

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: P855590

Luminaire Tested: **HLS6099FS1EWH-3500K**

Issue Date: 7/16/2024

Tested By:

Approved By:



Cooper Lighting Solutions laboratories have been accredited by National Voluntary Laboratory Accreditation Program (NVLAP) that it adheres to the requirements of ISO/IEC 17025:2005 and appropriate IESNA test methods. This report must not be used to claim product certification, approval or endorsement by NVLAP, NIST or any agency of the Federal Government. Results contained in this report are valid for luminaire sample tested, as supplied by requestor. Information related to the luminaire tested has been supplied by requestor and can affect the validity of the test results. Report shall not be reproduced except in full without approval of Cooper Lighting Solutions Lighting Laboratory. Test performed at address noted above.

**Test Information**

Test Method: LM-79-08  
 Report Number: P855590  
 Test Lab:  
 Issue Date: 7/16/2024  
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
 Product Line: HALO  
 Catalog Number: HLS6099FS1EWH-3500K  
 Description: 6IN 900LM, 90CRI, DIMMING TO 10%, DAMP LOCATION  
 Light Source: SELECTABLE CCT 90CRI / 3500K CCT  
 Ballast/Driver: -

**Summary**

Lumens per Lamp: 925.48 (1 lamp)  
 Luminaire Lumens: 950.0 lumens  
 Efficiency: 102.6%  
 Efficacy: 88.0 lumens/watt  
 Spacing Criteria (0/90/45): 1.25 / 1.25 / 1.37  
 Luminous Opening: Circular (Dia: 0.5' x H: 0')  
 CIE Type: Direct

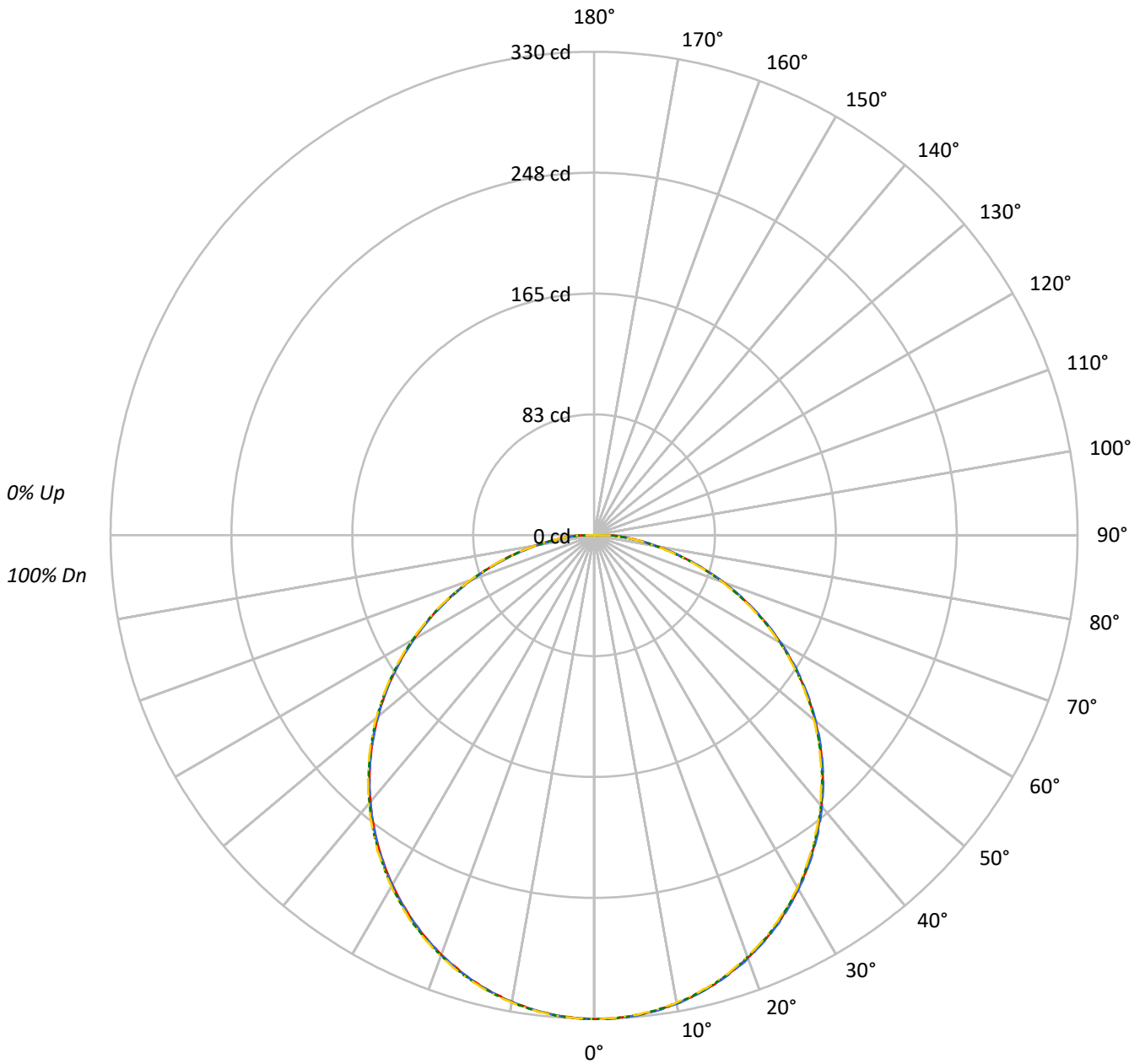
Input Watts (W): 10.8  
 Input Voltage (V): NR  
 Input Current (Ain): NR  
 Voltage Rise (V): NR  
 Power Factor: NR  
 Total Harmonic Distortion (THDi): NR  
 Frequency (hertz): 60  
 Stabilization Time: NR  
 Operation Time: NR  
 Ambient Temperature (°C): NR  
 Test Distance: 25 FT



