

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: P710088

Luminaire Tested: RA56LS9FSD2W1EWH-900lm-3000K

Issue Date: 10/6/2023

Test Information

Test Method: LM-79-2019
Report Number: P710088
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2304449B001)
Test Lab: EVERFINE
Issue Date: 10/6/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: RA56LS9FSD2W1EWH-900lm-3000K
Description: 5/6IN RETROFIT SELECTABLE LUMENS
Light Source: SELECTABLE LUMEN/CCT LEDs 90CRI / 3000K CCT
Ballast/Driver: -

Summary

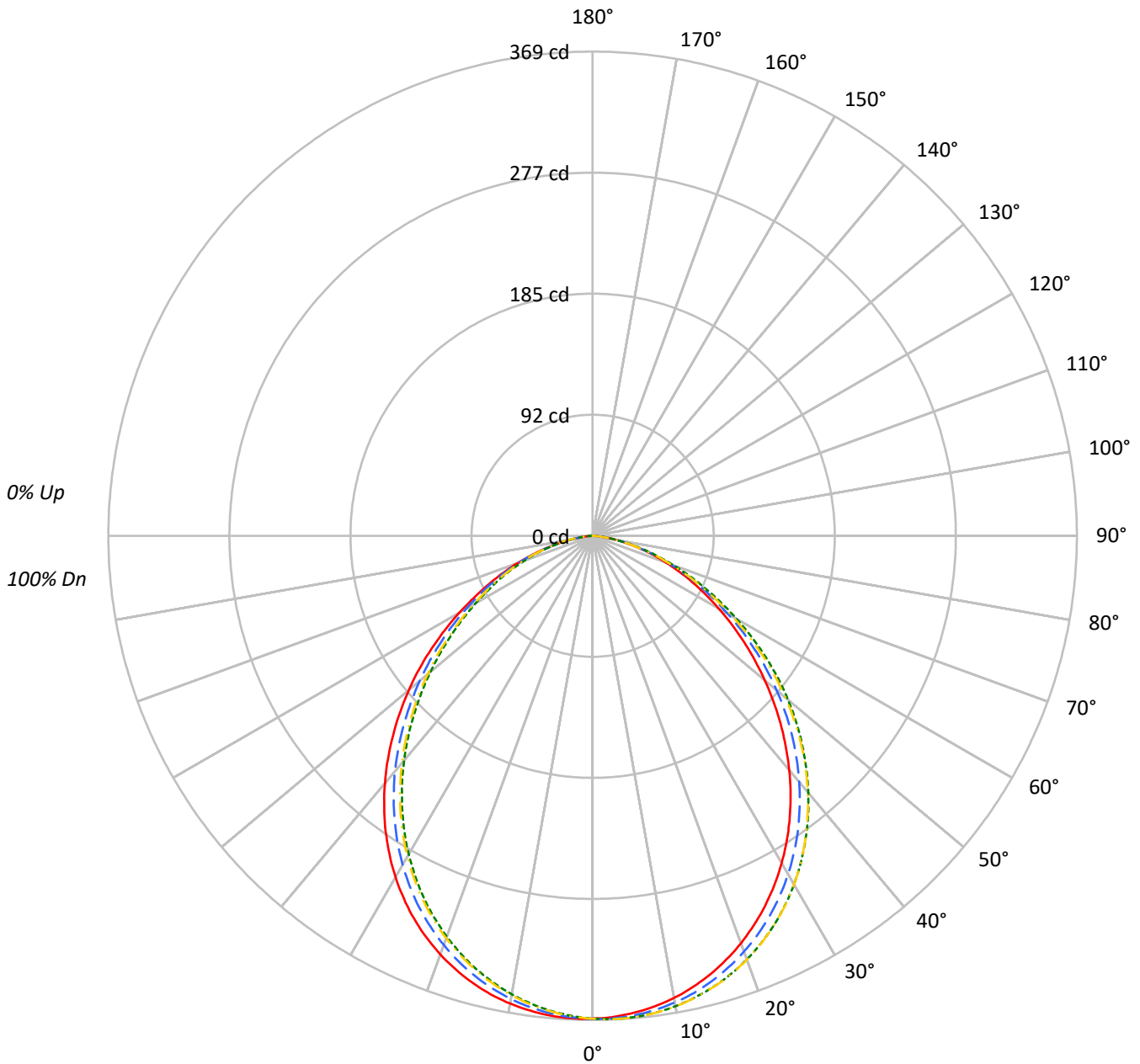
Lumens per Lamp: 930.22 (1 lamp)
Luminaire Lumens: 870.0 lumens
Efficiency: 93.5%
Efficacy: 100.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.28
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 8.7
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	50	30	10	0		
RCR																										
0	111	111	111	111	109	109	109	109	104	104	104	99	99	99	95	95	95	94					94			
1	103	99	95	92	100	97	93	90	93	90	88	89	87	85	86	84	82	81					81			
2	94	87	81	76	92	85	80	75	82	78	74	79	75	72	76	73	70	69					69			
