

LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: HALO

Report Number: P855594

Luminaire Tested: **HLS9129FS1EWH-3000K**

Issue Date: 7/16/2024

Tested By:

Approved By:



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Test Information

Test Method: LM-79-08
 Report Number: P855594
 Test Lab:
 Issue Date: 7/16/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: HALO
 Catalog Number: HLS9129FS1EWH-3000K
 Description: 9IN 1200LM, 90CRI, DIMMING TO 10%, DAMP LOCATION
 Light Source: SELECTABLE CCT 90CRI / 3000K CCT
 Ballast/Driver: -

Summary

Lumens per Lamp: 1287.7 (1 lamp)
 Luminaire Lumens: 1265.0 lumens
 Efficiency: 98.2%
 Efficacy: 76.7 lumens/watt
 Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.39
 Luminous Opening: Circular (Dia: 0.75' x H: 0')
 CIE Type: Direct

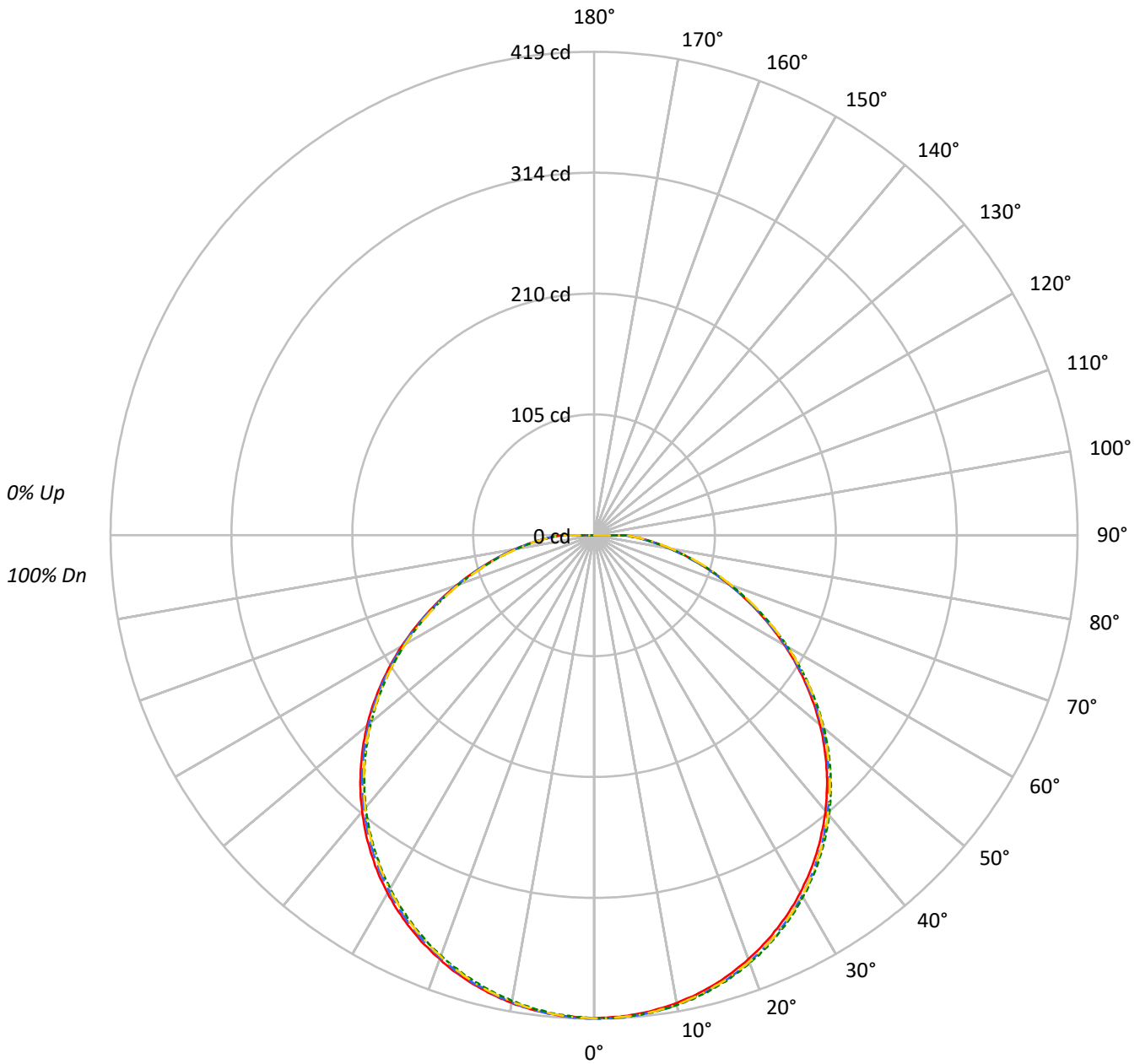
Input Watts (W): 16.5
 Input Voltage (V): NR
 Input Current (Ain): NR
 Voltage Rise (V): NR
 Power Factor: NR
 Total Harmonic Distortion (THDi): NR
 Frequency (hertz): 60
 Stabilization Time: NR
 Operation Time: NR
 Ambient Temperature (°C): NR
 Test Distance: 25 FT



Meas		Calibration Due Date	
Instrument	Identificatio		
Photometer	GONIO 1 11111111	4/22/2021	10/22/2021
Power Meter	XITRON 2801 IN0197	12/1/2020	12/1/2021
AC Power Source	CHROMA 61505 IN0196	12/1/2020	12/1/2021
DC Power Supply	AGILENT E3634A IN0198	11/30/2020	11/30/2021
Room Thermometer	ONSET IN0143	12/1/2020	12/1/2021