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: P855590  
CATALOG NUMBER: HLS6099FS1EWH-3500K

### Luminous Intensity Polar Plot



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

TEST NUMBER: P855590  
 CATALOG NUMBER: HLS6099FS1EWH-3500K

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	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	103	103
1	111	106	102	97	108	104	100	96	99	96	93	95	93	90	92	89	87	85	85	85	85
2	101	92	85	79	98	90	84	78	87	81	76	83	79	74	80	76	73	71	71	71	71
3	92	81	72	66	89	79	71	65	76	69	64	73	68	63	71	66	62	59	59	59	59
4	84	72	62	55	82	70	62	55	68	60	54	65	59	53	63	57	53	50	50	50	50
5	77	64	55	48	75	63	54	47	61	53	47	59	52	46	57	51	46	44	44	44	44
6	71	58	48	42	69	57	48	41	55	47	41	53	46	41	51	45	40	38	38	38	38
7	66	52	43	37	64	51	43	37	50	42	36	48	41	36	47	41	36	34	34	34	34
8	62	48	39	33	60	47	38	33	45	38	32	44	37	32	43	37	32	30	30	30	30
9	58	44	35	29	56	43	35	29	42	34	29	41	34	29	40	33	29	27	27	27	27
10	54	40	32	27	53	40	32	27	39	31	26	38	31	26	37	31	26	24	24	24	24

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

	0°	90°	180°	270°
0°	18107	18107	18107	18107
5°	18105	18088	18066	18083
10°	18064	18052	17991	18008
15°	18014	17991	17900	17946
20°	17910	17875	17776	17811
25°	17783	17759	17626	17687
30°	17648	17591	17427	17503
35°	17474	17433	17233	17286
40°	17297	17225	16996	17061
45°	17072	17017	16730	16816
50°	16810	16750	16409	16503
55°	16506	16468	16047	16143
60°	16128	16073	15591	15700
65°	15644	15592	15034	15099
70°	15035	14938	14313	14313
75°	14339	14234	13471	13386
80°	13859	13575	12817	12470
85°	15536	14655	13775	13146

TEST NUMBER: P855590  
 CATALOG NUMBER: HLS6099FS1EWH-3500K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	31.2	3.3	3.4
10°-20°	89.3	9.4	9.6
20°-30°	134.9	14.2	14.6
30°-40°	162.3	17.1	17.5
40°-50°	168.2	17.7	18.2
50°-60°	152.2	16.0	16.5
60°-70°	116.9	12.3	12.6
70°-80°	69.4	7.3	7.5
80°-90°	25.6	2.7	2.8
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°	255.5	26.9	27.6
0°-40°	417.7	44.0	45.1
0°-60°	738.2	77.7	79.8
0°-90°	950.0	100.0	102.6
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°	950.0	100.0	102.6

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	330	330	330	330	330	
5°	329	329	328	329	329	31
15°	317	317	315	316	317	89
25°	294	294	291	292	294	136
35°	261	260	258	258	261	163
45°	220	220	216	217	220	170
55°	173	172	168	169	173	154
65°	121	120	116	116	121	119
75°	68	67	64	63	68	72
85°	25	23	22	21	25	28
90°	0	0	0	0	0	