3	86	77	70	64	84	76	69	64	73	67	63	71	66	62	68	64	61	59					59			
4	79	69	61	55	77	68	60	55	65	59	54	63	58	53	61	57	53	51					51			
5	73	62	54	48	71	61	53	48	59	52	47	57	51	47	55	50	46	44					44			
6	68	56	48	42	66	55	48	42	54	47	42	52	46	41	51	45	41	39					39			
7	63	51	43	38	62	50	43	37	49	42	37	48	41	37	46	41	37	35					35			
8	59	47	39	34	57	46	39	34	45	38	33	44	38	33	43	37	33	31					31			
9	55	43	36	31	54	42	35	30	41	35	30	40	34	30	39	34	30	28					28			
10	52	40	33	28	51	39	32	28	38	32	28	37	32	27	37	31	27	26					26			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	20174	20174	20174	20174
5°	20080	20256	20201	20003
10°	19906	20262	20151	19750
15°	19643	20193	20023	19410
20°	19281	20033	19806	18966
25°	18818	19785	19477	18412
30°	18237	19421	19016	17737
35°	17520	18926	18397	16938
40°	16681	18299	17619	15994
45°	15699	17513	16676	14916
50°	14601	16571	15573	13748
55°	13419	15378	14308	12520
60°	12192	13902	12861	11282
65°	10896	12271	11298	10105
70°	9521	10531	9713	8832
75°	7900	8472	7795	7350
80°	5809	5872	5398	5304
85°	3208	3082	2390	3208