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Luminous Intensity Polar Plot



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

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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				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	117	117	117	117	114	114	114	114	109	109	109	105	105	105	100	100	100	100	100	100	98
1	106	101	96	92	103	98	94	90	94	91	88	90	87	85	87	84	82	87	84	82	80
2	96	87	80	74	93	85	79	73	82	76	72	79	74	70	76	72	68	76	72	68	66
3	87	76	68	61	85	75	67	61	72	65	60	69	63	59	67	62	58	67	62	58	55
4	80	68	59	52	77	66	58	51	64	56	51	61	55	50	59	54	49	59	54	49	47
5	73	60	51	44	71	59	51	44	57	49	44	55	48	43	53	47	43	53	47	43	41
6	68	54	45	39	66	53	45	38	51	44	38	50	43	38	48	42	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	34	45	38	33	44	38	33	44	38	33	31
8	58	45	36	30	57	44	36	30	43	35	30	41	35	30	40	34	30	40	34	30	28
9	54	41	33	27	53	40	33	27	39	32	27	38	32	27	37	31	27	37	31	27	25
10	51	38	30	25	50	37	30	25	36	29	25	35	29	24	35	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	10199	10199	10199	10199
5°	10189	10209	10187	10172
10°	10188	10230	10181	10141
15°	10168	10236	10168	10102
20°	10138	10234	10133	10050
25°	10103	10210	10111	10003
30°	10058	10184	10069	9940
35°	10006	10137	10018	9872
40°	9920	10079	9949	9793
45°	9813	9989	9855	9686
50°	9681	9863	9734	9560
55°	9507	9677	9579	9400
60°	9293	9458	9380	9220
65°	9051	9195	9184	9017
70°	8855	8969	9026	8862
75°	8858	8934	9075	8915
80°	9443	9443	9737	9583
85°	12552	12328	12999	12831

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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	39.6	3.1	3.1
10°-20°	113.8	9.0	8.8
20°-30°	173.3	13.7	13.5
30°-40°	210.5	16.6	16.3
40°-50°	220.1	17.4	17.1
50°-60°	200.7	15.9	15.6
60°-70°	156.6	12.4	12.2
70°-80°	100.9	8.0	7.8
80°-90°	49.5	3.9	3.8
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°	326.8	25.8	25.4
0°-40°	537.3	42.5	41.7
0°-60°	958.0	75.7	74.4
0°-90°	1265.0	100.0	98.2
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°	1265.0	100.0	98.2