TEST NUMBER: P855590  
 CATALOG NUMBER: HLS6099FS1EWH-3500K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	330.3	330.3	330.3	330.3	330.3	330.3	330.3	330.3	330.3	330.3	330.3
0.5°	330.3	330.4	330.4	330.6	330.2	330.4	330.4	330.3	330.2	330.0	330.0
1°	330.3	330.0	330.5	330.8	330.3	330.6	330.2	330.3	330.0	330.2	330.3
1.5°	330.3	329.9	330.2	330.5	330.2	330.4	329.7	330.0	329.9	329.7	330.0
2°	330.0	330.0	330.2	330.2	330.0	330.0	329.9	330.2	329.9	329.6	329.8
2.5°	330.2	329.9	330.0	330.4	330.2	330.3	329.8	329.9	329.6	329.8	329.7
3°	329.7	329.8	329.9	330.2	329.6	330.0	329.6	329.9	329.3	329.4	329.4
3.5°	329.5	329.7	329.7	329.9	329.4	329.6	329.4	329.3	329.3	329.2	329.2
4°	329.5	329.3	329.6	330.0	329.4	329.6	329.1	329.2	329.1	329.0	329.1
4.5°	329.3	329.0	329.3	329.4	329.1	329.3	328.7	329.3	328.8	328.4	328.7
5°	329.0	328.9	329.2	329.2	328.7	328.9	328.8	328.8	328.3	328.2	328.3
5.5°	328.8	328.7	328.8	329.2	328.6	328.8	328.2	328.4	327.8	328.2	328.2
6°	328.3	328.4	328.4	328.5	328.2	328.2	327.7	328.3	327.5	327.4	327.5
6.5°	327.8	328.0	328.0	328.2	327.6	328.0	327.5	327.4	327.4	327.1	327.1
7°	327.5	327.5	327.7	328.2	327.4	327.6	327.0	327.4	326.7	326.6	326.7
7.5°	327.3	327.1	327.4	327.3	326.9	326.9	326.5	326.9	326.2	325.9	326.3
8°	326.7	326.7	327.0	326.8	326.3	326.5	326.3	326.4	325.9	325.4	325.8
8.5°	326.1	326.2	326.5	326.5	326.1	326.2	325.6	326.0	325.0	325.2	325.4
9°	325.8	325.8	325.8	326.0	325.4	325.4	325.0	325.3	324.5	324.6	324.7
9.5°	325.0	325.2	325.3	325.2	324.6	325.1	324.8	324.4	324.2	324.0	324.0
10°	324.5	324.5	324.9	325.1	324.3	324.3	324.0	324.4	323.2	323.1	323.4
10.5°	324.0	324.0	324.3	324.0	323.8	323.7	323.1	323.4	322.8	322.5	322.9
11°	323.2	323.3	323.5	323.4	322.9	323.2	322.9	322.8	322.3	322.0	322.1
11.5°	322.6	322.7	322.9	323.0	322.5	322.5	322.1	322.1	321.1	321.1	321.3
12°	322.2	322.2	322.1	322.3	321.8	321.7	321.2	321.3	320.4	320.5	320.7
12.5°	321.0	321.5	321.5	321.3	320.7	321.2	320.6	320.7	320.0	319.8	319.9
13°	320.4	320.5	320.8	321.0	320.2	320.0	319.8	319.8	318.8	318.7	319.0
13.5°	319.8	319.8	320.0	320.0	319.5	319.3	318.7	319.1	318.1	318.2	318.3
14°	318.9	319.4	319.1	319.0	318.4	318.6	318.3	318.3	317.6	317.0	317.3
14.5°	318.1	318.1	318.4	318.5	317.7	317.8	317.3	317.2	316.2	316.2	316.4
15°	317.4	317.5	317.3	317.6	317.0	316.8	316.4	316.6	315.4	315.7	315.7
15.5°	316.1	316.5	316.3	316.4	315.8	315.8	315.4	315.5	314.7	314.4	314.5
16°	315.3	315.5	315.7	315.8	315.0	314.8	314.4	314.5	313.5	313.3	313.6
16.5°	314.4	314.5	314.7	314.6	314.1	314.2	313.4	313.7	312.5	312.6	312.6
17°	313.5	313.9	313.7	313.6	313.0	313.0	312.9	312.5	311.6	311.5	311.4
17.5°	312.3	312.4	312.9	313.0	312.1	312.2	311.6	311.6	310.2	310.2	310.4
18°	311.3	311.7	311.7	311.7	310.9	311.0	310.4	310.5	309.0	309.4	309.5
18.5°	310.2	310.7	310.5	310.5	309.6	309.7	309.3	309.4	308.3	308.0	308.2
19°	309.1	309.4	309.6	309.6	309.0	308.9	308.2	308.5	307.1	306.8	307.0
19.5°	308.0	308.1	308.6	308.5	307.6	307.6	307.2	307.1	305.8	305.9	305.9
20°	307.0	307.4	307.2	307.2	306.4	306.6	306.0	305.9	304.7	304.7	305.0
20.5°	305.7	306.0	306.1	306.2	305.4	305.5	304.7	304.9	303.4	303.2	303.6
21°	304.6	304.9	305.0	304.9	304.0	303.9	303.6	303.5	302.0	302.4	302.3
21.5°	303.4	303.7	303.5	303.7	302.8	302.8	302.4	302.5	301.0	300.8	301.1
22°	302.0	302.4	302.4	302.6	301.7	301.7	301.0	300.9	299.6	299.3	299.6

