

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: P855595

Luminaire Tested: **HLS9129FS1EWH-3500K**

Issue Date: 7/16/2024

Tested By:

Approved By:



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Test Information

Test Method: LM-79-08
 Report Number: P855595
 Test Lab:
 Issue Date: 7/16/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: HALO
 Catalog Number: HLS9129FS1EWH-3500K
 Description: 9IN 1200LM, 90CRI, DIMMING TO 10%, DAMP LOCATION
 Light Source: SELECTABLE CCT 90CRI / 3500K CCT
 Ballast/Driver: -

Summary

Lumens per Lamp: 1287.7 (1 lamp)
 Luminaire Lumens: 1320.0 lumens
 Efficiency: 102.5%
 Efficacy: 81.0 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

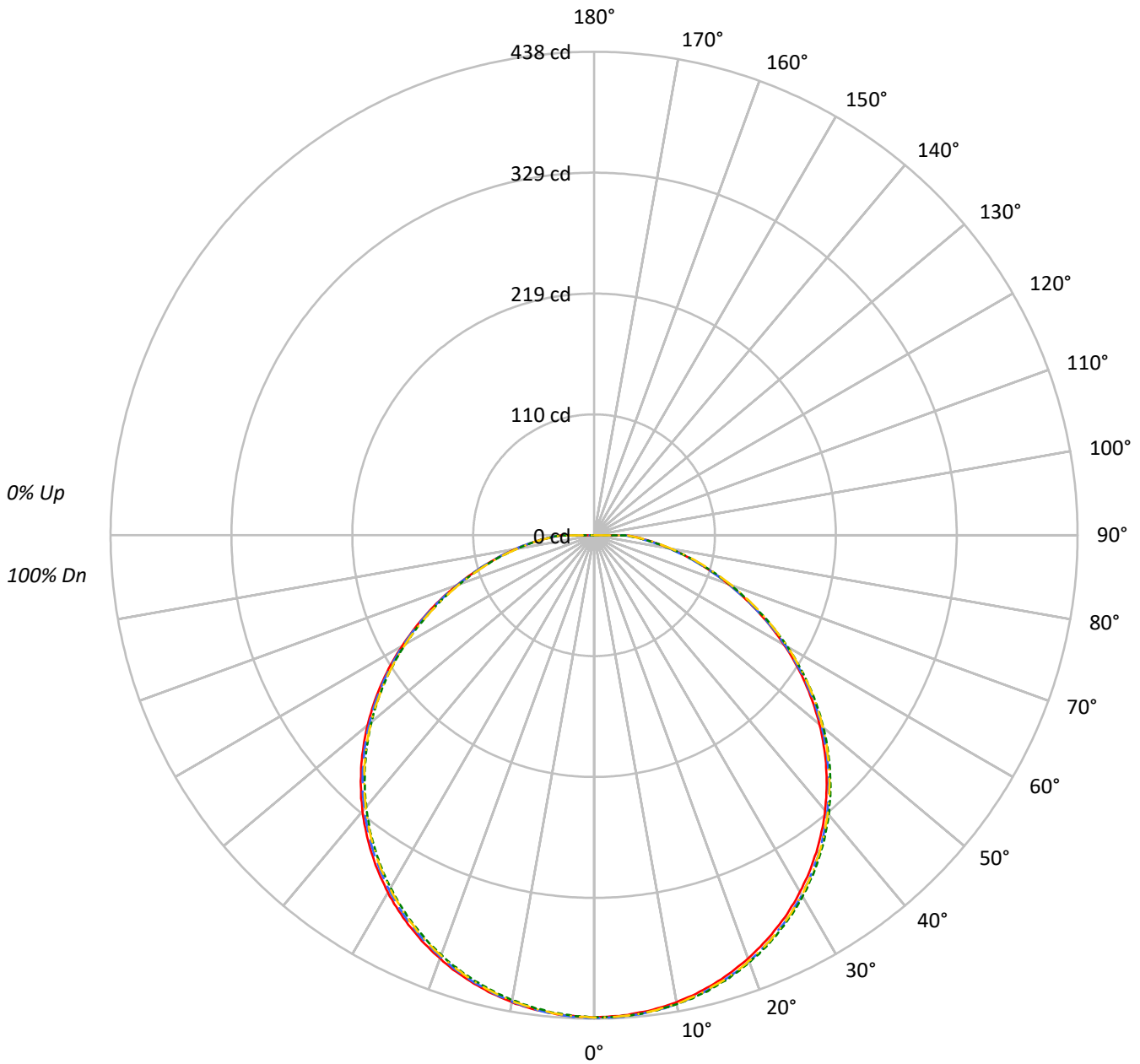
Input Watts (W): 16.3
 Input Voltage (V): NR
 Input Current (Ain): NR
 Voltage Rise (V): NR
 Power Factor: NR
 Total Harmonic Distortion (THDi): NR
 Frequency (hertz): 60
 Stabilization Time: NR
 Operation Time: NR
 Ambient Temperature (°C): NR
 Test Distance: 25 FT



