

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: P855598

Luminaire Tested: **HLSMS9129FS1EWH-2700K**

Issue Date: 7/16/2024

Tested By:

Approved By:



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**Test Information**

Test Method: LM-79-08  
 Report Number: P855598  
 Test Lab:  
 Issue Date: 7/16/2024  
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
 Product Line: HALO  
 Catalog Number: HLSMS9129FS1EWH-2700K  
 Description: 9IN 1200LM, 90CRI, DIMMING TO 10%, DAMP LOCATION, WITH MOTION SENSOR  
 Light Source: SELECTABLE CCT 90CRI / 2700K CCT  
 Ballast/Driver: -

**Summary**

Lumens per Lamp: 1294.2 (1 lamp)  
 Luminaire Lumens: 1255.0 lumens  
 Efficiency: 97.0%  
 Efficacy: 78.0 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

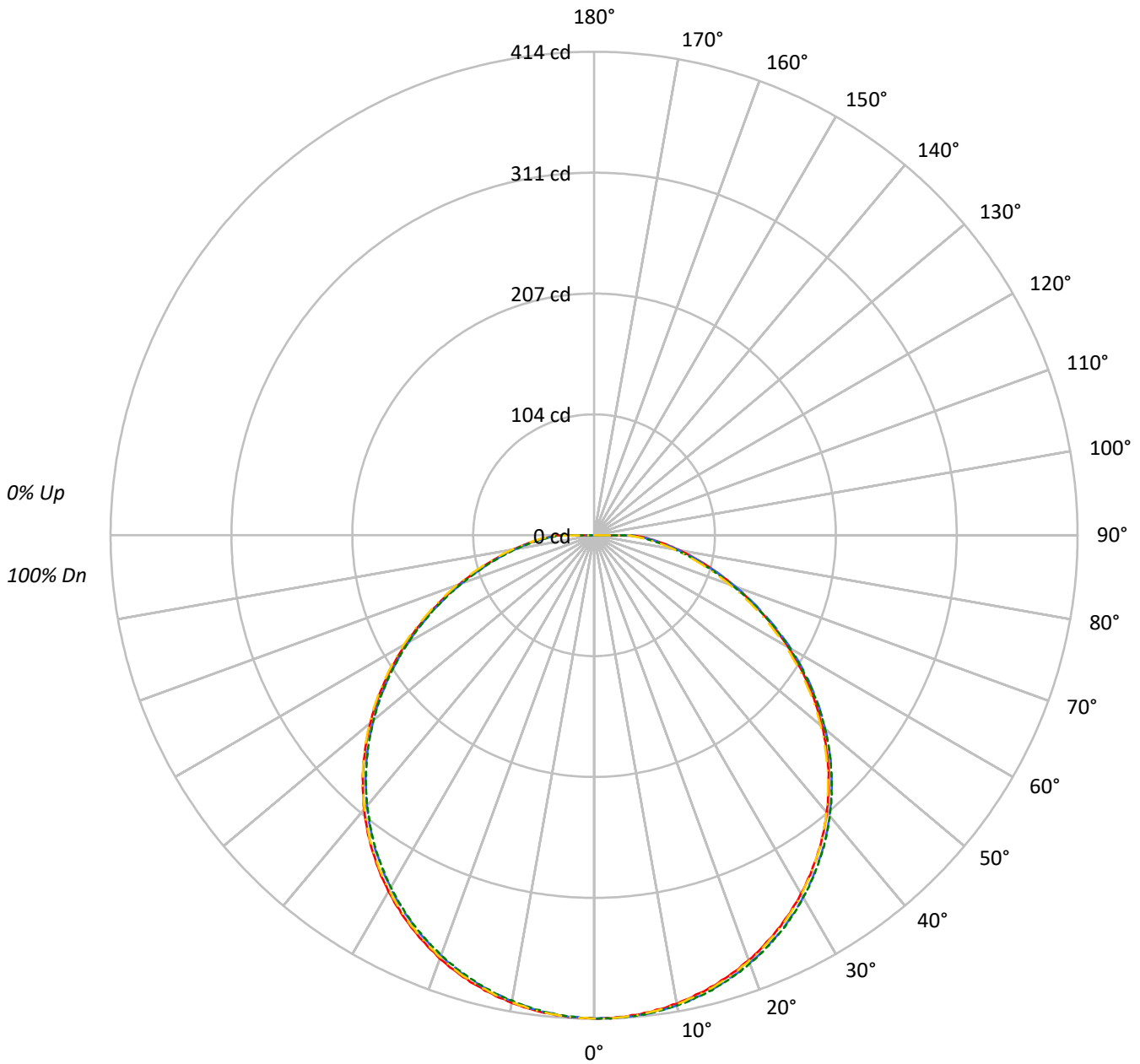
Input Watts (W): 16.1  
 Input Voltage (V): NR  
 Input Current (Ain): NR  
 Voltage Rise (V): NR  
 Power Factor: NR  
 Total Harmonic Distortion (THDi): NR  
 Frequency (hertz): 60  
 Stabilization Time: NR  
 Operation Time: NR  
 Ambient Temperature (°C): NR  
 Test Distance: 25 FT