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 120°
 Vertical Angle: 45°
 Luminance: 17529 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	34.7	4.0	3.7
10°-20°	98.4	11.3	10.6
20°-30°	145.5	16.7	15.6
30°-40°	167.6	19.3	18.0
40°-50°	161.3	18.5	17.3
50°-60°	130.2	15.0	14.0
60°-70°	85.5	9.8	9.2
70°-80°	39.9	4.6	4.3
80°-90°	6.8	0.8	0.7
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°	278.7	32.0	30.0
0°-40°	446.3	51.3	48.0
0°-60°	737.7	84.8	79.3
0°-90°	870.0	100.0	93.5
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°	870.0	100.0	93.5

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	368	368	368	368	368	
5°	365	368	367	364	365	35
15°	346	356	353	342	346	97
25°	311	327	322	304	311	143
35°	262	283	275	253	262	164
45°	202	226	215	192	202	156
55°	140	161	150	131	140	126
65°	84	95	87	78	84	84
75°	37	40	37	35	37	40
85°	5	5	4	5	5	7
90°	0	0	0	0	0	



TEST NUMBER: P710088

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CANDELA DISTRIBUTION (FULL):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
0°	368.0	368.0	368.0	368.0	368.0	368.0	368.0	368.0	368.0	368.0	368.0
0.5°	367.8	368.1	368.4	368.1	368.4	368.3	368.2	368.1	368.2	367.7	368.0
1°	367.7	368.1	368.5	368.3	368.6	368.5	368.2	368.0	367.9	367.4	367.7
1.5°	367.6	367.9	368.5	368.4	368.7	368.6	368.2	367.9	367.8	367.0	367.4
2°	367.3	367.8	368.5	368.6	368.8	368.6	368.2	367.8	367.4	366.7	367.0
2.5°	367.0	367.5	368.5	368.5	368.9	368.6	368.1	367.6	367.1	366.2	366.6
3°	366.6	367.4	368.4	368.6	368.9	368.6	368.0	367.4	366.7	365.8	366.1
3.5°	366.1	367.1	368.3	368.6	368.8	368.5	367.8	367.1	366.4	365.2	365.7
4°	365.8	366.8	368.0	368.4	368.7	368.4	367.6	366.8	365.8	364.7	365.1
4.5°	365.3	366.4	367.8	368.3	368.6	368.3	367.4	366.3	365.4	364.1	364.5
5°	364.9	366.1	367.5	368.1	368.4	368.1	367.1	366.0	364.9	363.5	363.9
5.5°	364.3	365.6	367.3	367.9	368.2	367.9	366.8	365.5	364.4	362.7	363.3
6°	363.7	365.1	366.8	367.7	367.9	367.5	366.4	365.1	363.7	362.1	362.6
6.5°	363.1	364.5	366.5	367.3	367.6	367.2	366.0	364.5	363.1	361.3	361.8
7°	362.4	364.0	366.0	366.9	367.3	366.9	365.5	364.0	362.3	360.5	361.1
7.5°	361.7	363.4	365.5	366.6	366.9	366.5	365.0	363.4	361.6	359.6	360.2
8°	361.0	362.8	365.0	366.1	366.4	366.0	364.5	362.7	360.8	358.8	359.3
8.5°	360.2	362.1	364.4	365.7	366.0	365.5	364.0	362.0	359.9	357.9	358.4
9°	359.4	361.4	363.8	365.2	365.5	365.0	363.3	361.3	359.1	356.9	357.4
9.5°	358.5	360.6	363.2	364.6	365.1	364.4	362.7	360.6	358.2	355.8	356.5
10°	357.6	359.8	362.5	364.0	364.4	363.8	362.0	359.7	357.1	354.8	355.4
10.5°	356.7	358.9	361.8	363.5	363.8	363.3	361.4	358.9	356.1	353.6	354.3
11°	355.7	358.0	361.0	362.7	363.2	362.6	360.5	357.9	355.0	352.6	353.2
11.5°	354.5	357.0	360.3	362.0	362.5	361.8	359.8	356.9	354.0	351.4	352.1
12°	353.6	356.1	359.3	361.3	361.6	361.1	358.9	356.0	352.8	350.2	350.8
12.5°	352.3	355.1	358.5	360.5	360.9	360.3	358.1	354.9	351.8	348.9	349.6
13°	351.2	354.0	357.5	359.6	360.1	359.4	357.0	353.9	350.5	347.6	348.2
13.5°	349.9	352.8	356.5	358.7	359.2	358.5	356.1	352.7	349.3	346.2	347.0
14°	348.7	351.7	355.5	357.8	358.3	357.6	355.0	351.6	347.9	344.9	345.6
14.5°	347.5	350.5	354.4	356.8	357.3	356.6	354.0	350.4	346.6	343.4	344.2
15°	346.1	349.3	353.3	355.8	356.4	355.6	352.8	349.2	345.2	342.0	342.7
15.5°	344.7	348.0	352.1	354.9	355.4	354.6	351.7	347.9	343.8	340.4	341.2
16°	343.3	346.7	351.0	353.7	354.3	353.5	350.5	346.6	342.3	338.9	339.7
16.5°	341.7	345.3	349.8	352.6	353.1	352.4	349.3	345.2	340.8	337.3	338.1
17°	340.3	343.9	348.5	351.4	351.9	351.2	348.0	343.8	339.2	335.6	336.5
17.5°	338.7	342.3	347.2	350.2	350.8	350.0	346.7	342.3	337.6	334.0	334.8
18°	337.2	341.0	345.9	349.0	349.6	348.7	345.3	340.9	336.0	332.3	333.1
18.5°	335.5	339.5	344.4	347.8	348.2	347.5	343.9	339.3	334.3	330.5	331.4
19°	333.9	337.9	343.0	346.3	346.9	346.0	342.5	337.8	332.6	328.8	329.6
19.5°	332.1	336.2	341.5	345.0	345.6	344.7	341.1	336.1	330.9	326.9	327.8
20°	330.5	334.6	339.9	343.4	344.1	343.2	339.5	334.5	329.1	325.1	325.9
20.5°	328.6	332.9	338.4	342.1	342.6	341.8	337.8	332.8	327.3	323.1	324.0
21°	326.9	331.2	336.8	340.6	341.1	340.3	336.2	331.1	325.4	321.2	322.2