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

TEST NUMBER: P855595
CATALOG NUMBER: HLS9129FS1EWH-3500K

Luminous Intensity Polar Plot



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

TEST NUMBER: P855595
 CATALOG NUMBER: HLS9129FS1EWH-3500K

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	122	122	122	122	119	119	119	119	114	114	114	109	109	109	105	105	105	103				103
1	110	105	100	96	108	103	98	94	98	95	91	94	91	89	91	88	86	84				84
2	100	91	84	77	97	89	82	76	85	80	75	82	77	73	79	75	71	69				69
3	91	80	71	64	88	78	70	63	75	68	62	72	66	61	69	64	60	58				58
4	83	70	61	54	81	69	60	54	66	59	53	64	57	52	62	56	51	49				49
5	76	63	53	46	74	62	53	46	59	52	46	57	50	45	55	49	45	42				42
6	71	57	47	40	69	56	47	40	54	46	40	52	45	39	50	44	39	37				37
7	65	51	42	36	64	50	42	35	49	41	35	47	40	35	46	39	35	33				33
8	61	47	38	32	59	46	37	32	45	37	31	43	36	31	42	36	31	29				29
9	57	43	34	28	55	42	34	28	41	33	28	40	33	28	39	33	28	26				26
10	53	40	31	26	52	39	31	26	38	31	26	37	30	25	36	30	25	24				24

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	10642	10642	10642	10642
5°	10632	10654	10629	10615
10°	10631	10675	10624	10584
15°	10609	10680	10609	10544
20°	10581	10677	10574	10488
25°	10541	10654	10549	10439
30°	10494	10629	10508	10373
35°	10440	10577	10452	10303
40°	10353	10515	10381	10219
45°	10241	10423	10285	10106
50°	10102	10291	10158	9973
55°	9919	10097	9995	9812
60°	9697	9868	9790	9619
65°	9443	9593	9582	9409
70°	9239	9361	9425	9247
75°	9244	9320	9470	9301
80°	9850	9850	10172	10004
85°	13083	12859	13558	13391

TEST NUMBER: P855595
 CATALOG NUMBER: HLS9129FS1EWH-3500K

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	41.4	3.1	3.2
10°-20°	118.8	9.0	9.2
20°-30°	180.9	13.7	14.0
30°-40°	219.6	16.6	17.1
40°-50°	229.7	17.4	17.8
50°-60°	209.4	15.9	16.3
60°-70°	163.4	12.4	12.7
70°-80°	105.3	8.0	8.2
80°-90°	51.7	3.9	4.0
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°	341.0	25.8	26.5
0°-40°	560.6	42.5	43.5
0°-60°	999.7	75.7	77.6
0°-90°	1320.0	100.0	102.5
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°	1320.0	100.0	102.5

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	437	437	437	437	437	
5°	435	436	435	434	435	41
15°	421	423	421	418	421	119
25°	392	396	392	388	392	181
35°	351	356	351	346	351	219
45°	297	302	298	293	297	229
55°	234	238	235	231	234	209
65°	164	166	166	163	164	162
75°	98	99	101	99	98	104
85°	47	46	48	48	47	51
90°	0	0	0	0	0	