TEST NUMBER: P855590  
 CATALOG NUMBER: HLS6099FS1EWH-3500K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	300.7	300.9	301.2	301.0	300.2	300.3	299.7	299.6	298.2	298.5	298.4
23°	299.6	300.1	299.9	299.7	299.0	298.9	298.4	298.6	296.9	297.0	297.2
23.5°	298.2	298.7	298.7	298.7	297.7	297.7	297.1	296.9	295.6	295.5	295.8
24°	296.8	297.1	297.3	297.2	296.3	296.2	296.0	295.8	293.9	294.2	294.1
24.5°	295.6	295.9	295.6	296.0	294.7	295.0	294.2	294.3	292.6	292.5	292.9
25°	294.0	294.5	294.4	294.4	293.6	293.4	292.7	292.6	291.4	291.2	291.4
25.5°	292.5	292.7	293.1	292.7	292.0	292.0	291.7	291.5	289.8	290.1	289.8
26°	291.3	291.5	291.5	291.6	290.6	290.8	289.9	290.0	288.3	288.3	288.4
26.5°	289.6	290.1	290.3	290.1	289.1	289.0	288.4	288.5	286.5	286.6	286.9
27°	288.1	288.4	288.6	288.4	287.5	287.4	287.2	287.0	285.0	285.3	285.3
27.5°	286.6	287.1	287.0	287.2	286.1	286.2	285.4	285.2	283.6	283.7	284.0
28°	285.2	285.7	285.6	285.5	284.5	284.3	283.8	284.0	282.0	281.9	282.1
28.5°	283.4	283.6	284.0	283.6	282.9	282.9	282.5	282.2	280.4	280.6	280.4
29°	282.1	282.2	282.5	282.3	281.5	281.3	280.7	280.5	278.8	278.7	279.0
29.5°	280.4	280.8	281.0	280.8	279.6	279.5	279.1	279.1	276.9	277.2	277.3
30°	278.8	279.0	279.1	279.0	277.9	277.9	277.7	277.2	275.3	275.5	275.5
30.5°	277.0	277.3	277.3	277.4	276.4	276.6	275.6	275.5	273.6	273.6	273.9
31°	275.3	275.8	275.8	275.5	274.9	274.6	274.1	274.1	271.9	271.8	272.2
31.5°	273.4	273.7	274.2	273.9	273.0	273.0	272.5	272.1	270.2	270.4	270.2
32°	272.0	272.2	272.3	272.4	271.4	271.1	270.6	270.4	268.6	268.4	268.6
32.5°	270.2	270.6	270.6	270.5	269.4	269.2	268.8	268.8	266.6	266.7	266.9
33°	268.4	268.6	268.8	268.7	267.7	267.5	267.2	266.8	264.7	264.8	264.9
33.5°	266.6	266.7	267.1	267.1	266.1	265.9	265.2	265.3	263.1	262.9	263.2
34°	264.8	265.4	265.4	265.2	264.2	264.0	263.5	263.3	261.1	261.1	261.5
34.5°	262.8	263.1	263.5	263.3	262.3	262.1	261.6	261.4	259.4	259.5	259.3
35°	261.1	261.4	261.5	261.5	260.5	260.0	259.7	259.6	257.5	257.3	257.4
35.5°	259.4	259.7	259.8	259.6	258.7	258.4	257.8	257.6	255.5	255.5	255.7
36°	257.4	257.7	257.7	257.8	256.7	256.4	256.0	255.8	253.5	253.7	253.6
36.5°	255.4	255.6	255.9	255.8	254.8	254.6	253.9	253.8	251.7	251.6	251.7
37°	253.6	253.9	254.1	253.8	252.8	252.9	252.2	251.8	249.6	249.5	249.8
37.5°	251.4	251.6	252.0	252.0	251.0	250.7	250.3	250.1	247.6	247.7	247.6
38°	249.5	249.8	250.1	250.1	248.9	248.5	248.3	247.7	245.6	245.6	245.6
38.5°	247.6	248.0	248.1	248.1	246.8	246.8	246.2	245.9	243.8	243.7	243.8
39°	245.5	245.9	246.0	246.2	245.0	244.7	244.2	244.2	241.6	241.7	241.6
39.5°	243.4	243.7	244.1	243.9	243.0	242.6	242.0	241.8	239.6	239.5	239.6
40°	241.7	242.0	242.1	242.0	240.7	240.6	240.2	239.8	237.5	237.3	237.7
40.5°	239.3	239.7	239.8	240.1	238.9	238.5	238.1	237.7	235.3	235.5	235.4
41°	237.3	237.6	238.0	237.7	236.6	236.3	235.9	235.5	233.3	233.2	233.2
41.5°	235.3	235.6	235.7	235.8	234.5	234.5	233.8	233.6	231.3	231.1	231.3
42°	233.2	233.5	233.5	233.8	232.5	232.2	231.7	231.4	229.0	229.1	229.1
42.5°	231.0	231.3	231.6	231.3	230.3	229.9	229.5	229.4	226.8	226.7	226.9
43°	229.0	229.3	229.4	229.4	228.1	228.0	227.5	227.1	224.7	224.5	224.8
43.5°	226.7	226.9	227.0	227.3	226.3	225.7	225.3	224.9	222.4	222.5	222.4
44°	224.5	224.6	225.1	224.9	223.8	223.4	223.0	222.9	220.2	220.2	220.1
44.5°	222.2	222.6	222.7	222.8	221.5	221.3	220.9	220.5	218.1	217.9	218.2

