

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: P710097

Luminaire Tested: RA6LS9FSD2W1EWHDM-900lm-2700K

Issue Date: 10/6/2023

Test Information

Test Method: LM-79-2019
Report Number: P710097
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A23044405B001)
Test Lab: EVERFINE
Issue Date: 10/6/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: RA6LS9FSD2W1EWHDM-900lm-2700K
Description: 6IN DM SELECTABLE LUMENS
Light Source: SELECTABLE LUMEN/CCT LEDs 90CRI / 2700K CCT
Ballast/Driver: -

Summary

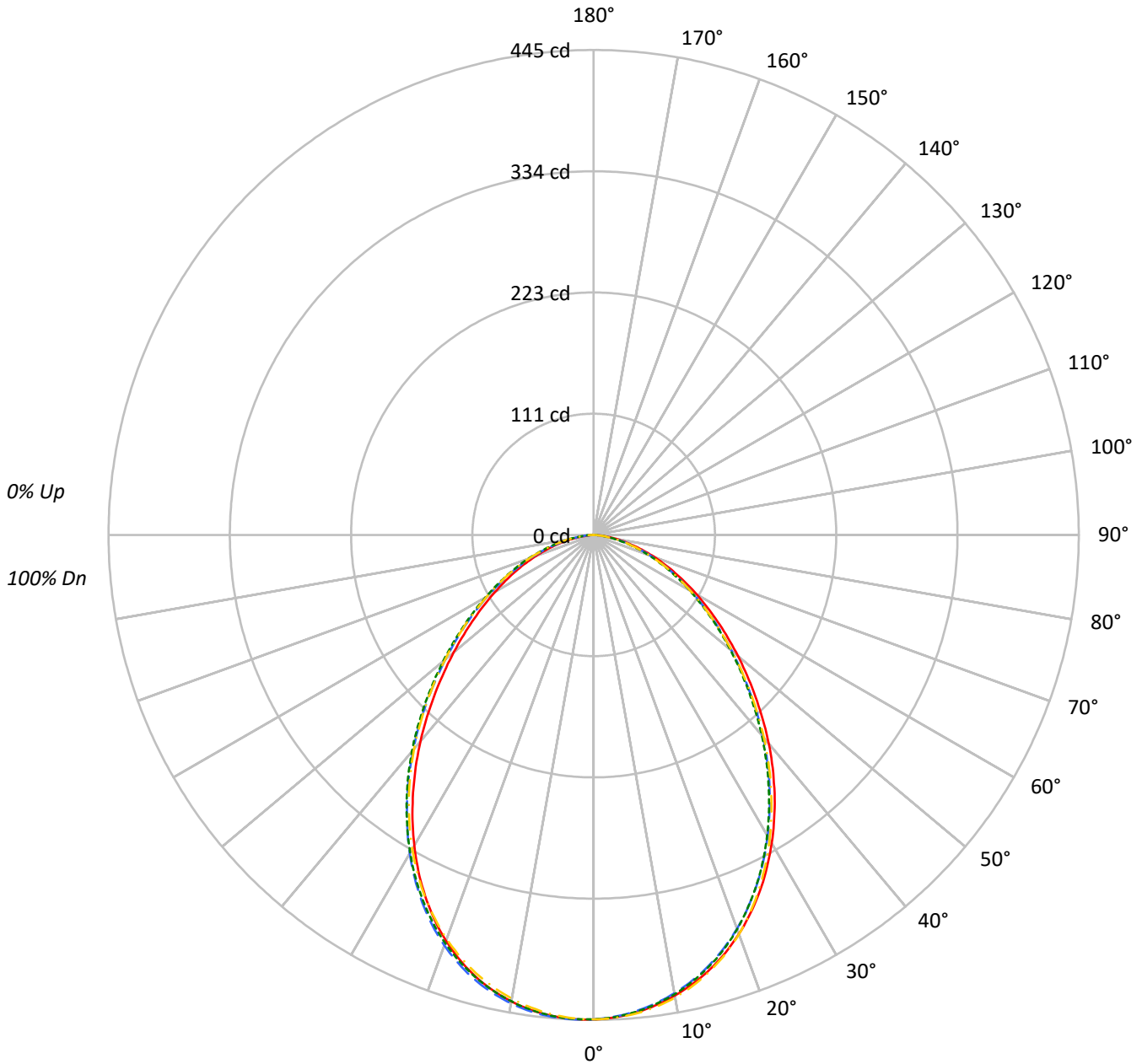
Lumens per Lamp: 939.74 (1 lamp)
Luminaire Lumens: 920.0 lumens
Efficiency: 97.9%
Efficacy: 95.8 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 1.12 / 1.19
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 9.6
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



