

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: P855589

Luminaire Tested: **HLS6099FS1EWH-3000K**

Issue Date: 7/16/2024

Tested By:

Approved By:



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**Test Information**

Test Method: LM-79-08  
 Report Number: P855589  
 Test Lab:  
 Issue Date: 7/16/2024  
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
 Product Line: HALO  
 Catalog Number: HLS6099FS1EWH-3000K  
 Description: 6IN 900LM, 90CRI, DIMMING TO 10%, DAMP LOCATION  
 Light Source: SELECTABLE CCT 90CRI / 3000K CCT  
 Ballast/Driver: -

**Summary**

Lumens per Lamp: 925.48 (1 lamp)  
 Luminaire Lumens: 935.0 lumens  
 Efficiency: 101.0%  
 Efficacy: 88.2 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

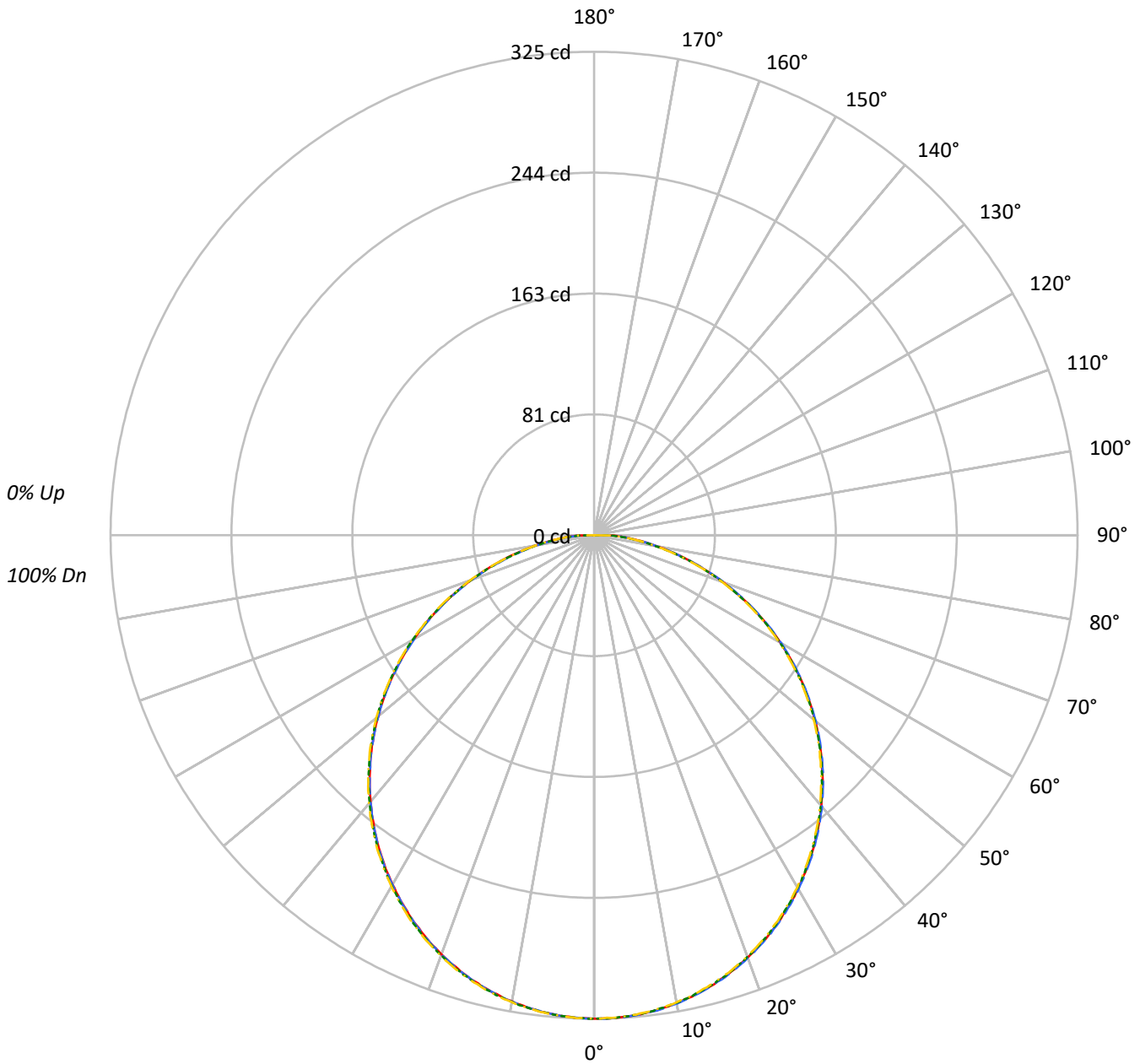
Input Watts (W): 10.6  
 Input Voltage (V): NR  
 Input Current (Ain): NR  
 Voltage Rise (V): NR  
 Power Factor: NR  
 Total Harmonic Distortion (THDi): NR  
 Frequency (hertz): 60  
 Stabilization Time: NR  
 Operation Time: NR  
 Ambient Temperature (°C): NR  
 Test Distance: 25 FT