TEST NUMBER: P855590  
 CATALOG NUMBER: HLS6099FS1EWH-3500K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	220.2	220.6	220.5	220.7	219.5	219.1	218.8	218.4	215.8	215.8	215.8
45.5°	217.8	218.1	218.5	218.3	217.2	216.9	216.3	216.2	213.5	213.5	213.5
46°	215.7	216.0	216.0	216.3	214.9	214.6	214.3	213.7	211.4	210.9	211.3
46.5°	213.4	213.7	213.9	213.9	212.7	212.3	212.0	211.7	209.1	209.0	208.8
47°	211.1	211.3	211.7	211.6	210.3	210.0	209.7	209.4	206.5	206.5	206.5
47.5°	208.7	209.1	209.3	209.4	208.1	208.0	207.4	207.0	204.3	204.2	204.3
48°	206.5	206.8	207.1	207.1	205.9	205.5	205.2	204.8	202.1	201.9	201.9
48.5°	204.0	204.3	204.7	204.6	203.4	203.2	202.6	202.2	199.6	199.6	199.5
49°	201.8	202.1	202.3	202.5	201.2	200.8	200.5	200.0	197.3	197.0	197.3
49.5°	199.6	199.8	200.1	200.0	198.8	198.5	198.2	197.7	195.0	194.9	194.7
50°	197.1	197.2	197.6	197.7	196.4	196.2	195.7	195.3	192.4	192.3	192.3
50.5°	194.6	194.9	195.1	195.1	194.2	193.9	193.3	192.9	190.1	190.0	190.0
51°	192.3	192.6	192.8	192.7	191.8	191.3	191.0	190.4	187.9	187.7	187.7
51.5°	189.9	190.1	190.5	190.5	189.2	189.0	188.3	188.1	185.3	185.2	185.3
52°	187.6	187.8	188.0	188.1	187.0	186.5	186.1	185.7	182.7	182.5	182.7
52.5°	185.2	185.3	185.8	185.7	184.4	184.0	183.7	183.2	180.4	180.3	180.2
53°	182.5	182.7	183.2	183.4	181.9	181.7	181.3	180.9	177.9	177.7	177.7
53.5°	180.1	180.3	180.6	180.6	179.6	179.2	178.8	178.2	175.5	175.3	175.3
54°	177.7	177.9	178.2	178.2	177.0	176.7	176.5	175.7	173.0	172.8	172.8
54.5°	175.3	175.4	175.6	175.9	174.7	174.4	173.6	173.4	170.5	170.2	170.3
55°	172.7	173.0	173.2	173.3	172.3	171.6	171.5	170.8	167.9	167.6	167.8
55.5°	170.3	170.4	170.8	170.8	169.4	169.2	168.9	168.4	165.3	165.3	165.2
56°	167.5	167.8	168.1	168.4	166.9	166.8	166.3	165.8	163.0	162.6	162.5
56.5°	165.1	165.3	165.7	165.7	164.6	164.2	163.8	163.2	160.2	160.1	160.0
57°	162.6	162.8	163.2	163.1	162.0	161.7	161.3	160.7	157.7	157.6	157.4
57.5°	160.0	160.2	160.5	160.8	159.6	159.2	158.5	158.2	155.3	155.0	155.0
58°	157.4	157.7	158.0	158.1	156.7	156.4	156.2	155.6	152.7	152.4	152.4
58.5°	155.0	155.1	155.5	155.5	154.2	153.9	153.7	153.1	149.9	149.9	149.6
59°	152.2	152.4	152.8	153.1	151.8	151.4	151.0	150.3	147.4	147.2	146.9
59.5°	149.6	149.9	150.2	150.3	149.2	148.8	148.5	147.9	144.8	144.6	144.5
60°	147.1	147.3	147.7	147.7	146.6	146.2	145.7	145.3	142.2	142.0	141.9
60.5°	144.5	144.7	145.0	145.2	144.0	143.5	143.1	142.6	139.7	139.2	139.2
61°	141.9	142.1	142.4	142.5	141.2	140.9	140.6	140.1	137.0	136.7	136.6
61.5°	139.3	139.3	139.8	140.0	138.7	138.4	138.0	137.3	134.3	134.2	133.9
62°	136.5	136.8	137.1	137.3	136.1	135.8	135.4	134.7	131.7	131.4	131.2
62.5°	133.9	134.2	134.5	134.6	133.4	133.0	132.6	132.2	129.1	128.6	128.7
63°	131.2	131.5	131.9	132.0	130.7	130.4	130.0	129.5	126.4	126.1	125.9
63.5°	128.7	128.9	129.2	129.4	128.1	127.8	127.3	126.9	123.7	123.4	123.2
64°	126.0	126.2	126.5	126.7	125.4	125.1	124.8	124.1	121.1	120.8	120.7
64.5°	123.3	123.5	123.7	124.0	122.7	122.5	121.9	121.5	118.4	118.2	117.9
65°	120.6	120.8	121.1	121.4	120.2	119.7	119.4	118.9	115.9	115.4	115.1
65.5°	117.9	118.2	118.6	118.7	117.4	117.1	116.8	116.3	113.2	112.8	112.6
66°	115.2	115.5	115.9	116.0	114.8	114.5	114.1	113.5	110.4	110.1	109.8
66.5°	112.6	112.8	113.1	113.3	112.0	111.7	111.3	110.9	107.8	107.4	107.0
67°	109.9	110.1	110.5	110.6	109.2	109.0	108.7	108.2	105.3	104.7	104.5