TEST NUMBER: P855595
 CATALOG NUMBER: HLS9129FS1EWH-3500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	436.8	436.8	436.8	436.8	436.8	436.8	436.8	436.8	436.8	436.8	436.8
0.5°	436.6	437.1	437.4	436.8	436.7	436.7	437.1	436.8	436.7	436.9	437.4
1°	436.4	436.6	437.5	437.1	436.8	436.7	436.7	436.8	436.4	436.6	437.3
1.5°	436.4	437.1	437.3	437.2	436.6	436.6	436.9	436.7	436.4	436.8	436.8
2°	436.2	436.5	437.2	437.1	436.6	437.1	436.6	436.7	436.4	436.1	436.7
2.5°	436.0	436.5	437.3	436.6	436.8	436.6	436.8	436.6	435.9	436.3	436.8
3°	436.2	436.2	436.9	436.9	436.5	436.5	436.5	436.6	435.9	436.2	436.3
3.5°	435.7	436.1	437.1	436.5	436.1	436.4	436.4	436.4	435.7	435.7	436.0
4°	435.6	435.9	436.7	436.5	436.4	436.4	436.2	436.3	435.7	435.5	435.8
4.5°	434.9	435.8	436.1	436.2	436.3	436.0	436.0	435.6	435.2	435.2	435.0
5°	434.7	435.2	436.1	436.0	435.6	436.0	435.6	435.6	434.6	434.7	434.8
5.5°	434.3	435.2	436.0	435.3	435.6	435.4	435.6	435.0	434.5	434.1	434.7
6°	434.1	434.3	435.4	435.2	435.2	434.9	434.8	434.8	433.7	434.1	434.0
6.5°	433.7	434.2	434.9	434.7	434.6	434.8	434.8	434.5	433.6	433.7	433.5
7°	433.3	433.6	434.6	434.6	434.8	434.5	434.2	434.0	433.3	432.9	432.9
7.5°	432.4	433.5	434.3	434.2	434.1	434.0	434.0	433.3	432.6	432.1	432.3
8°	432.0	432.8	433.6	433.8	433.4	433.7	433.0	432.8	431.9	431.9	431.6
8.5°	431.5	431.8	433.3	432.9	432.9	432.8	432.7	432.3	431.6	431.1	431.4
9°	430.9	431.5	432.5	432.6	432.7	432.3	432.0	432.0	430.7	430.5	430.3
9.5°	430.3	431.0	432.0	431.7	432.0	432.0	431.6	430.9	430.4	430.1	429.8
10°	429.7	430.3	431.1	431.5	431.5	431.3	430.8	430.5	429.4	429.2	428.9
10.5°	428.6	429.2	430.7	430.8	430.7	430.7	430.4	429.7	428.7	428.4	428.1
11°	427.8	428.6	429.9	430.1	430.1	430.0	429.5	429.0	427.9	427.6	427.1
11.5°	427.0	427.9	429.0	429.1	429.2	429.1	428.6	428.1	427.2	426.8	426.7
12°	426.5	427.0	428.4	428.4	429.0	428.4	427.9	427.4	426.1	425.9	425.5
12.5°	425.7	426.5	427.2	427.8	427.9	427.8	427.1	426.5	425.5	425.1	424.6
13°	424.5	425.2	426.6	426.7	426.9	426.8	426.1	425.6	424.7	424.1	423.4
13.5°	423.7	424.3	425.9	426.0	426.3	426.1	425.5	424.9	423.4	423.1	422.7
14°	422.6	423.4	424.7	425.1	425.7	425.0	424.4	424.1	422.5	422.2	421.2
14.5°	421.7	422.6	423.4	424.1	424.3	424.1	423.3	422.6	421.3	420.8	420.4
15°	420.6	421.3	422.9	423.0	423.4	422.9	422.1	421.7	420.6	419.8	419.4
15.5°	419.4	420.5	421.5	422.4	422.3	422.1	421.4	420.6	419.4	419.1	418.4
16°	418.5	419.0	420.6	421.0	421.2	421.1	420.4	419.8	418.3	417.9	416.8
16.5°	417.2	418.3	419.5	419.8	420.6	420.1	419.3	418.5	417.1	416.4	415.7
17°	415.9	416.8	418.5	419.0	419.4	418.9	418.1	417.6	415.9	415.2	414.6
17.5°	414.7	416.0	417.0	417.9	417.8	417.5	416.8	416.0	414.8	414.4	413.4
18°	413.4	414.4	416.1	416.5	416.8	416.5	415.5	414.6	413.7	412.8	412.2
18.5°	412.0	413.1	414.6	415.4	415.7	415.4	414.5	413.5	412.1	411.4	410.7
19°	410.7	412.0	413.2	414.0	414.2	414.2	413.0	412.5	410.7	410.3	409.3
19.5°	409.4	410.7	412.0	412.7	413.0	412.8	412.1	410.8	409.7	408.6	408.2
20°	408.1	409.0	410.9	411.3	411.8	411.4	410.2	409.7	407.8	407.4	406.6
20.5°	406.5	407.6	409.3	410.2	410.1	409.8	409.4	408.3	406.7	405.9	405.1
21°	405.1	406.3	407.8	408.6	409.0	408.8	407.7	406.6	405.3	404.6	403.6
21.5°	403.5	404.8	406.3	407.1	407.7	407.2	406.2	405.2	403.7	403.1	402.0
22°	402.1	403.2	404.8	405.7	405.8	405.6	404.7	403.8	401.9	401.4	400.4