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	0
RCR																		
0	115	115	115	115	113	113	113	113	108	108	108	103	103	103	99	99	99	97
1	104	99	95	90	102	97	93	89	93	89	86	89	86	83	85	83	81	79
2	94	86	79	73	92	84	78	72	81	75	70	77	73	69	74	71	67	65
3	86	75	67	60	83	74	66	60	71	64	59	68	62	58	65	61	57	54
4	79	66	58	51	76	65	57	50	63	55	50	60	54	49	58	53	48	46
5	72	59	50	44	70	58	50	43	56	49	43	54	48	42	52	47	42	40
6	67	53	44	38	65	52	44	38	51	43	37	49	42	37	47	41	37	35
7	62	48	40	33	60	48	39	33	46	39	33	45	38	33	43	37	33	31
8	57	44	36	30	56	43	35	30	42	35	30	41	34	29	40	34	29	27
9	54	40	32	27	52	40	32	27	39	32	27	38	31	26	37	31	26	24
10	50	37	29	24	49	37	29	24	36	29	24	35	28	24	34	28	24	22

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	10084	10084	10084	10084
5°	10086	10106	10072	10045
10°	10084	10119	10062	10007
15°	10064	10117	10034	9969
20°	10042	10112	10006	9923
25°	10006	10100	9963	9866
30°	9965	10077	9909	9793
35°	9919	10041	9836	9708
40°	9857	9987	9742	9612
45°	9779	9910	9624	9489
50°	9669	9787	9472	9347
55°	9532	9630	9298	9167
60°	9371	9424	9088	8952
65°	9201	9190	8873	8746
70°	9154	9019	8741	8598
75°	9404	9094	8915	8708
80°	10467	9906	9864	9499
85°	14676	13502	13698	12971

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	39.2	3.1	3.0
10°-20°	112.4	9.0	8.7
20°-30°	171.2	13.6	13.2
30°-40°	207.7	16.5	16.0
40°-50°	217.0	17.3	16.8
50°-60°	197.8	15.8	15.3
60°-70°	154.8	12.3	12.0
70°-80°	101.9	8.1	7.9
80°-90°	53.1	4.2	4.1
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°	322.8	25.7	24.9
0°-40°	530.5	42.3	41.0
0°-60°	945.2	75.3	73.0
0°-90°	1255.0	100.0	97.0
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°	1255.0	100.0	97.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	414	414	414	414	414	
5°	412	413	412	411	412	39
15°	399	401	398	395	399	113
25°	372	376	371	367	372	172
35°	334	338	331	326	334	209
45°	284	288	279	275	284	219
55°	224	227	219	216	224	200
65°	160	159	154	152	160	158
75°	100	97	95	92	100	106
85°	52	48	49	46	52	57
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°	413.9	413.9	413.9	413.9	413.9	413.9	413.9	413.9	413.9	413.9	413.9
0.5°	414.1	414.2	413.8	414.3	413.8	413.6	413.7	414.2	413.3	414.0	413.5
1°	413.6	414.3	413.5	414.1	413.9	414.1	414.1	413.9	413.7	414.0	413.5
1.5°	413.6	413.9	414.1	414.1	413.7	413.4	413.7	413.7	413.8	413.5	413.7
2°	414.0	413.8	413.9	414.4	414.0	413.9	413.7	414.2	413.2	413.6	412.7
2.5°	413.3	414.1	413.5	414.1	414.0	413.6	413.7	413.6	413.1	413.4	413.0
3°	413.0	413.8	413.8	413.8	413.3	413.4	413.5	413.2	413.2	413.1	412.9
3.5°	413.3	413.4	413.6	414.2	414.0	413.5	413.5	413.6	412.6	412.8	412.2
4°	413.0	413.4	413.1	414.1	413.2	413.3	412.9	413.1	412.3	412.6	411.8
4.5°	412.2	413.5	413.4	413.5	413.2	413.2	412.7	412.4	412.4	412.3	412.0
5°	412.4	412.6	413.1	413.2	413.2	413.2	412.8	412.5	411.8	411.7	410.9
5.5°	412.0	412.2	412.5	413.5	412.6	412.3	412.1	412.0	411.1	411.2	410.7
6°	411.3	412.2	412.7	412.9	412.6	412.5	412.0	411.5	411.2	411.0	410.5
6.5°	411.1	412.0	412.3	412.4	412.1	412.2	411.3	411.5	410.8	410.8	409.7
7°	410.9	411.2	411.4	412.4	411.9	411.4	411.0	410.7	410.1	409.8	409.0
7.5°	409.7	411.0	411.3	412.2	411.4	411.3	410.6	409.9	409.4	409.4	409.0
8°	409.7	410.6	411.1	411.1	410.8	410.8	410.0	410.1	409.1	409.1	408.0
8.5°	409.3	409.7	410.4	410.7	410.8	409.9	409.7	409.3	408.7	408.4	407.0
9°	408.4	409.0	409.6	410.6	409.8	410.1	408.7	408.4	407.8	407.1	406.7
9.5°	407.5	408.8	409.5	409.8	409.6	409.1	408.5	408.1	407.2	406.7	406.2
10°	407.6	408.3	408.7	409.2	409.0	408.8	407.9	407.5	406.7	406.4	404.9
10.5°	406.4	407.6	407.8	408.9	408.1	408.1	407.0	406.4	405.9	405.5	404.4
11°	405.6	406.5	407.5	408.1	407.9	407.2	406.5	406.0	404.6	404.3	403.7
11.5°	405.1	406.2	407.1	407.1	407.0	406.9	405.4	405.3	404.3	403.9	402.3
12°	404.3	405.4	405.8	406.7	406.5	405.9	404.9	404.3	403.7	402.9	401.7
12.5°	402.9	404.4	405.0	406.2	405.2	405.3	404.0	403.4	402.4	401.9	401.2
13°	402.5	403.5	404.7	405.1	404.9	404.5	403.1	402.9	401.5	400.9	399.7
13.5°	401.8	403.0	403.7	404.3	404.2	403.5	402.6	401.4	401.0	400.3	398.8
14°	400.7	401.8	402.5	403.7	402.8	403.0	401.0	400.7	399.4	399.2	398.2
14.5°	399.5	400.7	402.0	402.7	402.6	402.0	400.7	399.8	398.6	398.0	396.8
15°	399.0	400.2	401.1	401.7	401.1	401.1	399.6	398.8	397.8	396.9	395.6
15.5°	397.8	399.2	399.7	400.6	400.2	400.3	398.5	397.6	397.0	396.2	394.9
16°	396.4	397.7	399.0	399.9	399.5	398.8	397.5	397.0	395.2	394.8	393.5
16.5°	395.6	396.7	398.3	398.7	398.4	398.1	396.1	395.2	394.7	393.5	392.2
17°	394.5	396.2	396.7	397.6	397.5	397.2	395.4	394.4	393.4	392.4	391.3
17.5°	393.2	394.7	395.5	396.7	396.1	395.7	394.0	393.4	391.9	391.3	389.9
18°	392.3	393.3	394.8	395.6	395.0	395.0	393.0	392.2	390.8	389.9	388.1
18.5°	391.2	392.5	393.4	394.1	394.1	393.5	391.8	390.5	390.1	388.7	387.4
19°	389.5	391.0	392.2	393.0	392.5	392.4	390.3	389.9	388.2	387.6	386.0
19.5°	388.3	389.5	391.2	392.2	391.7	391.3	389.5	388.1	387.0	385.8	384.2
20°	387.3	388.7	389.9	390.8	390.0	389.8	387.8	386.8	385.9	384.3	383.1
20.5°	386.0	387.3	388.2	389.3	388.9	388.8	386.7	385.5	384.5	383.3	381.7
21°	384.4	385.5	387.2	388.1	387.9	387.3	385.2	384.3	382.4	381.7	379.8
21.5°	383.3	384.6	385.9	386.8	386.2	385.7	383.7	382.3	381.4	380.0	378.8
22°	381.8	383.2	384.2	385.0	385.1	384.9	382.4	381.3	380.1	378.8	377.3

