242.0	242.7	244.3	246.2
43.5°	240.5	236.2	236.3	237.2	238.9	240.6

TEST NUMBER: P639475

CATALOG NUMBER: RL4LS9FSD2W1EWH -900LM -3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	222.9	219.0	219.5	220.2	222.2	224.0
45.5°	216.9	213.3	213.8	215.2	216.9	218.7
46°	211.6	208.0	208.6	209.4	211.2	213.1
46.5°	206.1	202.2	203.4	204.3	205.9	208.1
47°	200.4	197.0	197.6	199.0	200.5	202.5
47.5°	194.9	191.5	192.1	193.4	195.5	197.3
48°	189.7	186.4	187.4	188.0	190.1	192.2
48.5°	184.4	181.1	182.0	183.2	184.8	186.6
49°	179.3	176.2	177.2	178.1	179.7	181.8
49.5°	174.2	171.1	171.8	172.9	174.8	176.6
50°	168.9	166.0	166.9	168.2	169.9	171.9
50.5°	164.1	161.4	162.1	163.0	164.7	166.8
51°	159.4	156.6	157.4	158.5	160.1	162.1
51.5°	154.7	152.2	152.9	153.8	155.5	157.4
52°	150.2	147.5	148.2	149.2	150.7	152.7
52.5°	145.3	143.0	143.9	144.7	145.9	148.0
53°	141.0	138.7	139.5	140.2	141.7	143.2
53.5°	136.9	134.6	135.1	136.1	137.2	139.0
54°	132.7	130.1	130.9	131.6	133.1	134.6
54.5°	128.7	126.3	126.9	127.5	128.8	130.6
55°	124.3	122.5	122.8	123.6	124.6	126.3
55.5°	120.7	118.6	119.0	119.5	120.8	122.2
56°	117.1	114.9	115.1	115.8	117.0	118.4
56.5°	113.0	111.1	111.5	111.9	112.8	114.5
57°	109.6	107.9	107.9	108.3	109.3	110.7
57.5°	106.3	104.1	104.3	104.7	105.5	107.3
58°	102.8	100.9	100.9	101.4	102.2	103.5
58.5°	99.5	97.5	97.5	97.8	98.5	100.2
59°	96.2	94.3	94.5	94.4	95.3	96.7
59.5°	92.9	91.2	91.1	91.2	91.9	93.0
60°	90.0	88.0	88.2	88.2	88.9	89.9
60.5°	87.0	85.1	84.8	85.0	85.8	86.8
61°	84.0	82.2	82.2	82.0	82.6	83.5
61.5°	81.3	79.4	79.2	79.1	79.6	80.6
62°	78.5	76.7	76.2	76.4	76.8	77.7
62.5°	75.8	73.7	73.6	73.5	74.1	74.8
63°	73.0	71.2	70.9	70.7	71.2	71.8
63.5°	70.3	68.7	68.4	68.2	68.5	69.2
64°	67.8	66.1	65.8	65.7	65.9	66.5
64.5°	65.3	63.7	63.5	63.2	63.5	63.8
65°	62.9	61.4	61.0	60.9	60.9	61.4
65.5°	60.6	59.1	58.6	58.4	58.5	58.9
66°	58.4	56.9	56.5	56.1	56.2	56.5