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	419	419	419	419	419	
5°	417	417	416	416	417	40
15°	403	406	403	400	403	114
25°	376	380	376	372	376	173
35°	336	341	337	332	336	210
45°	285	290	286	281	285	220
55°	224	228	226	221	224	200
65°	157	160	159	156	157	156
75°	94	95	96	95	94	100
85°	45	44	46	46	45	49
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°	418.6	418.6	418.6	418.6	418.6	418.6	418.6	418.6	418.6	418.6	418.6
0.5°	418.4	418.8	419.1	418.6	418.5	418.5	418.8	418.6	418.5	418.7	419.1
1°	418.2	418.4	419.2	418.8	418.6	418.5	418.5	418.6	418.2	418.4	419.0
1.5°	418.2	418.8	419.0	418.9	418.4	418.4	418.7	418.5	418.2	418.6	418.6
2°	418.0	418.3	418.9	418.8	418.4	418.8	418.4	418.5	418.2	417.9	418.5
2.5°	417.8	418.3	419.0	418.4	418.6	418.4	418.6	418.4	417.7	418.1	418.6
3°	418.0	418.0	418.7	418.7	418.3	418.3	418.3	418.4	417.7	418.0	418.1
3.5°	417.5	417.9	418.8	418.3	417.9	418.2	418.2	418.2	417.5	417.5	417.8
4°	417.4	417.7	418.5	418.3	418.2	418.2	418.0	418.1	417.5	417.3	417.6
4.5°	416.8	417.6	417.9	418.0	418.1	417.8	417.8	417.4	417.0	417.0	416.9
5°	416.6	417.0	417.9	417.8	417.4	417.8	417.4	417.4	416.5	416.6	416.7
5.5°	416.2	417.0	417.8	417.1	417.4	417.2	417.4	416.9	416.4	416.0	416.6
6°	416.0	416.2	417.2	417.0	417.0	416.8	416.7	416.7	415.6	416.0	415.9
6.5°	415.6	416.1	416.8	416.6	416.5	416.7	416.7	416.4	415.5	415.6	415.4
7°	415.2	415.5	416.5	416.5	416.7	416.4	416.1	415.9	415.2	414.9	414.9
7.5°	414.4	415.4	416.2	416.1	416.0	415.9	415.9	415.2	414.6	414.1	414.3
8°	414.0	414.8	415.5	415.7	415.3	415.6	415.0	414.8	413.9	413.9	413.6
8.5°	413.5	413.8	415.2	414.9	414.9	414.8	414.7	414.3	413.6	413.2	413.4
9°	413.0	413.5	414.5	414.6	414.7	414.3	414.0	414.0	412.8	412.6	412.4
9.5°	412.4	413.1	414.0	413.7	414.0	414.0	413.6	413.0	412.5	412.2	411.9
10°	411.8	412.4	413.2	413.5	413.5	413.3	412.9	412.6	411.5	411.4	411.1
10.5°	410.8	411.4	412.8	412.9	412.8	412.8	412.5	411.8	410.9	410.6	410.3
11°	409.9	410.8	412.0	412.2	412.2	412.1	411.6	411.2	410.0	409.7	409.3
11.5°	409.2	410.0	411.2	411.3	411.4	411.3	410.8	410.3	409.4	409.0	408.9
12°	408.7	409.2	410.6	410.6	411.2	410.6	410.0	409.5	408.3	408.1	407.7
12.5°	407.9	408.7	409.4	409.9	410.0	409.9	409.3	408.7	407.7	407.4	406.9
13°	406.8	407.5	408.8	408.9	409.1	409.0	408.3	407.8	407.0	406.4	405.8
13.5°	406.0	406.6	408.1	408.2	408.5	408.3	407.7	407.2	405.8	405.5	405.1
14°	405.0	405.8	407.0	407.4	407.9	407.3	406.7	406.4	404.9	404.6	403.7
14.5°	404.1	405.0	405.8	406.4	406.6	406.4	405.7	405.0	403.8	403.3	402.9
15°	403.1	403.8	405.3	405.4	405.8	405.3	404.5	404.1	403.1	402.3	402.0
15.5°	402.0	403.0	404.0	404.8	404.7	404.5	403.9	403.1	402.0	401.7	401.0
16°	401.1	401.6	403.1	403.5	403.7	403.6	402.9	402.3	400.9	400.4	399.4
16.5°	399.8	400.9	402.1	402.3	403.1	402.6	401.9	401.1	399.7	399.0	398.4
17°	398.5	399.4	401.1	401.6	402.0	401.5	400.6	400.2	398.5	397.9	397.3
17.5°	397.4	398.6	399.6	400.4	400.3	400.1	399.4	398.6	397.5	397.1	396.2
18°	396.2	397.1	398.7	399.1	399.4	399.1	398.2	397.3	396.5	395.6	395.0
18.5°	394.8	395.9	397.3	398.1	398.4	398.1	397.2	396.3	394.9	394.3	393.6
19°	393.6	394.8	396.0	396.7	396.9	396.9	395.8	395.3	393.6	393.2	392.3
19.5°	392.4	393.6	394.8	395.5	395.8	395.6	394.9	393.7	392.7	391.6	391.1
20°	391.0	392.0	393.8	394.2	394.7	394.3	393.1	392.7	390.8	390.4	389.6
20.5°	389.5	390.6	392.3	393.1	393.0	392.8	392.4	391.3	389.7	389.0	388.2
21°	388.2	389.3	390.8	391.6	392.0	391.8	390.7	389.6	388.4	387.7	386.8
21.5°	386.7	387.9	389.3	390.1	390.7	390.2	389.2	388.3	386.9	386.3	385.3
22°	385.4	386.4	387.9	388.8	388.9	388.7	387.8	387.0	385.2	384.7	383.7