TEST NUMBER: P855595
 CATALOG NUMBER: HLS9129FS1EWH-3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	400.4	401.8	403.1	403.9	404.6	404.3	403.3	402.0	400.9	399.8	398.9
23°	398.9	400.0	401.7	402.6	403.3	402.7	401.5	400.9	399.3	398.2	397.3
23.5°	397.3	398.7	399.9	400.8	401.3	401.0	400.4	399.2	397.4	396.7	395.5
24°	395.7	396.8	398.5	399.5	399.7	399.3	398.5	397.4	395.7	395.0	393.8
24.5°	393.7	395.3	396.9	397.6	398.3	397.7	396.7	395.4	394.0	392.9	392.3
25°	392.1	393.7	394.6	396.0	396.3	396.1	395.0	394.0	392.4	391.7	390.3
25.5°	390.4	391.7	393.3	394.2	394.6	394.4	393.4	392.1	390.9	389.9	388.6
26°	388.5	390.0	391.7	392.3	393.2	392.3	391.8	390.6	389.0	388.0	387.0
26.5°	386.9	388.3	389.8	390.4	391.1	390.9	389.8	388.7	387.3	385.8	385.1
27°	385.1	386.3	387.7	388.9	389.3	389.2	387.9	387.0	385.0	384.2	382.9
27.5°	383.1	384.5	386.2	386.7	387.6	387.2	386.2	385.0	383.6	382.2	381.5
28°	380.9	382.5	384.0	385.2	385.8	385.3	384.2	382.9	381.5	380.5	378.9
28.5°	379.4	380.5	382.2	383.1	383.8	383.6	382.3	380.9	379.8	378.3	377.5
29°	377.3	378.7	380.2	381.1	381.8	381.3	380.5	379.2	377.5	376.5	375.3
29.5°	375.1	376.7	378.4	379.0	379.9	379.3	378.2	377.3	375.9	374.4	373.5
30°	373.0	374.6	376.2	376.8	377.8	377.4	376.5	375.0	373.5	372.3	371.0
30.5°	371.1	372.4	374.1	375.0	375.7	375.5	374.5	372.9	371.6	370.1	369.2
31°	368.7	370.5	371.8	372.7	374.0	373.2	372.1	370.9	369.1	368.2	366.8
31.5°	366.7	368.3	369.7	370.6	371.6	371.1	370.0	368.8	367.2	366.2	364.8
32°	364.7	366.2	367.8	368.5	369.1	368.8	368.0	366.5	365.2	364.0	362.4
32.5°	362.4	364.0	365.4	366.2	367.3	366.9	365.7	364.5	362.9	361.6	360.6
33°	360.2	361.9	363.2	364.2	365.2	364.6	363.8	362.3	360.6	359.4	358.1
33.5°	357.8	359.4	360.9	361.8	362.8	362.5	361.3	359.9	358.6	357.0	355.8
34°	355.4	356.9	358.5	359.4	360.6	360.0	358.8	357.4	356.1	354.5	353.4
34.5°	353.0	354.9	356.3	357.2	358.2	357.6	356.5	355.3	353.6	352.6	351.3
35°	351.0	352.4	354.1	354.6	355.6	355.3	354.4	352.9	351.4	350.3	348.9
35.5°	348.5	350.4	351.3	352.5	353.6	353.1	351.8	350.6	349.1	347.8	346.6
36°	346.1	347.6	349.1	350.0	351.0	350.5	349.6	348.1	346.6	345.2	344.0
36.5°	343.6	345.3	346.6	347.4	348.6	348.4	347.1	345.6	344.2	343.0	341.6
37°	341.0	342.6	343.9	344.8	346.2	345.6	344.7	343.2	341.8	340.4	339.1
37.5°	338.2	340.2	341.7	342.6	343.8	343.2	342.0	340.8	339.2	337.8	336.8
38°	336.1	337.5	339.0	339.9	340.8	340.6	339.6	338.1	336.6	335.5	334.0
38.5°	333.5	335.3	336.3	337.2	338.5	338.0	337.0	335.5	334.2	332.6	331.5
39°	330.7	332.6	333.9	334.9	335.9	335.7	334.4	332.9	331.5	330.3	329.2
39.5°	328.3	329.7	331.3	332.0	333.3	333.0	331.9	330.4	329.1	327.6	326.5
40°	325.5	327.2	328.4	329.3	330.6	330.1	329.1	327.8	326.4	325.0	323.6
40.5°	322.7	324.5	325.8	326.5	328.0	327.7	326.3	324.9	323.5	322.4	321.1
41°	320.0	321.7	323.0	324.0	325.0	324.9	323.6	322.4	320.8	319.7	318.4
41.5°	317.5	318.8	320.2	321.0	322.5	321.9	321.0	319.6	318.4	316.8	315.9
42°	314.4	316.2	317.3	318.2	319.8	319.4	318.3	316.7	315.6	314.3	313.1
42.5°	311.7	313.4	314.6	315.5	316.8	316.5	315.6	314.1	312.6	311.5	310.2
43°	309.0	310.5	311.5	312.6	314.1	313.6	312.6	311.1	310.0	308.7	307.3
43.5°	306.1	307.8	309.0	309.6	311.2	310.7	309.9	308.5	307.2	305.7	304.7
44°	303.1	304.8	305.9	306.8	308.2	307.9	306.9	305.4	304.0	303.1	301.7
44.5°	300.3	301.5	303.0	303.7	305.2	305.0	304.0	302.7	301.3	300.2	299.0