TEST NUMBER: P855590  
 CATALOG NUMBER: HLS6099FS1EWH-3500K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	107.2	107.4	107.7	107.9	106.7	106.4	106.0	105.6	102.4	102.1	101.8
68°	104.5	104.7	105.1	105.3	104.0	103.6	103.4	102.9	99.8	99.5	99.1
68.5°	101.9	102.1	102.5	102.5	101.3	101.1	100.8	100.2	97.2	96.8	96.5
69°	99.1	99.4	99.8	99.8	98.7	98.3	97.9	97.6	94.5	94.0	93.7
69.5°	96.6	96.7	97.1	97.2	95.9	95.6	95.3	94.9	91.8	91.5	91.0
70°	93.8	93.9	94.4	94.5	93.2	93.1	92.8	92.3	89.3	88.9	88.5
70.5°	91.2	91.3	91.7	91.8	90.7	90.4	90.1	89.7	86.7	86.3	85.9
71°	88.5	88.7	89.0	89.1	88.1	87.8	87.4	87.1	84.1	83.7	83.2
71.5°	85.8	86.1	86.4	86.4	85.3	85.1	84.9	84.5	81.5	81.0	80.6
72°	83.2	83.5	83.8	83.9	82.7	82.5	82.3	81.9	78.8	78.4	78.1
72.5°	80.6	80.8	81.0	81.3	80.1	79.9	79.7	79.3	76.2	75.8	75.3
73°	78.0	78.2	78.5	78.5	77.5	77.3	77.1	76.6	73.8	73.3	72.8
73.5°	75.4	75.6	75.9	76.0	75.0	74.6	74.3	74.1	71.1	70.8	70.2
74°	72.9	73.0	73.3	73.4	72.2	72.1	71.9	71.6	68.6	68.3	67.7
74.5°	70.2	70.6	70.8	70.8	69.7	69.5	69.3	69.0	66.2	65.6	65.1
75°	67.7	67.9	68.1	68.3	67.2	66.9	66.8	66.5	63.6	63.2	62.6
75.5°	65.3	65.4	65.6	65.6	64.6	64.5	64.3	64.1	61.2	60.7	60.1
76°	62.7	62.9	63.2	63.1	62.1	61.9	61.8	61.5	58.8	58.2	57.7
76.5°	60.3	60.4	60.6	60.6	59.6	59.4	59.2	59.1	56.3	55.9	55.4
77°	57.9	58.1	58.1	58.2	57.1	56.9	56.9	56.7	54.0	53.5	52.8
77.5°	55.5	55.7	55.8	55.7	54.7	54.5	54.4	54.3	51.7	51.1	50.4
78°	53.1	53.3	53.4	53.4	52.2	52.2	52.1	52.0	49.4	48.8	48.2
78.5°	50.8	50.8	51.0	51.0	49.8	49.8	49.7	49.6	47.0	46.6	45.8
79°	48.4	48.6	48.8	48.6	47.6	47.5	47.4	47.4	44.9	44.3	43.6
79.5°	46.2	46.3	46.3	46.3	45.3	45.2	45.1	45.1	42.6	42.0	41.4
80°	43.9	44.1	44.1	44.0	43.0	43.0	43.0	42.9	40.6	39.9	39.3
80.5°	41.8	41.8	41.8	41.8	40.8	40.8	40.8	40.8	38.4	37.8	37.2
81°	39.6	39.7	39.8	39.6	38.6	38.7	38.7	38.7	36.4	35.9	35.1
81.5°	37.6	37.6	37.7	37.5	36.5	36.5	36.5	36.6	34.4	33.8	33.1
82°	35.8	35.8	35.8	35.5	34.5	34.4	34.5	34.6	32.5	31.9	31.1
82.5°	33.9	33.9	33.8	33.7	32.4	32.4	32.5	32.5	30.5	30.0	29.3
83°	32.0	32.0	31.9	31.7	30.4	30.5	30.6	30.7	28.7	28.1	27.5
83.5°	30.0	30.1	29.9	29.7	28.5	28.6	28.7	28.8	26.9	26.4	25.7
84°	28.1	28.1	28.0	27.7	26.7	26.8	26.9	27.0	25.2	24.7	24.0
84.5°	26.4	26.3	26.2	26.0	25.0	25.1	25.2	25.4	23.6	23.1	22.3
85°	24.7	24.7	24.5	24.2	23.3	23.3	23.5	23.7	21.9	21.5	20.8
85.5°	23.1	23.1	22.8	22.5	21.6	21.7	21.8	22.0	20.3	19.9	19.3
86°	21.5	21.5	21.2	20.9	19.9	20.1	20.3	20.5	19.0	18.5	17.8
86.5°	20.0	19.9	19.7	19.3	18.5	18.6	18.9	19.1	17.5	17.1	16.5
87°	18.6	18.6	18.1	17.8	17.0	17.2	17.4	17.6	16.1	15.7	15.2
87.5°	17.2	17.1	16.8	16.5	15.6	15.8	16.0	16.3	14.9	14.5	13.9
88°	15.9	15.8	15.4	15.1	14.4	14.5	14.8	15.0	13.6	13.2	12.8
88.5°	14.6	14.5	14.2	13.8	13.1	13.2	13.5	13.7	12.5	12.1	11.6
89°	13.4	13.2	13.0	12.6	12.0	12.1	12.4	12.6	11.3	11.0	10.6
89.5°	12.2	12.2	11.8	11.4	10.8	10.9	11.2	11.4	10.2	10.1	9.8

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



TEST NUMBER: P855590  
CATALOG NUMBER: HLS6099FS1EWH-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: P855590  
 CATALOG NUMBER: HLS6099FS1EWH-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	330.3	330.3	330.3	330.3	330.3	330.3
0.5°	330.4	330.3	330.4	330.0	330.2	330.3
1°	330.3	330.2	330.2	330.2	330.4	330.3
1.5°	330.3	329.9	330.5	329.8	330.2	330.3
2°	330.0	329.9	330.2	330.0	330.0	330.0
2.5°	329.9	329.7	329.8	329.7	330.0	330.2
3°	329.8	329.3	329.9	329.6	329.8	329.7
3.5°	329.3	329.3	329.5	329.3	329.5	329.5
4°	329.1	329.1	329.2	329.3	329.4	329.5
4.5°	329.0	328.8	329.3	328.7	328.9	329.3
5°	328.6	328.6	328.7	328.7	328.6	329.0
5.5°	328.4	327.8	328.5	328.3	328.5	328.8
6°	328.2	327.6	328.0	327.8	328.2	328.3
6.5°	327.2	327.4	327.6	327.5	327.5	327.8
7°	326.9	326.9	327.4	327.0	327.4	327.5
7.5°	326.5	326.5	326.7	326.5	326.6	327.3
8°	325.9	326.0	326.4	326.3	326.2	326.7
8.5°	325.5	325.2	326.0	325.5	325.8	326.1
9°	325.0	325.0	325.1	325.2	325.1	325.8
9.5°	324.2	324.3	324.8	324.6	324.6	325.0
10°	323.5	323.5	324.1	323.8	324.0	324.5
10.5°	323.0	323.1	323.3	323.2	323.0	324.0
11°	322.3	322.4	323.1	322.7	322.8	323.2
11.5°	321.8	321.5	321.9	322.0	322.2	322.6
12°	320.7	321.1	321.1	321.5	321.3	322.2
12.5°	320.0	320.2	320.8	320.4	320.7	321.0
13°	319.6	319.3	319.7	319.6	319.8	320.4
13.5°	318.5	318.7	318.9	318.9	318.8	319.8
14°	317.5	317.7	318.3	318.1	318.3	318.9
14.5°	316.9	316.7	317.0	317.0	317.3	318.1
15°	315.7	316.2	316.3	316.4	316.3	317.4
15.5°	314.8	315.0	315.5	315.3	315.7	316.1
16°	314.0	313.9	314.5	314.3	314.4	315.3
16.5°	312.8	313.3	313.6	313.5	313.4	314.4
17°	311.7	312.0	312.3	312.3	312.6	313.5
17.5°	311.0	310.9	311.3	311.4	311.5	312.3
18°	309.6	310.1	310.5	310.5	310.4	311.3
18.5°	308.3	308.9	309.3	309.1	309.4	310.2
19°	307.5	307.6	308.1	308.0	308.0	309.1
19.5°	306.2	306.6	307.0	307.1	307.0	308.0
20°	304.9	305.3	305.5	305.7	305.9	307.0
20.5°	303.7	304.2	304.6	304.5	304.6	305.7
21°	302.4	303.1	303.3	303.6	303.6	304.6
21.5°	301.3	301.6	302.1	302.1	302.2	303.4
22°	299.9	300.4	301.0	300.8	300.7	302.0