TEST NUMBER: P855594
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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°	383.7	385.1	386.3	387.1	387.7	387.4	386.5	385.3	384.2	383.2	382.3
23°	382.3	383.4	385.0	385.8	386.5	385.9	384.8	384.2	382.7	381.6	380.7
23.5°	380.7	382.1	383.3	384.1	384.6	384.3	383.7	382.6	380.8	380.1	379.0
24°	379.2	380.2	381.9	382.9	383.1	382.7	381.9	380.8	379.2	378.5	377.4
24.5°	377.3	378.8	380.3	381.0	381.7	381.1	380.1	378.9	377.6	376.5	376.0
25°	375.8	377.3	378.1	379.5	379.8	379.6	378.5	377.6	376.1	375.4	374.1
25.5°	374.2	375.4	376.9	377.8	378.1	378.0	377.0	375.8	374.6	373.7	372.5
26°	372.3	373.8	375.4	376.0	376.8	376.0	375.5	374.4	372.8	371.8	370.8
26.5°	370.7	372.1	373.6	374.2	374.8	374.6	373.6	372.6	371.1	369.7	369.0
27°	369.0	370.2	371.5	372.7	373.1	373.0	371.7	370.8	368.9	368.2	367.0
27.5°	367.1	368.5	370.1	370.6	371.4	371.0	370.1	368.9	367.6	366.3	365.6
28°	365.1	366.6	368.0	369.1	369.7	369.2	368.2	367.0	365.6	364.7	363.2
28.5°	363.6	364.7	366.3	367.1	367.8	367.6	366.4	365.1	364.0	362.5	361.7
29°	361.5	363.0	364.4	365.2	365.9	365.4	364.7	363.4	361.7	360.8	359.6
29.5°	359.5	361.0	362.6	363.3	364.1	363.5	362.4	361.5	360.2	358.8	357.9
30°	357.5	359.0	360.5	361.1	362.0	361.6	360.8	359.4	357.9	356.8	355.6
30.5°	355.7	356.9	358.5	359.4	360.0	359.8	358.9	357.4	356.1	354.7	353.9
31°	353.3	355.1	356.3	357.2	358.4	357.7	356.6	355.5	353.8	352.8	351.5
31.5°	351.4	352.9	354.3	355.2	356.1	355.7	354.6	353.4	351.9	350.9	349.6
32°	349.5	350.9	352.4	353.1	353.8	353.4	352.6	351.2	350.0	348.8	347.3
32.5°	347.3	348.8	350.2	350.9	352.0	351.6	350.4	349.3	347.8	346.6	345.6
33°	345.2	346.8	348.1	349.0	350.0	349.4	348.6	347.2	345.6	344.5	343.1
33.5°	342.9	344.5	345.9	346.7	347.7	347.4	346.3	344.9	343.6	342.1	341.0
34°	340.6	342.0	343.5	344.5	345.6	345.0	343.8	342.5	341.2	339.7	338.7
34.5°	338.3	340.1	341.4	342.3	343.2	342.7	341.6	340.5	338.9	337.9	336.7
35°	336.4	337.7	339.3	339.8	340.8	340.5	339.6	338.2	336.8	335.7	334.3
35.5°	333.9	335.8	336.7	337.8	338.9	338.4	337.2	336.0	334.5	333.3	332.1
36°	331.7	333.1	334.5	335.5	336.4	335.9	335.1	333.6	332.1	330.8	329.7
36.5°	329.3	330.9	332.1	332.9	334.0	333.8	332.6	331.2	329.9	328.7	327.4
37°	326.8	328.3	329.6	330.4	331.8	331.2	330.3	328.9	327.6	326.3	324.9
37.5°	324.1	326.1	327.5	328.3	329.5	328.9	327.8	326.6	325.0	323.7	322.7
38°	322.1	323.4	324.8	325.8	326.6	326.4	325.5	324.0	322.6	321.5	320.1
38.5°	319.6	321.3	322.3	323.1	324.4	323.9	322.9	321.5	320.3	318.8	317.7
39°	317.0	318.8	320.0	320.9	321.9	321.7	320.5	319.0	317.7	316.6	315.4
39.5°	314.6	316.0	317.5	318.2	319.4	319.1	318.1	316.7	315.3	313.9	312.9
40°	311.9	313.5	314.7	315.5	316.9	316.4	315.3	314.1	312.8	311.5	310.1
40.5°	309.3	311.0	312.2	312.9	314.3	314.0	312.7	311.4	310.0	309.0	307.8
41°	306.7	308.3	309.6	310.5	311.5	311.4	310.1	309.0	307.5	306.3	305.1
41.5°	304.2	305.5	306.9	307.7	309.1	308.5	307.7	306.2	305.1	303.6	302.7
42°	301.3	303.0	304.1	304.9	306.5	306.0	305.0	303.5	302.4	301.2	300.1
42.5°	298.7	300.4	301.5	302.3	303.6	303.3	302.4	301.0	299.6	298.6	297.3
43°	296.1	297.6	298.6	299.6	301.0	300.5	299.6	298.2	297.1	295.8	294.5
43.5°	293.3	294.9	296.1	296.7	298.3	297.8	296.9	295.6	294.4	293.0	292.0
44°	290.5	292.1	293.1	294.0	295.3	295.0	294.1	292.7	291.3	290.5	289.2
44.5°	287.8	289.0	290.4	291.1	292.5	292.3	291.3	290.1	288.8	287.7	286.5