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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°	380.1	381.5	382.9	384.1	383.2	383.0	380.8	380.0	378.2	377.3	375.3
23°	378.2	380.0	381.7	382.6	382.0	381.8	379.6	378.0	376.8	375.4	374.1
23.5°	377.2	378.9	379.9	380.7	380.8	380.1	377.7	376.5	375.4	374.2	372.6
24°	375.8	377.1	378.4	379.5	378.9	378.5	376.3	375.4	373.5	372.7	370.4
24.5°	373.9	375.4	377.2	378.3	377.7	377.3	375.0	373.3	372.0	370.6	369.0
25°	372.2	374.1	375.5	376.3	375.7	375.5	372.9	371.9	370.6	368.9	367.6
25.5°	371.0	372.7	373.7	374.7	374.4	374.0	371.6	370.4	368.6	367.7	365.4
26°	368.9	370.5	372.5	373.4	373.0	372.5	369.6	368.2	366.8	365.4	363.7
26.5°	367.1	369.1	370.7	371.6	370.9	370.2	368.1	366.6	365.4	363.6	362.2
27°	365.6	367.5	368.6	369.7	369.5	369.1	366.1	365.2	363.5	362.1	360.1
27.5°	364.0	365.4	367.1	368.4	367.3	367.2	364.6	362.7	361.2	360.4	358.0
28°	361.8	363.6	365.4	366.5	365.8	365.3	362.5	361.0	359.8	358.1	356.7
28.5°	360.0	362.2	363.5	364.1	364.1	363.7	360.6	359.4	358.0	356.4	354.5
29°	358.5	360.0	361.8	362.6	362.1	361.6	359.1	357.1	355.8	354.7	352.3
29.5°	356.5	358.0	360.0	361.0	360.2	359.9	356.9	355.3	353.8	352.4	350.5
30°	354.2	356.4	357.8	358.9	358.2	357.7	355.1	353.7	352.2	350.1	348.7
30.5°	352.5	354.5	356.1	356.9	356.4	356.1	353.0	351.2	350.0	348.5	346.1
31°	350.7	352.2	354.1	355.2	354.3	353.9	350.9	349.2	347.8	346.4	344.4
31.5°	348.4	350.6	352.0	352.9	352.6	351.8	348.9	347.6	345.8	344.2	342.4
32°	346.2	348.5	349.9	350.8	350.2	350.1	346.8	345.3	344.0	342.2	340.2
32.5°	344.6	346.1	348.3	349.0	348.4	347.7	345.1	342.7	341.7	340.2	337.8
33°	342.4	344.0	345.8	347.1	346.4	345.8	342.3	341.1	339.4	337.8	336.2
33.5°	339.9	342.2	343.9	344.5	344.1	343.4	340.6	339.0	337.4	335.4	333.6
34°	337.9	339.8	341.7	342.6	342.2	341.4	338.3	336.3	335.0	333.4	331.3
34.5°	336.0	337.5	339.4	340.6	339.6	339.4	335.8	334.3	332.7	331.5	329.2
35°	333.5	335.8	337.2	338.1	337.6	336.9	333.8	332.5	330.7	329.1	327.2
35.5°	331.2	333.2	335.3	335.7	335.5	335.0	331.6	329.6	328.6	326.6	324.5
36°	329.4	330.9	332.7	333.7	333.1	332.5	329.2	327.5	325.9	324.4	322.3
36.5°	326.9	328.9	330.5	331.5	331.1	330.1	327.0	325.4	323.5	322.0	320.1
37°	324.3	326.6	328.3	329.0	328.3	328.2	324.3	322.7	321.5	319.4	317.5
37.5°	322.2	324.1	326.0	326.8	326.3	325.3	322.3	320.2	318.9	317.0	314.8
38°	319.9	322.0	323.4	324.6	323.9	323.3	319.4	318.2	316.2	315.0	312.7
38.5°	317.1	319.4	321.3	321.9	321.4	320.5	317.3	315.4	314.0	312.2	310.3
39°	315.0	316.7	318.5	319.3	319.1	318.2	314.8	312.7	311.7	309.5	307.5
39.5°	312.7	314.5	316.1	317.3	316.3	315.8	311.9	310.6	308.8	307.2	305.1
40°	309.9	312.2	313.8	314.7	314.0	313.3	309.7	308.0	306.3	304.7	302.7
40.5°	307.3	309.3	311.1	312.1	311.3	310.8	306.9	305.1	304.0	301.8	299.8
41°	305.1	306.9	308.4	309.6	308.9	307.9	304.3	302.8	301.1	299.3	297.3
41.5°	302.3	304.7	306.3	306.9	306.3	305.6	301.9	300.3	298.3	296.9	294.9
42°	299.7	301.7	303.4	304.0	303.5	303.0	299.1	297.1	295.9	294.0	292.1
42.5°	297.3	299.0	300.6	301.6	301.1	300.1	296.6	294.7	293.2	291.4	289.3
43°	294.7	296.7	298.4	299.2	298.2	297.7	293.7	292.1	290.2	288.9	286.9
43.5°	291.5	293.9	295.6	296.3	295.6	294.7	291.0	289.1	287.8	285.9	284.1
44°	289.1	291.0	292.6	293.5	293.0	292.3	288.5	286.4	285.1	283.2	281.1
44.5°	286.6	288.6	290.2	290.9	290.0	289.3	285.4	284.0	282.0	280.7	278.6