TEST NUMBER: P855590  
 CATALOG NUMBER: HLS6099FS1EWH-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	298.5	299.0	299.3	299.6	299.6	300.7
23°	297.4	297.7	297.9	298.2	298.2	299.6
23.5°	295.8	296.4	297.0	296.8	296.9	298.2
24°	294.4	294.9	295.2	295.6	295.6	296.8
24.5°	293.0	293.6	293.9	293.9	293.8	295.6
25°	291.6	292.4	292.5	292.5	292.6	294.0
25.5°	290.2	290.3	290.9	291.3	291.3	292.5
26°	288.5	289.1	289.6	289.7	289.5	291.3
26.5°	286.9	287.7	287.9	288.0	288.2	289.6
27°	285.7	286.2	286.5	286.5	286.6	288.1
27.5°	283.8	284.4	285.1	285.0	285.0	286.6
28°	282.2	283.2	283.2	283.5	283.7	285.2
28.5°	280.9	281.3	281.7	281.8	281.9	283.4
29°	279.0	279.6	280.1	280.1	280.2	282.1
29.5°	277.2	278.0	278.4	278.7	278.7	280.4
30°	275.8	276.5	276.8	276.9	276.8	278.8
30.5°	273.9	274.7	275.1	275.1	275.2	277.0
31°	272.3	273.1	273.2	273.5	273.6	275.3
31.5°	270.5	271.4	271.8	271.9	271.8	273.4
32°	268.5	269.4	269.8	270.0	270.2	272.0
32.5°	266.8	267.6	267.9	268.4	268.3	270.2
33°	265.3	265.9	266.4	266.4	266.4	268.4
33.5°	263.3	264.1	264.3	264.4	264.7	266.6
34°	261.5	262.3	262.4	262.7	262.7	264.8
34.5°	259.6	260.5	260.9	261.1	261.0	262.8
35°	257.7	258.3	258.8	259.0	259.3	261.1
35.5°	255.8	256.4	256.8	257.3	257.0	259.4
36°	253.9	254.8	255.0	255.2	255.1	257.4
36.5°	251.9	252.8	252.9	253.1	253.5	255.4
37°	250.2	250.7	251.0	251.4	251.3	253.6
37.5°	247.9	248.9	249.1	249.2	249.4	251.4
38°	246.0	246.7	246.9	247.2	247.4	249.5
38.5°	244.1	244.7	245.0	245.5	245.2	247.6
39°	241.9	242.7	243.0	243.2	243.2	245.5
39.5°	239.9	240.6	240.8	241.0	241.4	243.4
40°	237.8	238.4	238.8	239.3	239.0	241.7
40.5°	235.5	236.6	236.6	237.1	237.1	239.3
41°	233.5	234.2	234.5	234.9	235.1	237.3
41.5°	231.5	232.0	232.5	232.9	232.8	235.3
42°	229.1	230.2	230.1	230.6	230.8	233.2
42.5°	227.1	227.9	228.0	228.4	228.7	231.0
43°	224.7	225.6	226.0	226.4	226.3	229.0
43.5°	222.4	223.6	223.7	224.1	224.3	226.7
44°	220.5	221.2	221.5	222.0	222.0	224.5
44.5°	218.2	219.0	219.3	219.8	219.8	222.2