TEST NUMBER: P855595
 CATALOG NUMBER: HLS9129FS1EWH-3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	297.2	299.0	299.9	300.8	302.5	302.0	301.1	299.6	298.5	297.1	295.9
45.5°	294.5	295.9	297.0	297.8	299.4	298.9	298.3	296.7	295.5	294.1	293.2
46°	291.4	292.9	294.0	294.9	296.5	295.9	295.2	293.7	292.4	291.3	290.2
46.5°	288.3	289.9	291.0	291.7	293.2	293.2	292.0	290.7	289.6	288.3	287.3
47°	285.3	286.8	287.9	288.5	290.3	289.8	289.0	287.7	286.4	285.4	284.2
47.5°	282.2	283.6	285.0	285.6	287.2	286.9	286.0	284.5	283.4	282.3	281.3
48°	279.2	280.5	281.6	282.4	284.1	283.6	283.3	281.5	280.4	279.3	278.1
48.5°	276.1	277.6	278.4	279.3	280.9	280.6	279.8	278.6	277.3	276.1	275.4
49°	273.1	274.4	275.6	276.0	277.8	277.3	276.7	275.4	274.2	273.1	272.1
49.5°	269.8	271.0	272.3	272.8	274.5	274.3	273.5	272.1	271.0	269.9	268.9
50°	266.5	268.0	268.9	269.6	271.5	271.0	270.4	268.9	268.0	266.8	265.8
50.5°	263.4	264.6	265.8	266.2	268.0	267.8	267.1	265.7	264.7	263.8	262.8
51°	260.1	261.3	262.4	263.0	264.7	264.4	264.0	262.5	261.6	260.6	259.4
51.5°	256.8	258.1	259.0	259.7	261.6	261.2	260.5	259.3	258.3	257.3	256.5
52°	253.8	254.9	255.9	256.4	258.4	258.0	257.5	256.3	255.2	254.3	253.2
52.5°	250.5	251.5	252.6	253.1	254.8	254.7	254.0	252.8	251.9	250.8	249.9
53°	246.9	248.1	249.1	249.5	251.4	251.3	250.8	249.3	248.6	247.6	246.7
53.5°	243.6	244.9	245.7	246.2	248.1	247.8	247.4	246.3	245.2	244.4	243.4
54°	240.4	241.4	242.2	242.6	244.8	244.4	244.0	242.7	241.9	241.1	240.1
54.5°	236.9	238.1	238.7	239.4	241.2	241.1	240.7	239.6	238.5	237.7	236.9
55°	233.5	234.6	235.5	235.9	237.7	237.7	237.3	236.1	235.3	234.5	233.6
55.5°	230.2	231.2	232.1	232.4	234.3	234.1	233.8	232.8	231.9	231.2	230.2
56°	226.8	227.8	228.4	228.9	230.9	230.8	230.5	229.3	228.7	227.5	226.9
56.5°	223.2	224.2	225.1	225.4	227.4	227.3	227.0	225.9	225.0	224.2	223.4
57°	219.9	220.8	221.4	221.9	223.9	223.7	223.6	222.4	221.9	220.8	220.2
57.5°	216.4	217.3	217.9	218.2	220.2	220.1	219.9	218.8	218.4	217.5	216.7
58°	212.9	213.7	214.4	214.7	216.7	216.7	216.4	215.6	214.8	214.1	213.4
58.5°	209.4	210.2	210.9	211.1	213.1	213.0	213.0	212.1	211.5	210.7	210.0
59°	206.0	206.8	207.3	207.8	209.7	209.9	209.4	208.6	208.0	207.2	206.6
59.5°	202.4	203.3	203.9	204.0	206.1	206.1	205.8	205.0	204.5	203.7	203.0
60°	199.0	199.5	200.2	200.5	202.5	202.4	202.4	201.4	200.9	200.4	199.8
60.5°	195.4	196.2	196.6	196.8	198.9	198.9	198.8	198.0	197.6	196.9	196.4
61°	191.8	192.6	192.8	193.2	195.2	195.5	195.2	194.6	194.1	193.5	192.9
61.5°	188.4	189.0	189.5	189.4	191.6	191.6	191.6	191.0	190.5	189.9	189.4
62°	184.9	185.4	185.8	186.1	188.0	188.3	188.2	187.4	187.1	186.6	186.0
62.5°	181.3	181.9	182.2	182.5	184.4	184.7	184.6	183.9	183.6	183.1	182.6
63°	177.9	178.3	178.6	178.9	180.8	181.1	181.0	180.3	180.1	179.6	179.1
63.5°	174.4	174.8	175.0	175.2	177.3	177.4	177.5	176.9	176.7	176.0	175.7
64°	170.8	171.3	171.4	171.6	173.7	173.9	173.9	173.5	173.1	172.6	172.2
64.5°	167.3	167.7	167.9	168.0	169.9	170.2	170.3	169.8	169.6	169.2	168.7
65°	163.8	164.1	164.2	164.4	166.4	166.8	167.0	166.4	166.2	165.9	165.4
65.5°	160.3	160.7	160.7	160.9	162.8	163.3	163.5	162.8	162.8	162.3	162.0
66°	156.8	157.1	157.1	157.3	159.4	159.6	159.8	159.5	159.4	158.9	158.5
66.5°	153.5	153.6	153.7	153.7	155.9	156.1	156.3	155.9	155.9	155.5	155.1
67°	149.9	150.2	150.1	150.2	152.3	152.6	152.9	152.4	152.5	152.1	151.8