TEST NUMBER: P855598  
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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	283.8	286.0	287.5	288.0	287.6	286.8	282.8	280.7	279.3	277.8	276.1
45.5°	280.8	282.9	284.6	285.3	284.5	283.9	279.8	278.1	276.8	274.7	272.8
46°	278.3	279.9	281.9	282.7	281.8	280.8	276.8	275.3	273.6	272.1	270.0
46.5°	275.3	277.6	279.2	279.6	278.8	278.4	274.3	272.2	270.7	269.2	267.4
47°	272.4	274.6	276.0	276.8	275.9	275.2	271.0	269.4	268.0	266.1	264.3
47.5°	269.5	271.7	273.2	274.1	273.1	272.4	268.3	266.7	265.0	263.3	261.2
48°	266.9	268.7	270.4	271.0	270.3	269.4	265.1	263.3	261.8	260.6	258.6
48.5°	263.6	266.1	267.3	267.9	267.1	266.3	262.3	260.6	259.1	257.4	255.7
49°	260.8	262.8	264.3	265.1	264.2	263.6	259.4	257.7	256.2	254.4	252.5
49.5°	258.1	259.9	261.5	262.2	261.0	260.7	256.1	254.5	253.2	251.5	249.6
50°	255.1	257.0	258.5	259.1	258.2	257.6	253.2	251.5	249.9	248.6	246.7
50.5°	251.8	254.2	255.3	256.0	254.9	254.2	249.9	248.6	247.1	245.3	243.6
51°	248.9	250.8	252.6	252.9	252.0	251.4	246.9	245.3	244.2	242.4	240.6
51.5°	246.0	248.0	249.3	249.7	248.7	248.5	244.2	242.4	241.0	239.4	237.7
52°	243.1	245.0	246.1	246.7	245.6	245.0	240.8	239.4	237.6	236.3	234.6
52.5°	239.8	242.0	243.3	243.8	242.7	242.2	237.8	236.1	234.7	233.1	231.2
53°	236.9	238.5	240.3	240.5	239.5	238.8	234.3	233.0	231.7	230.1	228.3
53.5°	233.9	235.7	236.8	237.3	236.4	235.8	231.3	229.9	228.5	227.0	225.2
54°	230.4	232.6	233.8	234.3	233.0	232.6	228.3	226.5	225.1	223.7	221.8
54.5°	227.3	229.4	230.7	230.9	229.8	229.4	224.8	223.4	222.2	220.3	218.9
55°	224.4	226.0	227.3	227.6	226.7	226.0	221.7	220.3	218.9	217.6	215.8
55.5°	221.3	223.1	224.1	224.6	223.2	222.5	218.3	217.1	215.5	214.3	212.5
56°	217.8	219.8	221.1	221.2	220.1	219.7	215.1	213.7	212.3	210.9	209.3
56.5°	214.9	216.5	217.6	217.9	216.7	216.1	212.0	210.5	209.4	207.7	206.3
57°	211.5	213.4	214.4	214.8	213.3	212.9	208.5	207.0	205.8	204.6	202.8
57.5°	208.2	210.2	211.2	211.4	210.1	209.6	205.3	204.0	202.6	201.2	199.8
58°	205.0	206.6	207.8	207.8	206.7	206.1	201.9	200.8	199.6	198.1	196.7
58.5°	202.0	203.7	204.4	204.7	203.3	203.1	198.6	197.5	196.3	194.9	193.4
59°	198.8	200.5	201.3	201.4	200.0	199.8	195.6	194.1	192.8	191.8	190.1
59.5°	195.4	197.2	198.0	198.1	196.6	196.5	191.9	191.0	189.6	188.2	187.0
60°	192.3	193.8	194.6	194.7	193.4	193.0	188.8	187.5	186.5	185.1	183.5
60.5°	189.1	190.7	191.5	191.5	189.9	189.6	185.3	184.3	183.1	181.9	180.4
61°	185.7	187.2	187.9	187.8	186.6	186.4	182.1	181.0	179.7	178.6	177.3
61.5°	182.4	183.9	184.6	184.6	183.1	182.8	178.7	177.7	176.6	175.2	173.9
62°	179.3	180.8	181.4	181.3	179.7	179.5	175.3	174.3	173.3	172.2	170.7
62.5°	176.1	177.5	178.0	177.7	176.5	176.0	172.0	171.2	169.9	168.8	167.6
63°	172.6	174.0	174.6	174.4	173.1	172.6	168.6	167.7	166.7	165.5	164.2
63.5°	169.5	170.9	171.4	171.2	169.5	169.5	165.2	164.5	163.5	162.4	161.0
64°	166.3	167.7	167.9	167.6	166.2	166.0	162.1	161.2	160.2	159.2	157.9
64.5°	163.0	164.2	164.6	164.2	162.7	162.7	158.6	157.9	156.9	155.9	154.7
65°	159.6	160.9	161.4	161.0	159.4	159.2	155.4	154.8	153.9	152.8	151.6
65.5°	156.6	158.0	158.0	157.6	155.9	156.1	152.2	151.6	150.6	149.6	148.5
66°	153.5	154.7	154.8	154.3	152.8	152.9	148.9	148.1	147.4	146.5	145.1
66.5°	150.3	151.4	151.7	151.1	149.4	149.5	145.7	145.1	144.4	143.3	141.9
67°	147.2	148.1	148.2	147.7	146.0	146.2	142.5	142.0	141.3	140.2	139.1