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CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
22.5°	321.2	325.9	331.8	335.9	336.3	335.6	331.2	325.6	319.5	315.1	316.1
23°	319.3	324.0	330.0	334.1	334.7	333.9	329.4	323.8	317.6	313.1	314.0
23.5°	317.2	322.0	328.3	332.5	333.0	332.1	327.7	321.7	315.6	310.9	312.0
24°	315.3	320.1	326.5	330.7	331.4	330.4	325.7	319.9	313.4	308.9	309.8
24.5°	313.2	318.2	324.6	329.0	329.5	328.7	323.9	317.8	311.3	306.6	307.7
25°	311.1	316.2	322.7	327.1	327.8	326.8	322.0	315.9	309.2	304.4	305.4
25.5°	308.8	314.1	320.7	325.4	325.9	324.9	320.0	313.8	307.1	302.1	303.2
26°	306.7	312.0	318.7	323.4	324.0	323.0	318.0	311.6	304.7	299.9	300.9
26.5°	304.4	309.9	316.8	321.5	322.1	321.1	315.8	309.4	302.5	297.4	298.7
27°	302.3	307.8	314.7	319.4	320.1	319.0	313.8	307.3	300.2	295.1	296.3
27.5°	299.9	305.5	312.6	317.5	318.2	317.0	311.6	305.0	297.9	292.7	293.9
28°	297.6	303.4	310.4	315.4	316.1	314.9	309.4	302.8	295.5	290.3	291.5
28.5°	295.3	301.1	308.3	313.3	314.0	312.8	307.3	300.5	293.1	287.7	289.0
29°	292.9	298.9	306.1	311.1	312.0	310.6	305.1	298.2	290.6	285.3	286.5
29.5°	290.4	296.5	303.9	309.0	309.8	308.5	302.8	295.8	288.2	282.8	284.0
30°	288.1	294.1	301.6	306.8	307.6	306.2	300.4	293.4	285.7	280.2	281.5
30.5°	285.6	291.7	299.4	304.6	305.2	303.9	298.0	290.9	283.1	277.6	278.9
31°	283.1	289.3	296.9	302.3	303.0	301.6	295.5	288.4	280.5	275.0	276.3
31.5°	280.5	286.9	294.5	300.1	300.7	299.3	293.2	285.9	278.0	272.3	273.7
32°	277.9	284.3	292.1	297.6	298.3	296.9	290.6	283.4	275.3	269.7	271.0
32.5°	275.3	281.8	289.7	295.3	295.9	294.4	288.0	280.8	272.6	266.9	268.4
33°	272.7	279.2	287.2	292.8	293.6	292.0	285.5	278.2	270.0	264.2	265.7
33.5°	270.1	276.6	284.7	290.4	291.0	289.5	282.9	275.6	267.2	261.4	262.9
34°	267.3	274.0	282.1	287.8	288.5	286.8	280.2	272.9	264.5	258.7	260.1
34.5°	264.7	271.5	279.6	285.3	285.9	284.2	277.6	270.2	261.7	255.8	257.4
35°	261.8	268.7	277.0	282.8	283.6	281.7	274.9	267.5	258.9	253.1	254.5
35.5°	259.1	266.0	274.3	280.2	280.9	279.1	272.2	264.8	256.1	250.1	251.6
36°	256.3	263.2	271.6	277.6	278.3	276.4	269.4	262.0	253.2	247.2	248.8
36.5°	253.5	260.5	269.0	275.0	275.6	273.7	266.6	259.1	250.4	244.3	245.9
37°	250.6	257.7	266.2	272.3	273.0	270.8	263.7	256.3	247.4	241.5	243.0
37.5°	247.6	254.9	263.5	269.7	270.2	268.1	260.8	253.4	244.5	238.5	240.0
38°	244.8	251.9	260.7	267.0	267.4	265.3	258.0	250.5	241.6	235.5	237.1
38.5°	241.9	249.2	257.9	264.3	264.7	262.5	255.2	247.6	238.6	232.5	234.1
39°	239.0	246.2	255.1	261.3	262.0	259.6	252.2	244.7	235.6	229.5	231.1
39.5°	236.0	243.4	252.3	258.5	259.0	256.7	249.3	241.8	232.7	226.5	228.1
40°	233.1	240.4	249.4	255.7	256.2	253.7	246.2	238.8	229.6	223.5	225.1
40.5°	230.1	237.5	246.5	252.9	253.3	250.8	243.2	235.8	226.6	220.4	222.1
41°	227.0	234.4	243.6	250.0	250.4	247.8	240.2	232.8	223.6	217.4	219.0
41.5°	224.0	231.5	240.7	247.0	247.4	244.9	237.2	229.6	220.4	214.2	216.0
42°	220.9	228.5	237.5	244.0	244.5	241.8	234.1	226.6	217.5	211.2	212.9
42.5°	217.9	225.5	234.6	241.1	241.4	238.8	230.9	223.6	214.4	208.0	209.8
43°	214.8	222.3	231.6	238.1	238.5	235.7	227.8	220.5	211.2	205.0	206.7
43.5°	211.7	219.3	228.6	235.2	235.3	232.6	224.7	217.4	208.1	201.9	203.7