TEST NUMBER: P855595
 CATALOG NUMBER: HLS9129FS1EWH-3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	146.5	146.6	146.7	146.8	148.7	149.2	149.3	149.1	149.1	148.7	148.5
68°	143.2	143.2	143.2	143.2	145.2	145.6	146.1	145.6	145.8	145.3	145.1
68.5°	139.8	139.7	139.7	139.7	141.9	142.3	142.6	142.4	142.4	142.1	141.9
69°	136.4	136.5	136.3	136.4	138.4	138.8	139.2	139.0	138.8	138.7	138.4
69.5°	133.0	132.9	132.9	132.9	134.9	135.4	135.6	135.5	135.6	135.4	135.2
70°	129.7	129.5	129.5	129.5	131.4	131.9	132.5	132.1	132.3	132.1	131.8
70.5°	126.3	126.3	126.1	126.0	127.9	128.7	129.0	129.0	129.0	128.9	128.6
71°	123.2	123.0	122.8	122.8	124.8	125.3	125.6	125.7	125.7	125.6	125.4
71.5°	120.0	119.7	119.4	119.5	121.4	122.0	122.4	122.3	122.6	122.3	122.1
72°	116.8	116.3	116.2	116.2	118.1	118.8	119.2	119.2	119.3	119.3	119.0
72.5°	113.5	113.3	113.0	112.8	114.9	115.5	115.9	116.0	116.0	116.0	115.8
73°	110.3	110.0	109.7	109.7	111.6	112.1	112.7	112.6	112.8	112.8	112.7
73.5°	107.3	106.8	106.5	106.5	108.4	108.9	109.5	109.6	109.8	109.8	109.5
74°	104.2	103.7	103.5	103.4	105.2	105.9	106.3	106.5	106.7	106.7	106.5
74.5°	101.1	100.6	100.3	100.2	102.1	102.7	103.4	103.5	103.7	103.7	103.6
75°	98.2	97.6	97.2	97.1	99.0	99.6	100.2	100.3	100.6	100.7	100.4
75.5°	95.2	94.6	94.2	94.1	96.0	96.6	97.1	97.5	97.6	97.7	97.6
76°	92.3	91.7	91.2	91.0	92.9	93.5	94.2	94.4	94.6	94.8	94.6
76.5°	89.2	88.7	88.2	88.2	90.1	90.7	91.2	91.4	91.8	91.9	91.7
77°	86.4	85.7	85.3	85.2	87.2	87.9	88.4	88.6	89.0	89.1	88.9
77.5°	83.7	83.0	82.6	82.3	84.3	85.0	85.5	85.7	86.2	86.3	86.2
78°	81.0	80.2	79.6	79.6	81.4	82.2	82.7	82.9	83.4	83.5	83.4
78.5°	78.2	77.4	76.8	76.7	78.6	79.2	79.8	80.0	80.6	80.8	80.7
79°	75.4	74.7	74.1	73.9	75.7	76.4	77.1	77.5	77.8	78.0	77.9
79.5°	72.9	71.9	71.4	71.2	73.0	73.6	74.4	74.7	75.2	75.4	75.2
80°	70.2	69.4	68.8	68.6	70.2	70.9	71.6	72.0	72.5	72.7	72.7
80.5°	67.8	66.9	66.2	66.1	67.6	68.3	69.0	69.5	69.9	70.1	70.0
81°	65.2	64.3	63.7	63.5	65.1	65.7	66.4	66.9	67.3	67.6	67.5
81.5°	62.8	61.7	61.2	60.9	62.5	63.2	63.9	64.3	64.9	65.1	65.0
82°	60.3	59.4	58.6	58.4	60.0	60.6	61.4	61.9	62.3	62.5	62.4
82.5°	58.0	57.0	56.3	56.0	57.5	58.1	59.0	59.5	59.9	60.1	60.1
83°	55.6	54.6	53.9	53.7	55.1	55.7	56.4	57.1	57.5	57.8	57.7
83.5°	53.4	52.3	51.7	51.3	52.8	53.4	54.1	54.8	55.3	55.5	55.5
84°	51.2	50.1	49.5	49.0	50.5	51.0	51.9	52.5	52.9	53.2	53.2
84.5°	48.9	48.0	47.2	46.9	48.2	48.9	49.6	50.2	50.7	50.9	50.9
85°	46.8	45.8	45.0	44.7	46.0	46.6	47.4	48.0	48.5	48.7	48.7
85.5°	44.7	43.7	42.9	42.6	43.8	44.4	45.2	45.8	46.4	46.5	46.6
86°	42.6	41.7	40.9	40.6	41.8	42.3	43.0	43.8	44.2	44.5	44.5
86.5°	40.6	39.7	38.9	38.5	39.7	40.3	41.0	41.7	42.2	42.4	42.4
87°	38.7	37.8	36.9	36.7	37.8	38.2	39.0	39.7	40.2	40.4	40.5
87.5°	37.1	36.0	35.1	34.9	35.8	36.3	37.0	37.8	38.2	38.5	38.5
88°	35.2	34.2	33.4	33.1	34.0	34.5	35.1	35.9	36.3	36.5	36.7
88.5°	33.4	32.5	31.6	31.3	32.1	32.6	33.2	34.0	34.5	34.7	34.8
89°	31.6	30.7	30.0	29.5	30.3	30.7	31.4	32.2	32.6	32.9	33.0
89.5°	29.7	28.9	28.3	27.8	28.6	29.0	29.7	30.4	30.8	31.1	31.2

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



TEST NUMBER: P855595
CATALOG NUMBER: HLS9129FS1EWH-3500K

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: P855595
 CATALOG NUMBER: HLS9129FS1EWH-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	436.8	436.8	436.8	436.8	436.8	436.8
0.5°	437.1	436.6	436.5	436.8	436.8	436.6
1°	436.5	436.2	436.5	436.5	436.7	436.4
1.5°	436.6	435.8	436.2	436.5	436.4	436.4
2°	436.5	436.1	436.1	436.2	436.2	436.2
2.5°	436.2	435.7	435.7	436.3	436.3	436.0
3°	435.7	435.2	435.7	435.8	436.1	436.2
3.5°	435.9	434.9	435.2	435.8	435.7	435.7
4°	435.3	434.6	434.7	435.2	435.6	435.6
4.5°	434.6	434.0	434.5	434.8	435.2	434.9
5°	434.4	434.0	433.8	434.5	434.5	434.7
5.5°	433.8	433.4	433.5	433.8	434.4	434.3
6°	433.6	432.6	433.2	433.5	434.1	434.1
6.5°	432.8	432.0	432.4	433.0	433.2	433.7
7°	432.3	432.0	432.0	432.5	432.7	433.3
7.5°	431.7	431.0	431.6	431.8	432.2	432.4
8°	431.4	430.2	430.6	431.1	431.7	432.0
8.5°	430.2	429.9	429.9	430.5	430.7	431.5
9°	429.8	429.0	429.2	429.6	430.6	430.9
9.5°	429.0	428.1	428.7	429.2	429.6	430.3
10°	428.5	427.8	427.7	428.5	429.0	429.7
10.5°	427.2	426.5	426.8	427.4	428.1	428.6
11°	426.6	425.9	426.2	426.6	427.5	427.8
11.5°	425.9	424.8	425.0	426.0	426.4	427.0
12°	424.6	424.3	424.1	424.9	425.6	426.5
12.5°	423.9	422.8	423.4	423.9	424.6	425.7
13°	423.0	422.0	422.3	423.1	423.7	424.5
13.5°	421.8	420.9	421.0	422.0	422.7	423.7
14°	420.5	420.0	420.4	420.7	421.8	422.6
14.5°	419.8	418.7	419.0	420.1	420.6	421.7
15°	418.8	418.0	417.8	418.6	419.4	420.6
15.5°	417.2	416.4	416.8	417.2	418.2	419.4
16°	416.3	415.3	415.6	416.4	417.3	418.5
16.5°	415.0	414.3	414.3	415.2	416.2	417.2
17°	413.7	412.9	413.2	413.6	415.1	415.9
17.5°	412.6	411.2	411.5	412.6	413.4	414.7
18°	411.2	410.4	410.4	411.1	412.2	413.4
18.5°	409.9	408.9	409.2	409.5	410.9	412.0
19°	408.2	407.6	407.9	408.5	409.4	410.7
19.5°	407.2	406.2	406.4	407.2	408.4	409.4
20°	405.4	404.5	404.9	405.3	406.9	408.1
20.5°	404.5	402.9	403.4	403.9	405.1	406.5
21°	402.5	401.6	401.8	402.7	403.7	405.1
21.5°	401.1	400.0	400.2	400.9	402.1	403.5
22°	399.5	398.6	398.8	399.3	400.4	402.1