TEST NUMBER: P855598  
 CATALOG NUMBER: HLSMS9129FS1EWH-2700K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	144.1	145.1	145.0	144.2	142.9	142.9	139.3	138.7	138.0	137.1	135.9
68°	140.7	141.8	141.8	141.2	139.5	139.6	136.0	135.6	134.9	133.9	132.6
68.5°	137.7	138.8	138.6	137.9	136.1	136.4	132.9	132.5	131.9	130.7	129.6
69°	134.7	135.6	135.4	134.5	133.1	133.1	129.8	129.3	128.8	127.8	126.6
69.5°	131.7	132.4	132.3	131.5	129.7	129.8	126.5	126.3	125.7	124.8	123.5
70°	128.5	129.3	129.0	128.2	126.6	126.7	123.6	123.4	122.7	121.7	120.5
70.5°	125.6	126.3	125.9	124.9	123.4	123.7	120.5	120.3	119.9	118.8	117.6
71°	122.6	123.3	122.9	121.9	120.3	120.4	117.4	117.4	116.9	115.9	114.6
71.5°	119.6	120.3	119.8	118.8	117.2	117.5	114.5	114.5	113.9	113.0	111.7
72°	116.6	117.3	116.7	115.8	114.1	114.3	111.5	111.4	111.1	110.1	109.0
72.5°	113.8	114.4	113.8	112.7	111.1	111.4	108.7	108.6	108.4	107.3	106.0
73°	111.0	111.4	110.9	109.9	108.0	108.5	105.7	105.9	105.5	104.6	103.1
73.5°	108.1	108.6	107.9	106.8	105.2	105.6	103.0	103.2	102.8	101.8	100.6
74°	105.4	105.8	105.1	103.9	102.3	102.7	100.2	100.3	100.2	99.1	97.9
74.5°	102.7	103.0	102.2	101.2	99.3	99.9	97.4	97.7	97.5	96.4	95.1
75°	99.9	100.2	99.4	98.3	96.6	97.1	94.7	94.9	94.7	93.8	92.5
75.5°	97.2	97.5	96.6	95.5	93.8	94.3	92.0	92.3	92.2	91.1	89.9
76°	94.7	94.9	94.0	92.8	91.1	91.5	89.3	89.7	89.7	88.6	87.2
76.5°	91.9	92.2	91.1	90.1	88.4	88.9	86.8	87.2	87.1	86.1	84.8
77°	89.3	89.5	88.6	87.2	85.7	86.1	84.2	84.7	84.7	83.7	82.4
77.5°	86.9	87.0	86.0	84.7	83.2	83.5	81.7	82.2	82.2	81.3	80.0
78°	84.4	84.4	83.3	82.2	80.6	81.0	79.2	79.8	79.8	78.8	77.5
78.5°	81.8	81.9	80.9	79.6	78.0	78.4	76.7	77.3	77.4	76.4	75.1
79°	79.4	79.3	78.4	77.0	75.5	75.8	74.2	74.8	75.0	74.0	72.6
79.5°	77.0	76.9	75.7	74.6	73.0	73.4	71.7	72.4	72.6	71.7	70.2
80°	74.6	74.3	73.4	72.0	70.6	71.0	69.3	70.1	70.3	69.5	68.0
80.5°	72.3	72.1	71.0	69.6	68.2	68.6	66.9	67.8	67.9	67.1	65.8
81°	69.9	69.7	68.6	67.4	65.9	66.4	64.7	65.5	65.8	64.9	63.5
81.5°	67.5	67.3	66.4	65.1	63.6	64.1	62.5	63.3	63.6	62.8	61.4
82°	65.4	65.1	64.1	62.7	61.3	61.6	60.1	61.1	61.4	60.5	59.2
82.5°	63.2	62.9	61.7	60.5	59.0	59.4	58.0	58.8	59.2	58.4	56.9
83°	60.9	60.6	59.5	58.3	56.9	57.2	55.8	56.7	57.1	56.3	54.9
83.5°	58.7	58.4	57.3	56.0	54.6	55.0	53.6	54.6	55.0	54.3	52.8
84°	56.6	56.2	55.1	53.9	52.5	52.8	51.5	52.5	52.9	52.2	50.8
84.5°	54.5	54.1	53.0	51.8	50.4	50.6	49.4	50.4	50.9	50.2	48.8
85°	52.5	51.9	51.0	49.7	48.3	48.5	47.3	48.4	49.0	48.3	46.8
85.5°	50.3	49.9	48.9	47.7	46.3	46.5	45.4	46.4	46.9	46.3	44.8
86°	48.3	47.9	46.8	45.7	44.3	44.5	43.4	44.5	45.0	44.4	43.0
86.5°	46.3	45.8	44.9	43.7	42.4	42.6	41.5	42.5	43.2	42.5	41.1
87°	44.4	43.8	42.9	41.8	40.4	40.5	39.5	40.7	41.3	40.7	39.3
87.5°	42.5	42.0	41.0	39.9	38.5	38.7	37.7	38.9	39.4	38.9	37.5
88°	40.6	40.0	39.2	38.0	36.8	36.9	35.9	37.0	37.6	37.2	35.8
88.5°	38.7	38.2	37.3	36.2	34.9	35.0	34.1	35.3	35.9	35.4	34.0
89°	36.9	36.4	35.5	34.6	33.1	33.3	32.4	33.5	34.2	33.7	32.4
89.5°	35.0	34.7	33.9	32.9	31.5	31.5	30.7	31.8	32.5	32.1	30.7