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CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
45°	202.5	210.1	219.3	225.9	226.1	223.2	215.1	208.0	198.7	192.4	194.3
45.5°	199.3	207.0	216.3	222.9	222.9	220.1	212.0	204.9	195.6	189.2	191.1
46°	196.2	203.8	213.2	219.8	219.7	216.8	208.8	201.7	192.5	186.2	188.0
46.5°	193.1	200.7	210.1	216.6	216.3	213.6	205.5	198.6	189.2	183.0	185.0
47°	190.0	197.6	206.8	213.5	213.2	210.4	202.2	195.5	186.1	179.9	181.9
47.5°	186.8	194.4	203.6	210.4	209.8	207.3	199.0	192.3	183.0	176.9	178.7
48°	183.6	191.2	200.5	207.2	206.6	203.9	195.8	189.1	179.9	173.7	175.6
48.5°	180.6	188.1	197.3	204.0	203.1	200.7	192.4	185.9	176.6	170.5	172.6
49°	177.5	184.9	194.0	200.8	199.8	197.3	189.2	182.8	173.5	167.3	169.6
49.5°	174.3	181.7	190.7	197.6	196.3	194.0	185.9	179.6	170.3	164.3	166.5
50°	171.2	178.6	187.5	194.3	192.9	190.7	182.6	176.4	167.3	161.2	163.4
50.5°	168.0	175.4	184.2	191.2	189.4	187.3	179.4	173.4	164.1	158.2	160.3
51°	164.9	172.2	180.9	188.0	186.1	183.8	176.2	170.2	161.0	155.1	157.2
51.5°	161.8	169.1	177.6	184.6	182.7	180.4	172.9	167.1	157.9	152.0	154.1
52°	158.6	165.9	174.3	181.2	179.3	176.9	169.6	163.9	154.9	149.0	151.0
52.5°	155.7	162.7	171.0	177.9	175.7	173.6	166.3	160.8	151.8	145.9	148.0
53°	152.8	159.6	167.7	174.5	172.1	170.1	162.9	157.6	148.7	142.9	145.0
53.5°	149.6	156.5	164.4	171.1	168.7	166.7	159.6	154.5	145.6	139.8	142.1
54°	146.5	153.3	161.1	167.7	165.2	163.2	156.3	151.4	142.5	136.9	139.0
54.5°	143.4	150.1	157.8	164.3	161.6	159.8	153.0	148.3	139.5	133.9	136.0
55°	140.4	146.9	154.4	160.9	158.1	156.4	149.7	145.1	136.5	131.0	133.1
55.5°	137.4	143.8	151.2	157.6	154.6	152.8	146.4	142.0	133.5	128.1	130.1
56°	134.4	140.7	147.8	154.1	151.0	149.5	143.1	139.0	130.6	125.1	127.2
56.5°	131.4	137.6	144.4	150.7	147.5	146.0	139.8	135.9	127.6	122.2	124.3
57°	128.4	134.6	141.1	147.3	144.0	142.7	136.6	132.8	124.7	119.5	121.5
57.5°	125.5	131.4	137.9	143.8	140.6	139.2	133.3	129.8	121.8	116.7	118.6
58°	122.6	128.4	134.5	140.4	137.3	135.8	130.1	126.7	118.9	113.8	115.7
58.5°	119.8	125.3	131.2	136.9	133.8	132.4	126.7	123.7	116.1	111.0	112.9
59°	116.9	122.2	127.9	133.6	130.4	129.0	123.6	120.7	113.3	108.2	110.1
59.5°	114.0	119.2	124.8	130.1	127.0	125.7	120.4	117.7	110.5	105.5	107.4
60°	111.2	116.2	121.6	126.8	123.7	122.5	117.3	114.7	107.7	102.9	104.7
60.5°	108.4	113.2	118.4	123.5	120.2	119.1	114.1	111.7	105.0	100.1	102.0
61°	105.6	110.2	115.2	120.2	117.0	115.9	111.0	108.8	102.3	97.5	99.3
61.5°	102.8	107.3	112.1	116.9	113.6	112.6	107.9	105.9	99.6	94.8	96.6
62°	100.0	104.4	109.0	113.6	110.4	109.5	104.8	103.0	96.8	92.2	94.0
62.5°	97.3	101.5	105.9	110.4	107.2	106.3	101.8	100.2	94.2	89.7	91.5
63°	94.7	98.6	102.8	107.2	104.0	103.1	98.8	97.3	91.6	87.2	89.0
63.5°	92.0	95.8	99.8	104.1	100.9	100.0	95.8	94.5	89.0	84.9	86.5
64°	89.3	92.9	96.8	100.9	97.7	97.0	92.9	91.7	86.6	82.6	83.9
64.5°	86.7	90.1	93.9	97.8	94.7	93.9	90.0	88.9	84.2	80.3	81.4
65°	84.0	87.4	91.0	94.6	91.7	90.9	87.1	86.2	81.8	77.9	79.0
65.5°	81.5	84.8	88.1	91.6	88.6	87.9	84.5	83.4	79.5	75.5	76.6
66°	79.0	82.3	85.3	88.6	85.8	85.0	81.8	80.8	77.0	73.2	74.2