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	284.8	286.5	287.4	288.3	289.9	289.4	288.6	287.1	286.0	284.7	283.6
45.5°	282.2	283.6	284.6	285.4	286.9	286.4	285.8	284.3	283.2	281.9	281.0
46°	279.3	280.7	281.8	282.6	284.1	283.6	282.9	281.5	280.2	279.2	278.2
46.5°	276.3	277.8	278.9	279.6	281.0	281.0	279.9	278.6	277.5	276.3	275.3
47°	273.4	274.8	275.9	276.4	278.3	277.7	276.9	275.7	274.5	273.5	272.4
47.5°	270.5	271.8	273.1	273.7	275.2	274.9	274.1	272.7	271.6	270.6	269.6
48°	267.5	268.9	269.9	270.7	272.3	271.8	271.5	269.8	268.8	267.6	266.5
48.5°	264.6	266.0	266.8	267.6	269.2	269.0	268.1	267.0	265.7	264.6	263.9
49°	261.7	263.0	264.1	264.5	266.2	265.7	265.2	263.9	262.8	261.7	260.8
49.5°	258.5	259.8	261.0	261.5	263.1	262.9	262.1	260.8	259.8	258.6	257.7
50°	255.4	256.8	257.7	258.3	260.2	259.8	259.1	257.7	256.8	255.7	254.7
50.5°	252.4	253.6	254.7	255.1	256.8	256.6	256.0	254.6	253.7	252.8	251.9
51°	249.2	250.5	251.5	252.1	253.7	253.4	253.0	251.6	250.7	249.7	248.6
51.5°	246.1	247.3	248.2	248.8	250.7	250.4	249.6	248.5	247.5	246.6	245.8
52°	243.2	244.3	245.2	245.7	247.6	247.2	246.8	245.6	244.6	243.7	242.7
52.5°	240.0	241.1	242.1	242.6	244.2	244.1	243.4	242.3	241.4	240.3	239.4
53°	236.6	237.7	238.7	239.1	241.0	240.9	240.3	238.9	238.2	237.3	236.4
53.5°	233.5	234.7	235.5	235.9	237.7	237.5	237.1	236.0	235.0	234.2	233.3
54°	230.3	231.4	232.1	232.5	234.6	234.2	233.9	232.6	231.9	231.1	230.1
54.5°	227.0	228.2	228.7	229.4	231.2	231.1	230.6	229.6	228.5	227.8	227.0
55°	223.8	224.8	225.7	226.1	227.8	227.8	227.4	226.3	225.5	224.7	223.9
55.5°	220.6	221.6	222.5	222.8	224.6	224.4	224.1	223.1	222.3	221.6	220.6
56°	217.3	218.3	218.9	219.3	221.2	221.1	220.9	219.7	219.1	218.0	217.4
56.5°	213.9	214.9	215.7	216.0	217.9	217.8	217.5	216.5	215.6	214.9	214.1
57°	210.7	211.6	212.2	212.7	214.6	214.4	214.3	213.2	212.7	211.6	211.0
57.5°	207.4	208.2	208.8	209.1	211.0	210.9	210.7	209.7	209.3	208.4	207.7
58°	204.1	204.8	205.5	205.8	207.7	207.7	207.4	206.6	205.9	205.2	204.5
58.5°	200.6	201.4	202.1	202.3	204.3	204.2	204.2	203.3	202.6	201.9	201.2
59°	197.4	198.2	198.7	199.1	200.9	201.1	200.6	199.9	199.3	198.6	198.0
59.5°	194.0	194.9	195.4	195.5	197.5	197.5	197.2	196.5	196.0	195.2	194.6
60°	190.7	191.2	191.8	192.1	194.1	194.0	194.0	193.0	192.5	192.0	191.4
60.5°	187.3	188.0	188.4	188.6	190.6	190.6	190.5	189.7	189.4	188.7	188.2
61°	183.9	184.6	184.8	185.2	187.1	187.4	187.1	186.5	186.0	185.5	184.9
61.5°	180.5	181.1	181.6	181.5	183.6	183.6	183.6	183.0	182.5	182.0	181.5
62°	177.2	177.7	178.1	178.4	180.2	180.4	180.3	179.6	179.3	178.8	178.3
62.5°	173.7	174.3	174.7	174.9	176.7	177.0	176.9	176.3	176.0	175.5	175.0
63°	170.5	170.9	171.1	171.4	173.2	173.5	173.4	172.8	172.6	172.1	171.6
63.5°	167.2	167.5	167.7	167.9	169.9	170.0	170.1	169.5	169.3	168.7	168.4
64°	163.6	164.1	164.2	164.4	166.5	166.7	166.7	166.3	165.9	165.5	165.1
64.5°	160.3	160.7	160.9	161.0	162.8	163.1	163.2	162.7	162.5	162.1	161.7
65°	157.0	157.3	157.4	157.6	159.5	159.9	160.0	159.5	159.3	159.0	158.5
65.5°	153.6	154.0	154.0	154.2	156.1	156.5	156.7	156.1	156.1	155.6	155.2
66°	150.3	150.6	150.6	150.7	152.7	152.9	153.1	152.8	152.7	152.3	151.9
66.5°	147.1	147.2	147.3	147.3	149.4	149.6	149.8	149.4	149.4	149.0	148.7
67°	143.6	143.9	143.8	143.9	145.9	146.3	146.6	146.0	146.2	145.7	145.4