TEST NUMBER: P710097
CATALOG NUMBER: RA6LS9FSD2W1EWHDM-900lm-2700K

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	117	117	117	117	114	114	114	114	109	109	109	104	104	104	100	100	100	98																			
1	108	104	100	97	105	102	98	95	97	95	92	94	91	89	90	88	87	85																			
2	99	92	86	81	97	90	85	80	87	82	78	84	80	76	81	78	75	73																			
3	91	82	75	69	89	80	74	68	78	72	67	75	70	66	73	68	65	63																			
4	84	73	66	60	82	72	65	59	70	63	58	68	62	58	66	61	57	55																			
5	78	66	58	52	76	65	58	52	63	57	51	61	55	51	60	54	50	48																			
6	72	60	52	46	71	59	52	46	58	51	46	56	50	45	55	49	45	43																			
7	67	55	47	41	66	54	47	41	53	46	41	51	45	41	50	45	40	39																			
8	63	51	43	37	62	50	42	37	49	42	37	47	41	37	46	41	37	35																			
9	59	47	39	34	58	46	39	34	45	38	34	44	38	34	43	37	33	32																			
10	56	43	36	31	54	43	36	31	42	35	31	41	35	31	40	35	31	29																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	24373	24373	24373	24373
5°	24213	24185	24373	24378
10°	23897	23819	24198	24192
15°	23417	23252	23797	23831
20°	22729	22454	23114	23248
25°	21812	21406	22114	22398
30°	20674	20149	20832	21313
35°	19361	18718	19327	20023
40°	17884	17154	17676	18556
45°	16281	15513	15947	16963
50°	14737	13944	14277	15360
55°	13276	12482	12779	13887
60°	11951	11139	11414	12554
65°	10702	9845	10248	11376
70°	9473	8511	8976	10178
75°	8133	7032	7562	8875
80°	6598	5272	5872	7356
85°	4529	3271	3145	5661

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 240°
 Vertical Angle: 45°
 Luminance: 16963 cd/sqm



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CATALOG NUMBER: RA6LS9FSD2W1EWHDM-900lm-2700K

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	41.8	4.5	4.5
10°-20°	116.8	12.7	12.4
20°-30°	166.6	18.1	17.7
30°-40°	180.7	19.6	19.2
40°-50°	161.3	17.5	17.2
50°-60°	123.3	13.4	13.1
60°-70°	80.9	8.8	8.6
70°-80°	40.0	4.3	4.3
80°-90°	8.6	0.9	0.9
90°-100°	0.0	0.0	0.0
100°-110°	0.0	0.0	0.0
110°-120°	0.0	0.0	0.0
120°-130°	0.0	0.0	0.0
130°-140°	0.0	0.0	0.0
140°-150°	0.0	0.0	0.0
150°-160°	0.0	0.0	0.0
160°-170°	0.0	0.0	0.0
170°-180°	0.0	0.0	0.0
0°-30°	325.2	35.3	34.6
0°-40°	505.9	55.0	53.8
0°-60°	790.5	85.9	84.1
0°-90°	920.0	100.0	97.9
90°-120°	0.0	0.0	0.0
90°-150°	0.0	0.0	0.0
90°-180°	0.0	0.0	0.0
0°-180°	920.0	100.0	97.9

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	445	445	445	445	445	
5°	440	440	443	443	440	42
15°	413	410	419	420	413	116
25°	361	354	366	370	361	166
35°	289	280	289	299	289	181
45°	210	200	206	219	210	162
55°	139	131	134	145	139	125
65°	82	76	79	88	82	82
75°	38	33	36	42	38	41
85°	7	5	5	9	7	9
90°	0	0	0	1	0	