TEST NUMBER: P710088

CATALOG NUMBER: RA56LS9FSD2W1EWH-900lm-3000K

CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
67.5°	71.5	74.5	76.8	79.7	77.4	76.4	73.7	72.8	69.7	66.2	67.3
68°	69.0	71.9	74.1	76.9	74.6	73.6	71.1	70.2	67.4	63.9	65.0
68.5°	66.6	69.3	71.4	73.9	71.8	70.8	68.4	67.6	65.0	61.6	62.7
69°	64.2	66.8	68.8	71.2	69.0	68.0	65.7	65.0	62.6	59.5	60.5
69.5°	61.8	64.3	66.1	68.4	66.3	65.4	63.1	62.6	60.3	57.3	58.3
70°	59.4	61.8	63.5	65.7	63.6	62.7	60.6	60.1	58.0	55.1	56.2
70.5°	57.1	59.3	60.9	62.9	60.9	60.1	58.1	57.6	55.8	53.0	54.0
71°	54.8	56.9	58.4	60.2	58.2	57.5	55.6	55.1	53.5	50.9	51.9
71.5°	52.5	54.5	55.9	57.6	55.6	54.9	53.1	52.7	51.2	48.8	49.9
72°	50.3	52.1	53.4	55.0	53.0	52.4	50.7	50.3	49.0	46.7	47.8
72.5°	48.1	49.7	51.0	52.4	50.5	49.9	48.3	48.0	46.8	44.6	45.8
73°	45.8	47.5	48.5	49.9	48.0	47.4	45.9	45.7	44.6	42.6	43.8
73.5°	43.6	45.2	46.2	47.4	45.6	45.1	43.6	43.4	42.5	40.6	41.8
74°	41.5	42.9	43.8	44.9	43.2	42.6	41.3	41.1	40.4	38.6	39.9
74.5°	39.4	40.6	41.5	42.4	40.8	40.3	39.1	38.9	38.3	36.6	38.0
75°	37.3	38.5	39.3	40.0	38.4	38.0	36.8	36.7	36.2	34.7	36.1
75.5°	35.3	36.3	37.1	37.6	36.1	35.7	34.7	34.5	34.1	32.7	34.2
76°	33.2	34.2	34.9	35.3	33.8	33.5	32.5	32.4	32.1	30.8	32.4
76.5°	31.2	32.2	32.7	33.1	31.6	31.4	30.4	30.4	30.2	28.9	30.6
77°	29.3	30.1	30.6	30.9	29.5	29.2	28.4	28.3	28.2	27.1	28.8
77.5°	27.3	28.1	28.5	28.7	27.3	27.2	26.4	26.3	26.3	25.3	27.0
78°	25.5	26.1	26.5	26.6	25.2	25.1	24.4	24.4	24.4	23.5	25.3
78.5°	23.7	24.2	24.5	24.5	23.3	23.1	22.5	22.4	22.6	21.7	23.6
79°	21.9	22.3	22.6	22.4	21.2	21.2	20.6	20.6	20.7	20.0	21.9
79.5°	20.1	20.6	20.7	20.5	19.4	19.3	18.8	18.8	18.9	18.4	20.3
80°	18.4	18.8	18.9	18.6	17.5	17.5	17.1	17.1	17.1	16.8	18.6
80.5°	16.8	17.1	17.1	16.8	15.8	15.8	15.4	15.5	15.4	15.2	17.0
81°	15.2	15.5	15.3	15.0	14.1	14.1	13.8	13.9	13.8	13.8	15.5
81.5°	13.7	13.9	13.6	13.4	12.5	12.5	12.2	12.3	12.3	12.4	14.0
82°	12.3	12.4	12.0	11.8	11.0	11.0	10.5	10.9	11.0	11.0	12.5
82.5°	10.9	11.0	10.6	10.3	9.6	9.6	8.8	9.6	9.7	9.8	11.2
83°	9.7	9.7	9.3	9.0	8.3	8.3	7.4	8.3	8.5	8.6	9.9
83.5°	8.4	8.5	8.1	7.8	7.2	7.1	6.2	7.2	7.4	7.6	8.8
84°	7.1	7.3	7.0	6.7	6.1	6.1	5.2	6.1	6.5	6.7	7.7
84.5°	6.0	6.3	6.0	5.7	5.3	5.1	4.5	5.2	5.7	5.8	6.8
85°	5.1	5.4	5.2	4.9	4.5	4.3	3.8	4.4	5.0	5.1	6.0
85.5°	4.4	4.6	4.4	4.2	3.9	3.5	3.0	3.7	4.2	4.3	5.2
86°	3.6	3.9	3.7	3.5	3.3	2.9	2.2	3.0	3.5	3.7	4.4
86.5°	2.9	3.2	3.2	3.0	2.7	2.3	1.4	2.3	3.0	3.1	3.8
87°	2.1	2.5	2.6	2.4	2.1	1.7	0.9	1.7	2.3	2.4	3.1
87.5°	1.7	1.9	2.0	1.7	1.4	1.2	0.6	1.0	1.7	2.1	2.5
88°	1.4	1.4	1.5	1.2	0.9	0.7	0.4	0.5	1.4	1.9	2.3
88.5°	0.8	1.0	1.0	0.6	0.3	0.3	0.3	0.4	1.1	1.6	2.0