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



TEST NUMBER: P855598  
CATALOG NUMBER: HLSMS9129FS1EWH-2700K

**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: P855598  
 CATALOG NUMBER: HLSMS9129FS1EWH-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	413.9	413.9	413.9	413.9	413.9	413.9
0.5°	413.8	413.7	413.6	413.8	413.7	414.1
1°	413.8	413.2	413.2	413.3	414.2	413.6
1.5°	413.8	413.7	413.0	413.7	413.7	413.6
2°	413.3	413.0	413.3	413.3	413.5	414.0
2.5°	412.8	412.7	412.4	413.0	413.6	413.3
3°	412.7	412.7	412.4	413.0	413.4	413.0
3.5°	412.7	412.3	412.4	412.4	412.8	413.3
4°	412.1	411.8	411.4	412.5	412.9	413.0
4.5°	411.4	411.7	411.5	411.9	412.3	412.2
5°	411.4	410.7	411.0	411.8	412.0	412.4
5.5°	410.9	410.8	410.2	411.3	411.9	412.0
6°	410.0	410.2	410.0	410.5	411.3	411.3
6.5°	409.5	409.3	409.4	410.4	410.7	411.1
7°	409.3	409.2	408.6	409.9	410.6	410.9
7.5°	408.7	408.4	408.5	409.1	409.9	409.7
8°	407.7	407.7	407.5	408.9	409.0	409.7
8.5°	407.2	407.2	407.0	407.7	408.8	409.3
9°	406.6	406.3	406.5	407.5	408.1	408.4
9.5°	405.7	405.8	405.4	406.6	407.3	407.5
10°	404.7	404.5	404.8	406.1	406.8	407.6
10.5°	404.3	404.2	403.9	405.3	406.1	406.4
11°	403.4	403.3	402.8	404.3	404.9	405.6
11.5°	402.2	402.2	402.5	403.6	404.4	405.1
12°	401.4	401.8	401.1	402.9	403.9	404.3
12.5°	400.8	400.6	400.5	401.9	402.7	402.9
13°	399.4	399.4	399.8	401.1	401.6	402.5
13.5°	398.5	398.9	398.2	399.6	401.1	401.8
14°	397.4	397.5	397.4	399.3	399.8	400.7
14.5°	396.7	396.6	396.6	397.7	398.9	399.5
15°	395.1	395.2	395.1	397.1	397.9	399.0
15.5°	394.2	394.1	394.3	395.9	396.7	397.8
16°	393.2	393.1	393.2	394.6	395.8	396.4
16.5°	391.8	391.9	391.5	393.7	394.8	395.6
17°	390.3	390.5	390.6	392.7	393.1	394.5
17.5°	389.4	389.7	389.2	391.3	392.3	393.2
18°	388.1	387.8	387.8	390.1	391.2	392.3
18.5°	386.5	387.0	386.8	388.5	389.7	391.2
19°	385.3	385.5	385.1	387.6	388.6	389.5
19.5°	384.1	384.1	383.9	385.9	387.3	388.3
20°	382.3	382.7	382.6	384.8	385.7	387.3
20.5°	380.9	381.1	381.0	383.5	384.4	386.0
21°	379.7	379.6	379.9	381.5	383.2	384.4
21.5°	378.2	378.5	378.1	380.5	381.3	383.3
22°	376.3	376.5	376.4	379.1	380.2	381.8