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CANDELA DISTRIBUTION (FULL):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
0°	444.6	444.6	444.6	444.6	444.6	444.6	444.6	444.6	444.6	444.6	444.6
1°	444.2	443.9	443.9	444.0	444.1	444.6	444.8	445.0	444.9	444.6	444.6
2°	443.5	443.0	443.0	443.3	443.6	444.3	444.7	445.1	444.9	444.6	444.4
3°	442.6	441.9	442.0	442.3	442.7	443.7	444.4	444.9	444.8	444.3	443.9
4°	441.5	440.5	440.5	441.0	441.5	442.9	443.8	444.5	444.3	443.8	443.3
5°	440.0	438.8	438.9	439.5	440.1	441.9	442.9	443.9	443.8	443.0	442.2
6°	438.4	437.0	437.0	437.7	438.6	440.6	441.9	443.0	442.8	441.8	440.9
7°	436.5	434.9	434.8	435.6	436.6	439.0	440.5	441.9	441.5	440.4	439.4
8°	434.3	432.5	432.4	433.2	434.3	437.2	438.9	440.4	440.1	438.7	437.8
9°	431.9	429.9	429.8	430.7	431.9	435.2	436.9	438.6	438.3	436.9	435.8
10°	429.3	427.1	426.9	427.9	429.2	432.6	434.7	436.7	436.4	434.6	433.4
11°	426.4	424.0	423.7	424.8	426.1	430.1	432.2	434.4	434.1	432.2	430.9
12°	423.3	420.7	420.4	421.4	423.0	427.1	429.4	431.7	431.5	429.6	428.1
13°	420.0	417.1	416.6	417.8	419.4	423.9	426.4	428.9	428.6	426.6	425.1
14°	416.4	413.4	412.8	413.9	415.5	420.3	423.0	425.8	425.5	423.4	421.8
15°	412.6	409.2	408.6	409.7	411.4	416.4	419.3	422.4	422.1	419.9	418.3
16°	408.5	404.9	404.2	405.4	406.9	412.3	415.3	418.6	418.4	416.1	414.4
17°	404.2	400.3	399.5	400.7	402.4	407.9	411.0	414.6	414.5	412.1	410.4
18°	399.6	395.5	394.6	395.7	397.4	403.2	406.4	410.3	410.2	407.9	406.2
19°	394.7	390.4	389.3	390.4	392.2	398.1	401.5	405.7	405.7	403.3	401.6
20°	389.6	385.1	383.9	384.9	386.7	392.8	396.2	400.7	400.9	398.5	396.7
21°	384.3	379.5	378.3	379.0	380.8	387.3	390.6	395.5	395.8	393.3	391.6
22°	378.6	373.8	372.3	373.1	374.9	381.4	384.8	390.0	390.4	388.0	386.1
23°	372.9	367.7	366.2	366.9	368.7	375.3	378.8	384.0	384.7	382.2	380.7
24°	366.8	361.6	359.8	360.4	362.2	368.9	372.3	377.9	378.9	376.5	374.8
25°	360.6	355.0	353.3	353.9	355.5	362.2	365.6	371.6	372.7	370.3	368.8
26°	354.2	348.5	346.6	347.1	348.6	355.4	358.7	364.9	366.2	364.0	362.5
27°	347.5	341.7	339.7	340.0	341.5	348.4	351.7	358.0	359.7	357.3	356.1
28°	340.7	334.7	332.6	333.0	334.3	341.2	344.3	350.9	352.8	350.8	349.4
29°	333.7	327.6	325.4	325.7	327.0	333.9	336.8	343.6	345.8	343.8	342.5
30°	326.6	320.3	318.0	318.3	319.4	326.2	329.1	336.1	338.6	336.7	335.5
31°	319.4	313.0	310.6	310.8	311.8	318.6	321.3	328.5	331.2	329.4	328.4
32°	312.0	305.5	302.9	303.1	304.1	310.6	313.3	320.6	323.7	322.0	321.0
33°	304.5	297.9	295.3	295.3	296.2	302.8	305.3	312.7	315.9	314.5	313.6
34°	297.1	290.3	287.5	287.5	288.4	294.7	296.9	304.7	308.1	306.8	306.1
35°	289.3	282.5	279.8	279.7	280.5	286.7	288.8	296.6	300.2	299.2	298.3
36°	281.4	274.7	271.8	271.8	272.5	278.6	280.4	288.4	292.3	291.2	290.7
37°	273.7	266.8	264.0	263.9	264.3	270.4	272.2	280.2	284.3	283.5	282.9
38°	265.8	258.9	256.1	255.8	256.3	262.3	263.8	271.9	276.2	275.5	275.0
39°	257.8	250.9	248.1	247.8	248.1	254.0	255.4	263.6	268.1	267.4	267.1
40°	249.9	242.9	240.1	239.7	240.0	245.7	247.0	255.1	259.8	259.3	259.0
41°	241.8	234.9	232.1	231.7	231.9	237.5	238.6	246.9	251.7	251.3	250.9
42°	233.8	226.9	224.0	223.7	223.8	229.3	230.3	238.4	243.4	243.0	242.7