TEST NUMBER: P710088

CATALOG NUMBER: RA56LS9FSD2W1EWH-900lm-3000K

CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
90°	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3



TEST NUMBER: P710088

CATALOG NUMBER: RA56LS9FSD2W1EWH-900lm-3000K

CANDELA DISTRIBUTION (continued):

	330°	360°
0°	368.0	368.0
0.5°	367.9	367.8
1°	367.6	367.7
1.5°	367.3	367.6
2°	367.0	367.3
2.5°	366.6	367.0
3°	366.1	366.6
3.5°	365.6	366.1
4°	365.2	365.8
4.5°	364.6	365.3
5°	364.0	364.9
5.5°	363.4	364.3
6°	362.7	363.7
6.5°	362.1	363.1
7°	361.2	362.4
7.5°	360.4	361.7
8°	359.6	361.0
8.5°	358.7	360.2
9°	357.8	359.4
9.5°	356.9	358.5
10°	355.8	357.6
10.5°	354.8	356.7
11°	353.7	355.7
11.5°	352.5	354.5
12°	351.4	353.6
12.5°	350.1	352.3
13°	348.8	351.2
13.5°	347.6	349.9
14°	346.2	348.7
14.5°	344.8	347.5
15°	343.4	346.1
15.5°	341.9	344.7
16°	340.4	343.3
16.5°	338.8	341.7
17°	337.2	340.3
17.5°	335.5	338.7
18°	333.9	337.2
18.5°	332.2	335.5
19°	330.5	333.9
19.5°	328.7	332.1
20°	326.9	330.5
20.5°	325.1	328.6
21°	323.2	326.9



TEST NUMBER: P710088

CATALOG NUMBER: RA56LS9FSD2W1EWH-900lm-3000K

CANDELA DISTRIBUTION (continued):

	330°	360°
22.5°	317.2	321.2
23°	315.2	319.3
23.5°	313.0	317.2
24°	311.0	315.3
24.5°	308.8	313.2
25°	306.7	311.1
25.5°	304.5	308.8
26°	302.3	306.7
26.5°	299.9	304.4
27°	297.7	302.3
27.5°	295.2	299.9
28°	292.8	297.6
28.5°	290.4	295.3
29°	288.0	292.9
29.5°	285.4	290.4
30°	283.0	288.1
30.5°	280.4	285.6
31°	277.8	283.1
31.5°	275.2	280.5
32°	272.6	277.9
32.5°	269.9	275.3
33°	267.3	272.7
33.5°	264.5	270.1
34°	261.8	267.3
34.5°	259.0	264.7
35°	256.3	261.8
35.5°	253.3	259.1
36°	250.5	256.3
36.5°	247.6	253.5
37°	244.8	250.6
37.5°	241.9	247.6
38°	238.9	244.8
38.5°	235.9	241.9
39°	233.0	239.0
39.5°	229.9	236.0
40°	227.0	233.1
40.5°	223.9	230.1
41°	220.9	227.0
41.5°	217.9	224.0
42°	214.8	220.9
42.5°	211.7	217.9
43°	208.7	214.8
43.5°	205.5	211.7