TEST NUMBER: P855598  
 CATALOG NUMBER: HLSMS9129FS1EWH-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	374.9	375.3	375.4	377.3	378.8	380.1
23°	373.5	373.5	373.3	375.9	377.0	378.2
23.5°	371.6	371.9	371.9	374.2	375.3	377.2
24°	369.8	370.5	370.3	372.8	374.2	375.8
24.5°	368.4	368.6	368.4	370.8	372.4	373.9
25°	366.7	367.0	366.6	369.5	370.7	372.2
25.5°	364.6	365.1	365.3	367.8	369.1	371.0
26°	363.0	363.1	363.0	365.6	367.1	368.9
26.5°	361.4	361.8	361.6	364.4	365.4	367.1
27°	359.2	359.7	359.5	362.5	364.1	365.6
27.5°	357.3	357.7	357.7	360.6	362.0	364.0
28°	355.5	356.1	355.9	358.8	360.0	361.8
28.5°	353.8	353.8	353.9	356.7	358.3	360.0
29°	351.4	352.1	352.1	355.1	356.3	358.5
29.5°	349.8	350.0	350.0	352.8	354.3	356.5
30°	347.8	348.1	347.8	351.3	352.7	354.2
30.5°	345.4	346.0	346.2	349.0	350.5	352.5
31°	343.0	343.8	343.7	346.8	348.4	350.7
31.5°	341.7	342.0	341.9	345.2	346.7	348.4
32°	339.1	339.4	339.7	342.8	344.3	346.2
32.5°	337.0	337.6	337.4	340.8	342.2	344.6
33°	334.9	335.4	335.6	338.8	340.3	342.4
33.5°	332.8	333.0	333.1	336.3	338.0	339.9
34°	330.1	331.0	331.1	334.4	335.9	337.9
34.5°	328.3	328.9	328.9	332.1	333.7	336.0
35°	326.1	326.4	326.4	330.2	331.3	333.5
35.5°	323.7	324.3	324.2	327.3	329.4	331.2
36°	321.1	321.6	321.8	325.4	327.0	329.4
36.5°	319.1	319.6	319.4	323.2	324.4	326.9
37°	316.3	317.1	317.2	320.5	322.6	324.3
37.5°	313.9	314.7	314.6	318.4	319.9	322.2
38°	311.5	312.2	312.2	315.9	317.4	319.9
38.5°	309.3	309.5	310.0	313.4	315.3	317.1
39°	306.4	307.2	307.0	311.0	312.7	315.0
39.5°	304.2	304.7	304.9	308.5	310.0	312.7
40°	301.6	302.2	302.2	306.2	307.9	309.9
40.5°	298.7	299.7	299.5	303.3	305.2	307.3
41°	296.2	296.8	297.1	300.9	302.4	305.1
41.5°	293.8	294.4	294.5	298.4	300.1	302.3
42°	290.9	291.8	291.8	295.5	297.5	299.7
42.5°	288.4	289.1	289.3	293.3	294.5	297.3
43°	285.8	286.6	286.3	290.4	292.3	294.7
43.5°	283.0	283.6	284.1	287.7	289.6	291.5
44°	280.1	281.1	281.2	285.2	286.6	289.1
44.5°	277.6	278.2	278.6	282.3	284.2	286.6