TEST NUMBER: P855594
 CATALOG NUMBER: HLS9129FS1EWH-3000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	140.4	140.5	140.6	140.7	142.5	143.0	143.1	142.9	142.9	142.5	142.3
68°	137.3	137.3	137.3	137.3	139.2	139.6	140.0	139.6	139.7	139.3	139.1
68.5°	134.0	133.9	133.9	133.9	135.9	136.3	136.6	136.4	136.4	136.1	135.9
69°	130.7	130.8	130.6	130.7	132.6	133.0	133.4	133.2	133.0	132.9	132.6
69.5°	127.5	127.4	127.4	127.4	129.3	129.8	130.0	129.9	130.0	129.8	129.6
70°	124.3	124.1	124.1	124.1	125.9	126.4	126.9	126.6	126.7	126.6	126.3
70.5°	121.1	121.1	120.9	120.8	122.6	123.3	123.6	123.6	123.6	123.5	123.2
71°	118.1	117.9	117.6	117.6	119.6	120.1	120.4	120.5	120.5	120.4	120.2
71.5°	115.0	114.7	114.4	114.5	116.3	116.9	117.3	117.2	117.4	117.2	117.0
72°	111.9	111.5	111.4	111.4	113.2	113.8	114.2	114.2	114.3	114.3	114.0
72.5°	108.8	108.6	108.2	108.1	110.1	110.7	111.1	111.2	111.2	111.2	111.0
73°	105.7	105.4	105.1	105.1	106.9	107.4	108.0	107.9	108.1	108.1	108.0
73.5°	102.8	102.4	102.1	102.1	103.9	104.4	104.9	105.0	105.2	105.2	104.9
74°	99.9	99.4	99.2	99.1	100.8	101.5	101.9	102.1	102.3	102.3	102.1
74.5°	96.9	96.4	96.1	96.0	97.8	98.4	99.1	99.2	99.4	99.4	99.3
75°	94.1	93.5	93.2	93.1	94.9	95.4	96.0	96.1	96.4	96.5	96.2
75.5°	91.3	90.7	90.3	90.2	92.0	92.6	93.1	93.4	93.5	93.6	93.5
76°	88.4	87.8	87.4	87.2	89.0	89.7	90.3	90.5	90.7	90.9	90.7
76.5°	85.5	85.0	84.5	84.5	86.3	86.9	87.4	87.6	87.9	88.0	87.8
77°	82.8	82.2	81.8	81.7	83.6	84.2	84.7	84.9	85.3	85.4	85.2
77.5°	80.3	79.5	79.1	78.8	80.8	81.5	82.0	82.2	82.6	82.7	82.6
78°	77.6	76.8	76.3	76.3	78.0	78.7	79.2	79.4	79.9	80.0	79.9
78.5°	74.9	74.2	73.6	73.5	75.3	75.9	76.5	76.7	77.2	77.4	77.3
79°	72.3	71.6	71.1	70.9	72.6	73.2	73.9	74.3	74.6	74.8	74.7
79.5°	69.8	68.9	68.4	68.2	69.9	70.5	71.3	71.6	72.1	72.3	72.1
80°	67.3	66.5	65.9	65.7	67.3	67.9	68.6	69.0	69.4	69.6	69.6
80.5°	65.0	64.1	63.5	63.4	64.8	65.5	66.1	66.6	67.0	67.2	67.1
81°	62.5	61.7	61.0	60.8	62.4	63.0	63.7	64.1	64.5	64.8	64.7
81.5°	60.1	59.1	58.6	58.3	59.9	60.5	61.2	61.7	62.2	62.4	62.3
82°	57.8	56.9	56.2	56.0	57.5	58.1	58.8	59.3	59.7	59.9	59.8
82.5°	55.6	54.6	54.0	53.7	55.1	55.7	56.5	57.0	57.4	57.6	57.6
83°	53.3	52.4	51.6	51.4	52.8	53.4	54.1	54.7	55.1	55.4	55.3
83.5°	51.1	50.1	49.5	49.1	50.6	51.1	51.9	52.6	53.0	53.2	53.2
84°	49.0	48.0	47.4	47.0	48.4	48.9	49.7	50.3	50.7	50.9	50.9
84.5°	46.9	46.0	45.3	45.0	46.2	46.9	47.5	48.1	48.6	48.8	48.8
85°	44.9	43.9	43.2	42.9	44.1	44.7	45.4	46.0	46.5	46.7	46.7
85.5°	42.9	41.8	41.1	40.8	41.9	42.6	43.4	43.9	44.5	44.6	44.7
86°	40.8	39.9	39.2	38.9	40.0	40.5	41.2	41.9	42.3	42.7	42.7
86.5°	38.9	38.0	37.3	36.9	38.0	38.6	39.3	39.9	40.4	40.6	40.6
87°	37.1	36.2	35.4	35.2	36.2	36.6	37.4	38.0	38.5	38.7	38.8
87.5°	35.6	34.5	33.7	33.5	34.3	34.8	35.5	36.2	36.6	36.9	36.9
88°	33.8	32.7	32.0	31.7	32.5	33.1	33.7	34.4	34.8	35.0	35.2
88.5°	32.0	31.1	30.3	30.0	30.7	31.2	31.8	32.5	33.1	33.3	33.4
89°	30.3	29.4	28.7	28.3	29.0	29.4	30.1	30.8	31.2	31.5	31.6
89.5°	28.5	27.7	27.1	26.7	27.4	27.8	28.5	29.1	29.5	29.8	29.9

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



TEST NUMBER: P855594
CATALOG NUMBER: HLS9129FS1EWH-3000K

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: P855594
 CATALOG NUMBER: HLS9129FS1EWH-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	418.6	418.6	418.6	418.6	418.6	418.6
0.5°	418.8	418.4	418.3	418.6	418.6	418.4
1°	418.3	418.0	418.3	418.3	418.5	418.2
1.5°	418.4	417.6	418.0	418.3	418.2	418.2
2°	418.3	417.9	417.9	418.0	418.0	418.0
2.5°	418.0	417.5	417.5	418.1	418.1	417.8
3°	417.5	417.0	417.5	417.6	417.9	418.0
3.5°	417.7	416.8	417.0	417.6	417.5	417.5
4°	417.1	416.5	416.6	417.0	417.4	417.4
4.5°	416.5	415.9	416.4	416.7	417.0	416.8
5°	416.3	415.9	415.7	416.4	416.4	416.6
5.5°	415.7	415.3	415.4	415.7	416.3	416.2
6°	415.5	414.6	415.1	415.4	416.0	416.0
6.5°	414.8	414.0	414.4	415.0	415.1	415.6
7°	414.3	414.0	414.0	414.5	414.7	415.2
7.5°	413.7	413.1	413.6	413.8	414.2	414.4
8°	413.4	412.3	412.7	413.2	413.7	414.0
8.5°	412.3	412.0	412.0	412.6	412.8	413.5
9°	411.9	411.2	411.4	411.7	412.7	413.0
9.5°	411.2	410.3	410.9	411.4	411.7	412.4
10°	410.7	409.9	409.8	410.7	411.2	411.8
10.5°	409.4	408.7	409.0	409.5	410.3	410.8
11°	408.8	408.1	408.4	408.8	409.6	409.9
11.5°	408.1	407.1	407.3	408.2	408.6	409.2
12°	406.9	406.6	406.4	407.2	407.8	408.7
12.5°	406.2	405.2	405.8	406.2	406.9	407.9
13°	405.4	404.4	404.7	405.5	406.0	406.8
13.5°	404.2	403.4	403.5	404.4	405.1	406.0
14°	403.0	402.5	402.9	403.2	404.2	405.0
14.5°	402.3	401.3	401.6	402.6	403.1	404.1
15°	401.4	400.5	400.3	401.2	402.0	403.1
15.5°	399.8	399.0	399.4	399.8	400.8	402.0
16°	398.9	398.0	398.3	399.0	399.9	401.1
16.5°	397.7	397.0	397.0	397.9	398.8	399.8
17°	396.5	395.7	396.0	396.4	397.8	398.5
17.5°	395.4	394.1	394.4	395.4	396.2	397.4
18°	394.1	393.3	393.3	394.0	395.0	396.2
18.5°	392.9	391.9	392.2	392.5	393.8	394.8
19°	391.1	390.6	390.9	391.5	392.4	393.6
19.5°	390.2	389.2	389.4	390.2	391.4	392.4
20°	388.5	387.6	388.0	388.4	389.9	391.0
20.5°	387.6	386.1	386.6	387.1	388.2	389.5
21°	385.7	384.9	385.1	385.9	386.9	388.2
21.5°	384.4	383.4	383.6	384.2	385.4	386.7
22°	382.9	382.0	382.2	382.7	383.7	385.4