TEST NUMBER: P710088

CATALOG NUMBER: RA56LS9FSD2W1EWH-900lm-3000K

CANDELA DISTRIBUTION (continued):

	330°	360°
45°	196.3	202.5
45.5°	193.1	199.3
46°	190.0	196.2
46.5°	186.9	193.1
47°	183.8	190.0
47.5°	180.7	186.8
48°	177.5	183.6
48.5°	174.4	180.6
49°	171.3	177.5
49.5°	168.1	174.3
50°	165.1	171.2
50.5°	161.9	168.0
51°	158.8	164.9
51.5°	155.7	161.8
52°	152.6	158.6
52.5°	149.6	155.7
53°	146.5	152.8
53.5°	143.5	149.6
54°	140.5	146.5
54.5°	137.5	143.4
55°	134.5	140.4
55.5°	131.5	137.4
56°	128.6	134.4
56.5°	125.6	131.4
57°	122.7	128.4
57.5°	119.9	125.5
58°	117.0	122.6
58.5°	114.1	119.8
59°	111.3	116.9
59.5°	108.5	114.0
60°	105.8	111.2
60.5°	103.0	108.4
61°	100.4	105.6
61.5°	97.7	102.8
62°	95.1	100.0
62.5°	92.4	97.3
63°	89.9	94.7
63.5°	87.4	92.0
64°	85.0	89.3
64.5°	82.7	86.7
65°	80.4	84.0
65.5°	78.0	81.5
66°	75.6	79.0



TEST NUMBER: P710088

CATALOG NUMBER: RA56LS9FSD2W1EWH-900lm-3000K

CANDELA DISTRIBUTION (continued):

	330°	360°
67.5°	68.5	71.5
68°	66.2	69.0
68.5°	63.8	66.6
69°	61.6	64.2
69.5°	59.4	61.8
70°	57.2	59.4
70.5°	54.9	57.1
71°	52.8	54.8
71.5°	50.6	52.5
72°	48.5	50.3
72.5°	46.4	48.1
73°	44.3	45.8
73.5°	42.2	43.6
74°	40.2	41.5
74.5°	38.2	39.4
75°	36.2	37.3
75.5°	34.2	35.3
76°	32.3	33.2
76.5°	30.4	31.2
77°	28.5	29.3
77.5°	26.7	27.3
78°	24.8	25.5
78.5°	23.1	23.7
79°	21.4	21.9
79.5°	19.7	20.1
80°	18.0	18.4
80.5°	16.5	16.8
81°	14.9	15.2
81.5°	13.5	13.7
82°	12.1	12.3
82.5°	10.8	10.9
83°	9.5	9.7
83.5°	8.4	8.4
84°	7.3	7.1
84.5°	6.4	6.0
85°	5.6	5.1
85.5°	4.8	4.4
86°	4.0	3.6
86.5°	3.3	2.9
87°	2.8	2.1
87.5°	2.0	1.7
88°	1.4	1.4
88.5°	1.2	0.8



TEST NUMBER: P710088

CATALOG NUMBER: RA56LS9FSD2W1EWH-900lm-3000K

CANDELA DISTRIBUTION (continued):

	330°	360°
90°	0.3	0.3



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Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report





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

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Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



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1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report





21.5°	324.9	329.4	335.1	339.0	339.5	338.8	334.6	329.3	323.5	319.2	320.1
22°	323.1	327.7	333.5	337.4	338.0	337.1	332.9	327.5	321.5	317.2	318.1



44°	208.7	216.3	225.5	232.0	232.3	229.5	221.5	214.3	205.0	198.8	200.6
44.5°	205.5	213.1	222.5	229.1	229.2	226.4	218.4	211.3	201.9	195.6	197.4



66.5°	76.5	79.7	82.5	85.7	83.0	82.1	79.2	78.1	74.6	70.8	71.9
67°	74.0	77.1	79.6	82.6	80.2	79.2	76.5	75.4	72.2	68.5	69.5



89°	0.5	0.7	0.5	0.2	0.2	0.2	0.2	0.3	0.6	1.1	1.5
89.5°	0.4	0.5	0.3	0.1	0.1	0.1	0.1	0.1	0.2	0.6	0.8

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Scaled Data Report





21.5°	321.2	324.9
22°	319.2	323.1

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1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



44°	202.5	208.7
44.5°	199.4	205.5

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1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



66.5°	73.2	76.5
67°	70.8	74.0



89°	1.0	0.5
89.5°	0.7	0.4

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1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)