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CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
45°	210.0	203.3	200.6	200.1	200.0	205.1	205.7	213.7	218.8	218.8	218.7
46°	202.2	195.5	193.0	192.4	192.3	197.1	197.7	205.6	210.6	210.7	210.9
47°	194.6	188.1	185.5	185.0	184.8	189.5	189.8	197.7	202.9	202.9	203.1
48°	187.1	180.6	178.4	177.8	177.3	182.1	182.2	190.0	194.9	195.2	195.4
49°	179.9	173.3	171.2	170.6	170.0	174.9	174.8	182.4	187.4	187.5	187.9
50°	172.8	166.3	164.1	163.5	163.0	167.6	167.4	175.2	179.8	180.1	180.6
51°	165.6	159.2	157.3	156.7	156.1	160.4	160.4	167.9	172.6	172.9	173.3
52°	158.7	152.5	150.5	149.9	149.3	153.5	153.4	160.7	165.4	165.8	165.9
53°	152.0	145.9	143.9	143.2	142.6	146.7	146.6	153.7	158.3	158.8	159.4
54°	145.4	139.3	137.6	136.9	136.2	140.2	140.1	147.1	151.5	152.0	152.5
55°	138.9	133.1	131.3	130.6	129.9	133.8	133.7	140.5	144.8	145.3	145.9
56°	132.6	127.0	125.2	124.5	123.8	127.6	127.5	134.1	138.3	138.9	139.4
57°	126.5	121.0	119.2	118.5	117.9	121.5	121.4	127.9	131.9	132.5	133.2
58°	120.5	115.0	113.3	112.7	112.1	115.6	115.5	121.8	125.8	126.4	127.0
59°	114.7	109.4	107.7	107.0	106.3	109.8	109.8	115.9	119.8	120.4	121.0
60°	109.0	103.8	102.3	101.6	100.8	104.2	104.1	110.2	113.9	114.5	115.2
61°	103.4	98.3	96.8	96.2	95.4	98.8	98.8	104.5	108.2	108.8	109.5
62°	98.0	93.0	91.6	90.8	90.5	93.4	93.4	99.0	102.4	103.2	103.9
63°	92.8	88.2	86.4	85.8	85.6	88.2	88.6	93.7	96.9	97.8	98.5
64°	87.6	83.5	81.5	80.8	80.7	83.2	83.8	88.5	91.5	92.5	93.2
65°	82.5	78.4	76.5	75.9	75.8	78.2	79.0	83.3	86.6	87.7	88.0
66°	77.6	73.7	71.8	71.1	71.0	73.4	74.1	78.3	81.7	82.8	83.0
67°	72.8	69.0	67.1	66.4	66.4	68.7	69.5	73.4	76.7	77.8	78.0
68°	68.1	64.4	62.6	62.0	61.8	64.1	64.9	68.7	71.8	73.0	73.2
69°	63.5	60.0	58.2	57.4	57.4	59.6	60.4	64.0	67.0	68.2	68.6
70°	59.1	55.6	53.9	53.1	53.1	55.3	56.0	59.5	62.4	63.5	63.9
71°	54.7	51.4	49.6	48.9	48.9	51.0	51.7	55.0	57.8	59.0	59.4
72°	50.5	47.2	45.6	44.9	44.8	46.8	47.5	50.7	53.3	54.5	55.0
73°	46.3	43.2	41.6	40.9	40.8	42.8	43.5	46.5	49.0	50.3	50.7
74°	42.3	39.3	37.7	37.0	36.9	38.7	39.5	42.4	44.8	46.0	46.5
75°	38.4	35.5	34.0	33.2	33.2	34.9	35.7	38.4	40.6	41.9	42.5
76°	34.7	31.8	30.3	29.6	29.6	31.2	32.0	34.5	36.7	37.9	38.5
77°	31.0	28.3	26.8	26.2	26.1	27.6	28.4	30.8	32.8	34.1	34.6
78°	27.5	24.9	23.5	22.8	22.8	24.2	25.0	27.3	29.1	30.3	30.9
79°	24.1	21.7	20.3	19.7	19.6	20.8	21.7	23.8	25.6	26.7	27.3
80°	20.9	18.6	17.3	16.7	16.6	17.8	18.6	20.5	22.2	23.3	23.8
81°	17.9	15.7	14.5	13.9	13.8	14.8	15.6	17.4	18.9	20.0	20.6
82°	15.0	13.1	11.9	11.3	11.2	12.1	12.8	14.5	15.9	16.9	17.5
83°	12.3	10.6	9.5	9.0	8.8	9.6	9.8	11.8	13.1	14.0	14.5
84°	9.8	8.3	7.5	7.0	6.8	7.3	7.0	9.2	10.5	11.4	11.8
85°	7.2	6.4	5.7	5.2	5.1	5.2	5.0	6.9	8.1	9.0	9.4
86°	5.0	4.6	4.1	3.7	3.5	3.5	3.3	4.9	6.2	6.9	7.2
87°	3.2	2.8	2.6	2.2	2.0	2.1	1.5	3.2	4.6	5.1	5.4