TEST NUMBER: P855598  
 CATALOG NUMBER: HLSMS9129FS1EWH-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	274.8	275.4	275.6	279.9	281.5	283.8
45.5°	271.9	272.8	272.8	276.8	278.5	280.8
46°	268.9	269.8	269.9	274.0	275.9	278.3
46.5°	266.4	267.1	267.3	271.4	273.3	275.3
47°	263.3	264.3	264.1	268.4	269.9	272.4
47.5°	260.4	261.2	261.6	265.8	267.4	269.5
48°	257.5	258.4	258.4	262.7	264.6	266.9
48.5°	254.8	255.2	255.4	259.6	261.6	263.6
49°	251.6	252.5	252.9	257.1	258.6	260.8
49.5°	248.7	249.4	249.6	253.8	256.0	258.1
50°	245.6	246.6	246.7	251.1	252.7	255.1
50.5°	242.6	243.5	243.8	247.9	249.7	251.8
51°	239.6	240.4	240.8	244.9	246.8	248.9
51.5°	236.9	237.7	237.8	242.2	244.0	246.0
52°	233.5	234.5	234.5	239.1	240.6	243.1
52.5°	230.4	231.6	231.8	236.1	238.0	239.8
53°	227.5	228.3	228.6	232.8	234.8	236.9
53.5°	224.3	225.2	225.4	229.7	231.5	233.9
54°	221.1	222.0	222.6	226.7	228.6	230.4
54.5°	218.2	218.9	219.2	223.5	225.5	227.3
55°	214.9	215.8	216.1	220.6	222.1	224.4
55.5°	211.6	212.5	212.9	217.1	219.3	221.3
56°	208.6	209.5	209.7	214.0	216.0	217.8
56.5°	205.3	206.2	206.6	210.9	212.7	214.9
57°	201.9	203.0	203.3	207.7	209.7	211.5
57.5°	199.0	199.9	200.1	204.5	206.5	208.2
58°	195.9	196.6	197.0	201.1	203.0	205.0
58.5°	192.4	193.6	193.6	198.2	200.1	202.0
59°	189.3	190.2	190.6	194.8	197.0	198.8
59.5°	186.2	187.1	187.3	191.7	193.6	195.4
60°	182.8	183.7	184.1	188.6	190.4	192.3
60.5°	179.6	180.6	180.9	185.1	187.3	189.1
61°	176.5	177.3	177.4	182.0	183.8	185.7
61.5°	173.2	174.0	174.4	178.8	180.6	182.4
62°	169.8	170.9	171.1	175.3	177.5	179.3
62.5°	166.7	167.5	168.0	172.2	174.3	176.1
63°	163.5	164.4	164.7	168.9	170.7	172.6
63.5°	160.1	161.1	161.3	165.8	167.8	169.5
64°	157.0	157.9	158.1	162.4	164.4	166.3
64.5°	154.0	154.7	155.0	159.3	161.2	163.0
65°	150.7	151.7	151.7	156.1	158.1	159.6
65.5°	147.4	148.5	148.7	152.9	155.1	156.6
66°	144.4	145.3	145.4	149.8	151.5	153.5
66.5°	141.4	142.2	142.2	146.7	148.7	150.3
67°	138.1	138.9	139.1	143.4	145.5	147.2

TEST NUMBER: P855598  
 CATALOG NUMBER: HLSMS9129FS1EWH-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	135.0	135.9	135.9	140.4	142.3	144.1
68°	131.9	132.8	133.0	137.3	139.1	140.7
68.5°	128.9	129.7	129.9	134.1	136.3	137.7
69°	125.8	126.6	126.8	131.1	133.0	134.7
69.5°	122.9	123.5	123.8	128.0	130.0	131.7
70°	119.9	120.7	120.8	125.1	127.1	128.5
70.5°	116.9	117.5	117.8	121.9	124.1	125.6
71°	113.9	114.7	114.8	119.1	121.0	122.6
71.5°	111.1	111.8	111.9	116.1	118.2	119.6
72°	108.2	108.9	109.2	113.1	115.2	116.6
72.5°	105.4	106.1	106.3	110.5	112.3	113.8
73°	102.5	103.3	103.5	107.5	109.6	111.0
73.5°	99.9	100.6	100.7	104.8	106.8	108.1
74°	97.1	97.7	98.1	102.0	104.0	105.4
74.5°	94.4	95.1	95.4	99.3	101.4	102.7
75°	91.8	92.5	92.7	96.6	98.6	99.9
75.5°	89.1	89.8	90.2	93.9	96.0	97.2
76°	86.6	87.3	87.5	91.5	93.4	94.7
76.5°	84.1	84.7	85.0	88.9	90.7	91.9
77°	81.6	82.2	82.6	86.3	88.2	89.3
77.5°	79.1	79.6	80.0	83.9	85.8	86.9
78°	76.6	77.2	77.7	81.3	83.2	84.4
78.5°	74.2	74.8	75.2	78.9	80.7	81.8
79°	71.8	72.4	72.8	76.5	78.3	79.4
79.5°	69.4	70.0	70.5	74.1	75.9	77.0
80°	67.0	67.7	68.1	71.8	73.6	74.6
80.5°	64.9	65.6	66.0	69.4	71.2	72.3
81°	62.7	63.3	63.7	67.2	69.0	69.9
81.5°	60.4	60.9	61.6	65.1	66.6	67.5
82°	58.2	58.8	59.4	62.8	64.5	65.4
82.5°	56.0	56.7	57.2	60.7	62.3	63.2
83°	53.9	54.5	55.1	58.5	60.2	60.9
83.5°	51.8	52.4	53.0	56.5	58.0	58.7
84°	49.8	50.4	51.1	54.3	55.9	56.6
84.5°	47.7	48.4	49.1	52.3	53.9	54.5
85°	45.8	46.4	47.1	50.4	51.8	52.5
85.5°	43.8	44.4	45.2	48.3	49.8	50.3
86°	41.9	42.5	43.3	46.5	47.9	48.3
86.5°	40.0	40.6	41.4	44.5	45.9	46.3
87°	38.2	38.8	39.6	42.7	44.0	44.4
87.5°	36.5	37.0	37.8	40.8	42.2	42.5
88°	34.7	35.1	36.1	39.0	40.3	40.6
88.5°	32.9	33.5	34.5	37.3	38.5	38.7
89°	31.3	31.9	32.9	35.6	36.7	36.9
89.5°	29.6	30.3	31.3	34.0	35.5	35.0

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



TEST NUMBER: P855598  
CATALOG NUMBER: HLSMS9129FS1EWH-2700K

**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)