TEST NUMBER: P855594
 CATALOG NUMBER: HLS9129FS1EWH-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	381.4	380.2	380.6	381.1	382.4	383.7
23°	379.6	378.7	378.9	379.6	380.9	382.3
23.5°	378.2	376.9	377.3	377.7	379.2	380.7
24°	376.7	375.4	375.6	376.6	377.7	379.2
24.5°	375.0	373.8	374.0	374.6	375.9	377.3
25°	373.2	372.1	372.3	372.9	374.2	375.8
25.5°	371.6	370.2	370.6	371.3	372.3	374.2
26°	369.6	368.9	368.6	369.6	370.9	372.3
26.5°	368.0	366.6	367.1	367.7	369.1	370.7
27°	366.1	364.9	365.3	365.9	367.0	369.0
27.5°	364.4	363.1	363.4	364.1	365.3	367.1
28°	362.2	361.3	361.5	361.9	363.6	365.1
28.5°	360.6	359.2	359.8	360.1	361.4	363.6
29°	358.8	357.5	357.6	358.4	359.6	361.5
29.5°	356.7	355.3	355.7	356.3	357.8	359.5
30°	354.7	353.3	353.7	354.1	355.8	357.5
30.5°	352.6	351.2	351.6	352.3	353.4	355.7
31°	350.7	349.5	349.7	350.0	351.9	353.3
31.5°	348.7	347.3	347.6	348.2	349.4	351.4
32°	346.7	345.3	345.5	345.9	347.4	349.5
32.5°	344.5	343.0	343.2	344.0	345.2	347.3
33°	342.4	340.9	341.1	341.6	343.2	345.2
33.5°	339.9	338.5	339.0	339.6	340.9	342.9
34°	337.9	336.6	336.8	337.3	338.7	340.6
34.5°	335.9	334.1	334.5	335.0	336.7	338.3
35°	333.3	331.9	332.1	332.8	334.2	336.4
35.5°	331.2	329.6	329.8	330.3	331.7	333.9
36°	328.9	327.3	327.6	328.1	329.7	331.7
36.5°	326.6	324.7	325.0	325.8	327.3	329.3
37°	323.9	322.8	322.7	323.3	324.8	326.8
37.5°	321.7	320.3	320.5	321.1	322.4	324.1
38°	319.4	317.7	318.0	318.5	319.8	322.1
38.5°	316.9	315.2	315.3	316.1	317.5	319.6
39°	314.4	312.9	313.1	313.6	315.0	317.0
39.5°	312.0	310.1	310.6	311.0	312.5	314.6
40°	309.4	307.9	307.9	308.7	309.9	311.9
40.5°	306.9	305.1	305.4	305.7	307.4	309.3
41°	304.3	302.6	302.7	303.4	304.8	306.7
41.5°	301.8	300.0	300.3	300.8	302.1	304.2
42°	299.1	297.6	297.6	298.2	299.4	301.3
42.5°	296.4	294.5	295.1	295.3	296.9	298.7
43°	293.9	292.1	292.1	292.9	294.2	296.1
43.5°	291.2	289.2	289.5	289.8	291.5	293.3
44°	288.3	286.7	286.8	287.1	288.7	290.5
44.5°	285.5	283.9	284.1	284.5	285.9	287.8