TEST NUMBER: P855595
 CATALOG NUMBER: HLS9129FS1EWH-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	398.0	396.8	397.2	397.7	399.0	400.4
23°	396.1	395.2	395.4	396.1	397.5	398.9
23.5°	394.7	393.3	393.7	394.1	395.7	397.3
24°	393.1	391.7	391.9	393.0	394.1	395.7
24.5°	391.3	390.0	390.2	390.9	392.2	393.7
25°	389.4	388.3	388.5	389.1	390.4	392.1
25.5°	387.8	386.3	386.7	387.5	388.5	390.4
26°	385.7	385.0	384.6	385.7	387.1	388.5
26.5°	384.0	382.5	383.1	383.7	385.2	386.9
27°	382.0	380.7	381.2	381.8	382.9	385.1
27.5°	380.2	378.8	379.2	379.9	381.2	383.1
28°	378.0	377.0	377.3	377.7	379.4	380.9
28.5°	376.3	374.8	375.5	375.8	377.1	379.4
29°	374.4	373.0	373.1	374.0	375.3	377.3
29.5°	372.2	370.7	371.1	371.8	373.4	375.1
30°	370.1	368.7	369.0	369.4	371.2	373.0
30.5°	368.0	366.5	366.9	367.7	368.8	371.1
31°	366.0	364.7	364.9	365.2	367.2	368.7
31.5°	363.9	362.4	362.7	363.3	364.6	366.7
32°	361.8	360.3	360.5	360.9	362.5	364.7
32.5°	359.4	358.0	358.2	359.0	360.2	362.4
33°	357.3	355.7	355.9	356.5	358.2	360.2
33.5°	354.7	353.2	353.7	354.4	355.7	357.8
34°	352.6	351.2	351.4	351.9	353.4	355.4
34.5°	350.5	348.7	349.1	349.5	351.3	353.0
35°	347.8	346.4	346.6	347.3	348.8	351.0
35.5°	345.6	343.9	344.1	344.7	346.1	348.5
36°	343.2	341.5	341.8	342.3	344.0	346.1
36.5°	340.8	338.9	339.2	339.9	341.5	343.6
37°	338.0	336.9	336.8	337.4	339.0	341.0
37.5°	335.7	334.2	334.4	335.1	336.4	338.2
38°	333.3	331.5	331.8	332.3	333.7	336.1
38.5°	330.6	329.0	329.1	329.8	331.3	333.5
39°	328.1	326.5	326.7	327.3	328.7	330.7
39.5°	325.6	323.6	324.1	324.5	326.1	328.3
40°	322.8	321.3	321.3	322.1	323.4	325.5
40.5°	320.2	318.4	318.7	319.0	320.7	322.7
41°	317.6	315.8	315.9	316.6	318.1	320.0
41.5°	314.9	313.0	313.3	313.9	315.2	317.5
42°	312.1	310.5	310.5	311.1	312.4	314.4
42.5°	309.3	307.3	308.0	308.2	309.9	311.7
43°	306.7	304.8	304.8	305.6	307.0	309.0
43.5°	303.8	301.7	302.1	302.4	304.2	306.1
44°	300.8	299.2	299.3	299.6	301.2	303.1
44.5°	297.9	296.3	296.5	296.9	298.4	300.3