TEST NUMBER: P710097

CATALOG NUMBER: RA6LS9FSD2W1EWHDM-900lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
90°	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.8	1.0



TEST NUMBER: P710097

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CANDELA DISTRIBUTION (continued):

	330°	360°
0°	444.6	444.6
1°	444.4	444.2
2°	443.8	443.5
3°	443.1	442.6
4°	442.1	441.5
5°	440.7	440.0
6°	439.3	438.4
7°	437.5	436.5
8°	435.4	434.3
9°	433.2	431.9
10°	430.7	429.3
11°	428.0	426.4
12°	425.0	423.3
13°	421.8	420.0
14°	418.2	416.4
15°	414.6	412.6
16°	410.6	408.5
17°	406.4	404.2
18°	401.9	399.6
19°	397.2	394.7
20°	392.1	389.6
21°	386.8	384.3
22°	381.4	378.6
23°	375.7	372.9
24°	369.7	366.8
25°	363.6	360.6
26°	357.2	354.2
27°	350.6	347.5
28°	344.0	340.7
29°	337.0	333.7
30°	329.9	326.6
31°	322.7	319.4
32°	315.4	312.0
33°	307.9	304.5
34°	300.3	297.1
35°	292.7	289.3
36°	284.8	281.4
37°	277.2	273.7
38°	269.2	265.8
39°	261.3	257.8
40°	253.3	249.9
41°	245.2	241.8
42°	237.2	233.8



TEST NUMBER: P710097

CATALOG NUMBER: RA6LS9FSD2W1EWHDM-900lm-2700K

CANDELA DISTRIBUTION (continued):

	330°	360°
45°	213.3	210.0
46°	205.4	202.2
47°	197.7	194.6
48°	190.1	187.1
49°	182.6	179.9
50°	175.2	172.8
51°	168.2	165.6
52°	161.3	158.7
53°	154.4	152.0
54°	147.7	145.4
55°	141.3	138.9
56°	134.9	132.6
57°	128.7	126.5
58°	122.7	120.5
59°	116.7	114.7
60°	111.0	109.0
61°	105.4	103.4
62°	99.9	98.0
63°	94.6	92.8
64°	89.7	87.6
65°	84.8	82.5
66°	79.9	77.6
67°	75.1	72.8
68°	70.4	68.1
69°	65.8	63.5
70°	61.3	59.1
71°	56.9	54.7
72°	52.6	50.5
73°	48.4	46.3
74°	44.3	42.3
75°	40.4	38.4
76°	36.6	34.7
77°	32.8	31.0
78°	29.3	27.5
79°	25.8	24.1
80°	22.5	20.9
81°	19.3	17.9
82°	16.3	15.0
83°	13.5	12.3
84°	10.9	9.8
85°	8.6	7.2
86°	6.4	5.0
87°	4.6	3.2



TEST NUMBER: P710097
CATALOG NUMBER: RA6LS9FSD2W1EWHDM-900lm-2700K

CANDELA DISTRIBUTION (continued):

	330°	360°
90°	0.4	0.2

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Report Generated By 670245859 / DESKTOP-T8S5UU9

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report





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

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report





43°	225.8	218.9	216.2	215.6	215.8	221.0	222.0	230.1	235.2	234.8	234.7
44°	217.8	211.1	208.3	207.8	207.8	213.1	213.8	221.9	226.9	226.8	226.7



88°	1.5	1.4	1.4	0.9	0.8	1.1	0.6	1.7	3.1	3.6	3.8
89°	0.5	0.4	0.3	0.1	0.1	0.1	0.1	0.7	1.7	2.1	2.3

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report





43°	229.0	225.8
44°	221.1	217.8



88°	2.8	1.5
89°	1.4	0.5

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Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
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Scaled Data Report



(END OF REPORT)