TEST NUMBER: P855594
 CATALOG NUMBER: HLS9129FS1EWH-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	282.8	281.1	281.1	281.8	283.2	284.8
45.5°	280.2	278.2	278.6	279.0	280.5	282.2
46°	277.3	275.5	275.6	275.9	277.5	279.3
46.5°	274.6	272.7	272.8	273.3	274.5	276.3
47°	271.6	270.0	270.1	270.4	271.9	273.4
47.5°	268.6	266.7	267.0	267.4	268.6	270.5
48°	265.9	264.1	264.0	264.5	265.8	267.5
48.5°	263.1	261.2	261.3	261.7	263.0	264.6
49°	260.0	258.1	258.3	258.6	260.0	261.7
49.5°	257.0	255.2	255.2	255.7	256.9	258.5
50°	254.1	252.2	252.4	252.6	254.2	255.4
50.5°	251.1	249.0	249.1	249.6	250.8	252.4
51°	248.1	246.3	246.2	246.8	247.7	249.2
51.5°	245.2	243.2	243.2	243.6	244.8	246.1
52°	242.1	240.0	240.2	240.6	241.9	243.2
52.5°	238.8	236.9	236.8	237.4	238.6	240.0
53°	235.9	233.9	234.0	234.3	235.4	236.6
53.5°	232.9	230.7	230.7	231.1	232.3	233.5
54°	229.6	227.7	227.7	228.0	229.1	230.3
54.5°	226.5	224.5	224.4	224.9	225.9	227.0
55°	223.4	221.3	221.3	221.8	222.9	223.8
55.5°	220.2	218.1	218.1	218.4	219.4	220.6
56°	217.0	215.1	215.0	215.4	216.2	217.3
56.5°	213.9	211.9	211.6	211.9	213.2	213.9
57°	210.5	208.5	208.4	208.7	209.7	210.7
57.5°	207.3	205.4	205.3	205.6	206.4	207.4
58°	204.2	202.2	202.0	202.3	203.3	204.1
58.5°	200.9	198.8	198.7	199.1	199.8	200.6
59°	197.6	195.7	195.6	195.8	196.6	197.4
59.5°	194.5	192.3	192.1	192.3	193.5	194.0
60°	191.1	189.2	188.9	189.2	189.9	190.7
60.5°	188.0	185.9	185.8	185.8	186.6	187.3
61°	184.6	182.5	182.4	182.6	183.3	183.9
61.5°	181.3	179.2	179.0	179.2	180.0	180.5
62°	178.0	176.1	175.9	176.1	176.7	177.2
62.5°	174.8	172.7	172.4	172.6	173.3	173.7
63°	171.4	169.5	169.2	169.5	170.0	170.5
63.5°	168.2	166.2	165.9	166.1	166.6	167.2
64°	164.8	162.8	162.7	162.7	163.3	163.6
64.5°	161.6	159.6	159.4	159.5	160.0	160.3
65°	158.2	156.4	156.1	156.3	156.7	157.0
65.5°	155.1	153.0	152.8	152.8	153.4	153.6
66°	151.9	149.9	149.6	149.6	150.2	150.3
66.5°	148.6	146.5	146.3	146.4	146.8	147.1
67°	145.3	143.5	143.2	143.1	143.5	143.6

TEST NUMBER: P855594
 CATALOG NUMBER: HLS9129FS1EWH-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	142.1	140.2	139.9	139.9	140.3	140.4
68°	138.9	137.1	136.6	136.8	137.1	137.3
68.5°	135.7	133.8	133.5	133.6	133.8	134.0
69°	132.6	130.7	130.4	130.5	130.8	130.7
69.5°	129.5	127.6	127.1	127.1	127.5	127.5
70°	126.2	124.4	124.2	124.1	124.3	124.3
70.5°	123.1	121.3	121.0	121.0	121.2	121.1
71°	120.1	118.3	118.0	118.1	118.3	118.1
71.5°	117.0	115.2	114.9	114.9	115.1	115.0
72°	114.0	112.3	112.0	111.8	112.0	111.9
72.5°	111.0	109.3	108.8	108.9	109.0	108.8
73°	107.9	106.2	105.9	105.9	106.0	105.7
73.5°	105.0	103.3	103.0	103.0	103.1	102.8
74°	102.1	100.5	100.2	100.2	100.2	99.9
74.5°	99.2	97.5	97.2	97.2	97.2	96.9
75°	96.4	94.7	94.4	94.4	94.4	94.1
75.5°	93.6	91.9	91.6	91.6	91.6	91.3
76°	90.8	89.2	88.8	88.8	88.7	88.4
76.5°	87.9	86.4	86.1	86.0	86.0	85.5
77°	85.3	83.7	83.5	83.4	83.3	82.8
77.5°	82.7	81.1	80.9	80.8	80.7	80.3
78°	80.0	78.4	78.2	78.1	78.0	77.6
78.5°	77.4	75.9	75.6	75.5	75.5	74.9
79°	74.8	73.4	73.1	73.0	72.9	72.3
79.5°	72.3	70.8	70.5	70.4	70.3	69.8
80°	69.7	68.3	68.1	68.0	67.9	67.3
80.5°	67.2	65.9	65.7	65.7	65.5	65.0
81°	64.9	63.6	63.4	63.3	63.2	62.5
81.5°	62.5	61.1	60.9	60.8	60.7	60.1
82°	60.0	58.8	58.7	58.6	58.5	57.8
82.5°	57.7	56.6	56.5	56.4	56.2	55.6
83°	55.6	54.4	54.3	54.2	54.0	53.3
83.5°	53.3	52.2	52.2	52.1	51.9	51.1
84°	51.1	50.0	50.0	49.9	49.7	49.0
84.5°	49.0	48.0	48.0	47.9	47.7	46.9
85°	47.0	45.9	45.9	45.8	45.6	44.9
85.5°	44.9	44.0	44.0	43.9	43.6	42.9
86°	43.0	41.9	42.0	41.9	41.6	40.8
86.5°	40.9	40.0	40.1	40.0	39.7	38.9
87°	39.0	38.2	38.2	38.2	37.9	37.1
87.5°	37.2	36.5	36.5	36.4	36.1	35.6
88°	35.4	34.8	34.9	34.8	34.5	33.8
88.5°	33.7	33.2	33.2	33.1	32.7	32.0
89°	31.9	31.5	31.5	31.4	31.1	30.3
89.5°	30.2	29.8	29.9	29.8	29.4	28.5

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



TEST NUMBER: P855594
CATALOG NUMBER: HLS9129FS1EWH-3000K

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

(END OF REPORT)