TEST NUMBER: P855590  
 CATALOG NUMBER: HLS6099FS1EWH-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	215.8	216.9	216.9	217.3	217.6	220.2
45.5°	213.7	214.5	214.7	215.1	215.1	217.8
46°	211.3	212.4	212.5	212.9	212.9	215.7
46.5°	209.1	210.2	210.2	210.6	210.7	213.4
47°	206.6	207.7	208.1	208.3	208.3	211.1
47.5°	204.3	205.4	205.5	205.8	206.1	208.7
48°	202.0	203.1	203.2	203.6	203.7	206.5
48.5°	199.6	200.8	200.9	201.4	201.4	204.0
49°	197.2	198.4	198.6	198.9	199.1	201.8
49.5°	195.0	196.0	196.2	196.5	196.6	199.6
50°	192.4	193.5	193.8	194.2	194.4	197.1
50.5°	190.1	191.2	191.2	191.7	192.0	194.6
51°	187.8	188.8	189.0	189.2	189.5	192.3
51.5°	185.2	186.3	186.4	186.9	187.1	189.9
52°	182.7	183.9	184.1	184.3	184.6	187.6
52.5°	180.4	181.4	181.7	182.0	182.1	185.2
53°	177.7	178.9	179.1	179.6	179.7	182.5
53.5°	175.4	176.5	176.6	176.9	177.2	180.1
54°	172.9	173.9	174.3	174.5	174.7	177.7
54.5°	170.3	171.4	171.6	172.0	172.2	175.3
55°	167.9	168.9	169.2	169.4	169.6	172.7
55.5°	165.3	166.4	166.6	166.9	167.1	170.3
56°	162.6	163.8	164.0	164.5	164.6	167.5
56.5°	160.2	161.3	161.5	161.7	162.0	165.1
57°	157.5	158.7	158.9	159.3	159.6	162.6
57.5°	155.0	156.1	156.3	156.6	156.7	160.0
58°	152.4	153.5	153.7	154.0	154.3	157.4
58.5°	149.8	151.0	151.2	151.4	151.8	155.0
59°	147.1	148.4	148.5	148.9	149.0	152.2
59.5°	144.7	145.7	145.8	146.2	146.6	149.6
60°	141.9	143.2	143.3	143.6	144.0	147.1
60.5°	139.2	140.4	140.6	140.9	141.1	144.5
61°	136.7	137.8	138.0	138.4	138.6	141.9
61.5°	134.0	135.1	135.2	135.7	136.1	139.3
62°	131.3	132.4	132.6	132.9	133.3	136.5
62.5°	128.5	129.7	130.0	130.2	130.6	133.9
63°	125.8	127.3	127.4	127.7	128.1	131.2
63.5°	123.3	124.5	124.6	124.9	125.3	128.7
64°	120.6	121.7	121.9	122.4	122.7	126.0
64.5°	117.8	119.0	119.2	119.6	119.9	123.3
65°	115.2	116.4	116.6	116.9	117.3	120.6
65.5°	112.5	113.7	113.8	114.2	114.6	117.9
66°	109.8	111.0	111.1	111.6	112.0	115.2
66.5°	107.2	108.2	108.5	108.7	109.1	112.6
67°	104.3	105.5	105.8	106.2	106.5	109.9

TEST NUMBER: P855590  
 CATALOG NUMBER: HLS6099FS1EWH-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	101.7	102.9	103.1	103.4	103.9	107.2
68°	99.1	100.1	100.5	100.7	101.2	104.5
68.5°	96.2	97.5	97.7	98.1	98.4	101.9
69°	93.5	94.8	95.1	95.4	95.8	99.1
69.5°	91.0	92.1	92.3	92.7	93.1	96.6
70°	88.4	89.3	89.6	90.1	90.6	93.8
70.5°	85.8	86.7	86.9	87.3	87.8	91.2
71°	83.0	84.0	84.3	84.7	85.2	88.5
71.5°	80.4	81.3	81.7	82.1	82.5	85.8
72°	77.8	78.7	79.1	79.5	79.9	83.2
72.5°	75.1	76.1	76.3	76.7	77.4	80.6
73°	72.6	73.5	73.7	74.2	74.8	78.0
73.5°	69.9	70.8	71.1	71.5	72.1	75.4
74°	67.3	68.1	68.6	69.0	69.6	72.9
74.5°	64.8	65.7	66.1	66.5	67.1	70.2
75°	62.3	63.2	63.4	64.0	64.6	67.7
75.5°	59.8	60.6	61.0	61.4	62.1	65.3
76°	57.2	58.2	58.5	59.0	59.7	62.7
76.5°	54.8	55.7	56.0	56.5	57.1	60.3
77°	52.4	53.3	53.7	54.1	54.8	57.9
77.5°	50.0	50.8	51.3	51.8	52.4	55.5
78°	47.8	48.5	48.9	49.5	50.0	53.1
78.5°	45.4	46.2	46.6	47.2	47.8	50.8
79°	43.2	43.9	44.2	44.9	45.5	48.4
79.5°	40.9	41.7	42.0	42.6	43.3	46.2
80°	38.8	39.5	39.8	40.5	41.1	43.9
80.5°	36.7	37.4	37.7	38.4	39.0	41.8
81°	34.7	35.5	35.8	36.4	36.8	39.6
81.5°	32.6	33.6	33.8	34.5	34.9	37.6
82°	30.7	31.6	31.9	32.5	33.0	35.8
82.5°	28.7	29.6	29.9	30.6	31.1	33.9
83°	26.9	27.6	28.0	28.6	29.3	32.0
83.5°	25.3	25.9	26.2	26.7	27.5	30.0
84°	23.5	24.1	24.4	25.1	25.8	28.1
84.5°	21.8	22.5	22.8	23.4	24.1	26.4
85°	20.3	20.9	21.2	21.8	22.4	24.7
85.5°	18.8	19.4	19.6	20.2	20.9	23.1
86°	17.4	17.9	18.1	18.8	19.4	21.5
86.5°	16.0	16.6	16.8	17.3	17.9	20.0
87°	14.8	15.2	15.4	15.9	16.6	18.6
87.5°	13.5	13.9	14.2	14.7	15.3	17.2
88°	12.4	12.8	13.0	13.4	14.0	15.9
88.5°	11.2	11.6	11.8	12.3	12.9	14.6
89°	10.2	10.6	10.7	11.2	11.7	13.4
89.5°	9.3	9.5	9.8	10.2	10.7	12.2

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

  
NVLAP Lab Code: 200050-0



TEST NUMBER: P855590  
CATALOG NUMBER: HLS6099FS1EWH-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)