TEST NUMBER: P639475

CATALOG NUMBER: RL4LS9FSD2W1EWH -900LM -3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	51.9	50.4	50.1	49.8	49.6	49.9
68°	49.8	48.6	48.1	47.7	47.5	47.7
68.5°	47.8	46.5	46.1	45.7	45.5	45.7
69°	46.0	44.7	44.2	43.8	43.7	43.8
69.5°	44.1	43.0	42.4	42.0	41.8	42.0
70°	42.3	41.2	40.7	40.3	40.0	40.1
70.5°	40.6	39.4	39.0	38.5	38.3	38.4
71°	38.9	37.8	37.3	36.9	36.7	36.7
71.5°	37.1	36.2	35.8	35.4	35.2	35.1
72°	35.7	34.7	34.3	33.6	34.0	34.1
72.5°	34.1	33.3	32.8	32.3	32.4	32.5
73°	32.6	31.9	31.4	30.9	30.9	31.0
73.5°	31.1	30.5	30.1	29.6	29.5	29.5
74°	29.8	29.1	28.7	28.2	28.0	28.0
74.5°	28.5	27.7	27.3	26.9	26.7	26.6
75°	27.2	26.5	26.1	25.7	25.4	25.4
75.5°	25.9	25.2	24.9	24.5	24.2	24.2
76°	24.7	24.0	23.7	23.4	23.2	23.1
76.5°	23.5	23.0	22.7	22.4	22.2	22.0
77°	22.5	21.9	21.6	21.3	21.1	20.9
77.5°	21.5	20.9	20.6	20.3	20.1	19.9
78°	20.4	19.8	19.5	19.2	18.9	18.7
78.5°	19.4	18.8	18.5	18.1	17.8	17.6
79°	18.3	17.7	17.4	17.0	16.7	16.6
79.5°	17.3	16.7	16.4	16.1	15.8	15.5
80°	16.3	15.7	15.4	15.0	14.7	14.5
80.5°	15.3	14.7	14.4	14.0	13.7	13.4
81°	14.2	13.7	13.3	13.0	12.6	12.5
81.5°	13.3	12.7	12.4	12.0	11.6	11.4
82°	12.3	11.7	11.3	10.9	10.6	10.4
82.5°	11.3	10.7	10.4	10.0	9.8	9.6
83°	10.3	9.9	9.6	9.2	8.8	8.5
83.5°	9.5	9.0	8.6	8.2	7.8	7.6
84°	8.6	8.0	7.7	7.3	7.0	6.8
84.5°	7.7	7.1	6.8	6.5	6.1	5.9
85°	6.8	6.3	5.9	5.6	5.2	4.9
85.5°	5.9	5.4	5.0	4.7	4.3	4.2
86°	5.0	4.5	4.2	3.9	3.6	3.4
86.5°	4.2	3.8	3.5	3.3	3.0	2.8
87°	3.5	3.2	2.9	2.6	2.3	2.1
87.5°	2.8	2.5	2.2	1.9	1.6	1.4
88°	2.0	1.8	1.5	1.2	0.8	0.7
88.5°	1.4	1.1	0.8	0.5	0.3	0.3



TEST NUMBER: P639475

CATALOG NUMBER: RL4LS9FSD2W1EWH -900LM -3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.3	0.3	0.2	0.2	0.2	0.2

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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°	432.0	432.0	435.4	438.3	442.5	446.1	448.0	448.3	447.0	444.8	443.5
22°	427.7	429.2	432.3	435.1	439.9	442.9	445.7	445.5	445.0	443.1	440.4



44°	235.0	237.7	241.2	244.2	248.7	248.8	245.3	238.7	236.5	237.3	237.5
44.5°	229.9	231.8	235.7	238.6	243.2	243.5	239.1	232.7	229.9	231.5	230.8



66.5°	54.2	54.7	55.4	56.0	57.6	57.3	56.8	56.1	55.6	55.5	55.9
67°	52.0	52.4	52.9	53.5	55.2	55.0	54.5	53.8	53.4	53.6	53.8



89°	0.3	0.3	0.2	0.2	0.2	0.2	0.4	0.4	0.5	0.7	0.8
89.5°	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.3

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21.5°	441.0	436.5	434.6	432.4	431.7	432.0
22°	437.4	433.7	431.5	429.1	428.5	427.7



44°	234.7	230.6	230.5	231.6	233.3	235.0
44.5°	228.9	224.7	225.2	226.1	227.7	229.9



66.5°	56.1	54.7	54.2	53.9	53.9	54.2
67°	54.0	52.6	52.0	51.7	51.6	52.0



89°	0.8	0.5	0.3	0.2	0.2	0.3
89.5°	0.4	0.3	0.2	0.2	0.2	0.2

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(END OF REPORT)