TEST NUMBER: P855595
 CATALOG NUMBER: HLS9129FS1EWH-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	295.1	293.3	293.3	294.0	295.5	297.2
45.5°	292.4	290.2	290.7	291.1	292.7	294.5
46°	289.4	287.5	287.6	287.9	289.6	291.4
46.5°	286.6	284.5	284.7	285.2	286.4	288.3
47°	283.4	281.7	281.8	282.1	283.7	285.3
47.5°	280.3	278.3	278.6	279.1	280.3	282.2
48°	277.5	275.6	275.5	276.0	277.4	279.2
48.5°	274.5	272.5	272.6	273.1	274.4	276.1
49°	271.3	269.4	269.6	269.9	271.3	273.1
49.5°	268.2	266.3	266.3	266.8	268.1	269.8
50°	265.1	263.1	263.4	263.6	265.2	266.5
50.5°	262.0	259.9	260.0	260.5	261.7	263.4
51°	258.9	257.0	256.9	257.5	258.5	260.1
51.5°	255.9	253.8	253.8	254.2	255.4	256.8
52°	252.6	250.5	250.7	251.0	252.4	253.8
52.5°	249.2	247.2	247.1	247.7	249.0	250.5
53°	246.2	244.0	244.2	244.5	245.6	246.9
53.5°	243.0	240.8	240.8	241.1	242.4	243.6
54°	239.6	237.6	237.6	237.9	239.1	240.4
54.5°	236.4	234.2	234.1	234.7	235.7	236.9
55°	233.1	231.0	231.0	231.4	232.6	233.5
55.5°	229.8	227.6	227.6	227.9	229.0	230.2
56°	226.4	224.4	224.3	224.7	225.6	226.8
56.5°	223.2	221.2	220.8	221.2	222.4	223.2
57°	219.7	217.6	217.5	217.8	218.8	219.9
57.5°	216.3	214.3	214.2	214.5	215.4	216.4
58°	213.0	211.0	210.8	211.1	212.1	212.9
58.5°	209.7	207.5	207.3	207.8	208.5	209.4
59°	206.2	204.2	204.1	204.3	205.1	206.0
59.5°	202.9	200.7	200.5	200.7	201.9	202.4
60°	199.4	197.4	197.1	197.4	198.2	199.0
60.5°	196.2	194.0	193.8	193.8	194.7	195.4
61°	192.6	190.5	190.4	190.6	191.3	191.8
61.5°	189.2	187.0	186.8	187.0	187.8	188.4
62°	185.7	183.7	183.5	183.7	184.4	184.9
62.5°	182.4	180.2	179.9	180.1	180.9	181.3
63°	178.9	176.9	176.6	176.9	177.4	177.9
63.5°	175.5	173.4	173.1	173.3	173.8	174.4
64°	172.0	169.9	169.8	169.8	170.4	170.8
64.5°	168.6	166.5	166.3	166.4	167.0	167.3
65°	165.1	163.2	162.8	163.1	163.5	163.8
65.5°	161.9	159.7	159.5	159.5	160.1	160.3
66°	158.5	156.4	156.1	156.1	156.7	156.8
66.5°	155.0	152.8	152.6	152.7	153.1	153.5
67°	151.7	149.8	149.4	149.3	149.8	149.9

TEST NUMBER: P855595
 CATALOG NUMBER: HLS9129FS1EWH-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	148.3	146.3	146.0	146.0	146.4	146.5
68°	144.9	143.0	142.6	142.7	143.0	143.2
68.5°	141.6	139.6	139.3	139.4	139.6	139.8
69°	138.4	136.4	136.1	136.2	136.5	136.4
69.5°	135.1	133.1	132.7	132.7	133.0	133.0
70°	131.7	129.8	129.6	129.5	129.7	129.7
70.5°	128.5	126.6	126.2	126.2	126.5	126.3
71°	125.3	123.4	123.1	123.2	123.4	123.2
71.5°	122.1	120.2	119.9	119.9	120.1	120.0
72°	119.0	117.2	116.9	116.6	116.9	116.8
72.5°	115.8	114.0	113.5	113.6	113.7	113.5
73°	112.6	110.8	110.5	110.5	110.6	110.3
73.5°	109.6	107.8	107.5	107.5	107.6	107.3
74°	106.5	104.8	104.5	104.5	104.5	104.2
74.5°	103.5	101.8	101.5	101.5	101.5	101.1
75°	100.6	98.8	98.5	98.5	98.5	98.2
75.5°	97.7	95.9	95.6	95.6	95.6	95.2
76°	94.7	93.1	92.7	92.7	92.6	92.3
76.5°	91.8	90.2	89.9	89.8	89.8	89.2
77°	89.0	87.3	87.1	87.0	86.9	86.4
77.5°	86.3	84.6	84.4	84.3	84.2	83.7
78°	83.5	81.8	81.6	81.5	81.4	81.0
78.5°	80.8	79.2	78.9	78.8	78.8	78.2
79°	78.0	76.6	76.3	76.1	76.0	75.4
79.5°	75.4	73.8	73.6	73.5	73.4	72.9
80°	72.8	71.3	71.1	71.0	70.9	70.2
80.5°	70.1	68.8	68.6	68.6	68.3	67.8
81°	67.7	66.3	66.1	66.0	65.9	65.2
81.5°	65.2	63.8	63.6	63.5	63.4	62.8
82°	62.6	61.4	61.3	61.2	61.1	60.3
82.5°	60.2	59.1	59.0	58.9	58.6	58.0
83°	58.0	56.7	56.6	56.5	56.3	55.6
83.5°	55.6	54.4	54.4	54.3	54.1	53.4
84°	53.4	52.2	52.2	52.1	51.9	51.2
84.5°	51.2	50.1	50.1	50.0	49.8	48.9
85°	49.0	47.9	47.9	47.8	47.6	46.8
85.5°	46.8	45.9	45.9	45.8	45.5	44.7
86°	44.8	43.8	43.9	43.8	43.5	42.6
86.5°	42.7	41.8	41.9	41.8	41.4	40.6
87°	40.7	39.9	39.9	39.9	39.5	38.7
87.5°	38.8	38.1	38.1	38.0	37.7	37.1
88°	36.9	36.3	36.4	36.3	36.0	35.2
88.5°	35.1	34.6	34.6	34.5	34.2	33.4
89°	33.3	32.9	32.9	32.8	32.5	31.6
89.5°	31.5	31.1	31.2	31.1	30.7	29.7

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


NVLAP Lab Code: 200050-0



TEST NUMBER: P855595
CATALOG NUMBER: HLS9129FS1EWH-3500K

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)