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	120	120	120	120	117	117	117	117	112	112	112	107	107	107	103	103	103	101	101	101	101
1	109	104	100	96	107	102	98	94	98	94	91	94	91	89	90	88	86	84	84	84	84
2	99	91	84	78	97	89	82	77	85	80	75	82	77	73	79	75	72	69	69	69	69
3	90	80	71	64	88	78	70	64	75	68	63	72	66	62	70	65	61	58	58	58	58
4	83	70	61	55	80	69	61	54	67	59	53	64	58	53	62	56	52	50	50	50	50
5	76	63	54	47	74	62	53	47	60	52	46	58	51	46	56	50	45	43	43	43	43
6	70	57	47	41	68	56	47	41	54	46	40	52	45	40	50	44	40	37	37	37	37
7	65	51	42	36	63	50	42	36	49	41	36	47	41	35	46	40	35	33	33	33	33
8	61	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30	30	30	30
9	57	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27	27	27	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24	24	24	24

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

	0°	90°	180°	270°
0°	17817	17817	17817	17817
5°	17819	17802	17780	17797
10°	17780	17769	17707	17724
15°	17730	17707	17616	17662
20°	17624	17589	17496	17531
25°	17499	17475	17348	17408
30°	17370	17319	17155	17224
35°	17193	17159	16958	17019
40°	17025	16953	16724	16796
45°	16800	16754	16467	16552
50°	16545	16486	16153	16247
55°	16248	16200	15789	15885
60°	15876	15821	15339	15459
65°	15397	15345	14788	14852
70°	14810	14698	14089	14089
75°	14128	14001	13259	13175
80°	13638	13354	12596	12281
85°	15347	14404	13586	12894

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	30.7	3.3	3.3
10°-20°	87.9	9.4	9.5
20°-30°	132.8	14.2	14.3
30°-40°	159.7	17.1	17.3
40°-50°	165.5	17.7	17.9
50°-60°	149.8	16.0	16.2
60°-70°	115.1	12.3	12.4
70°-80°	68.3	7.3	7.4
80°-90°	25.1	2.7	2.7
90°-100°	0.0	0.0	0.0
100°-110°	0.0	0.0	0.0
110°-120°	0.0	0.0	0.0
120°-130°	0.0	0.0	0.0
130°-140°	0.0	0.0	0.0
140°-150°	0.0	0.0	0.0
150°-160°	0.0	0.0	0.0
160°-170°	0.0	0.0	0.0
170°-180°	0.0	0.0	0.0
0°-30°	251.4	26.9	27.2
0°-40°	411.1	44.0	44.4
0°-60°	726.5	77.7	78.5
0°-90°	935.0	100.0	101.0
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°	935.0	100.0	101.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	325	325	325	325	325	
5°	324	324	323	323	324	31
15°	312	312	310	311	312	88
25°	289	289	287	288	289	133
35°	257	256	253	254	257	161
45°	217	216	212	214	217	167
55°	170	170	165	166	170	152
65°	119	118	114	114	119	117
75°	67	66	63	62	67	71
85°	24	23	22	20	24	27
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°	325.0	325.0	325.0	325.0	325.0	325.0	325.0	325.0	325.0	325.0	325.0
0.5°	325.0	325.1	325.1	325.4	324.9	325.1	325.1	325.0	324.9	324.8	324.8
1°	325.0	324.8	325.3	325.6	325.0	325.4	324.9	325.0	324.8	324.9	325.0
1.5°	325.0	324.7	324.9	325.3	324.9	325.1	324.5	324.8	324.7	324.5	324.8
2°	324.8	324.8	324.9	324.9	324.8	324.8	324.7	324.9	324.7	324.4	324.6
2.5°	324.9	324.7	324.8	325.1	324.9	325.0	324.6	324.7	324.4	324.6	324.5
3°	324.5	324.6	324.7	324.9	324.4	324.8	324.4	324.7	324.1	324.2	324.2
3.5°	324.3	324.5	324.5	324.7	324.2	324.4	324.2	324.1	324.1	324.0	324.0
4°	324.3	324.1	324.4	324.8	324.2	324.4	323.9	324.0	323.9	323.8	323.9
4.5°	324.1	323.8	324.1	324.2	323.9	324.1	323.5	324.1	323.6	323.2	323.5
5°	323.8	323.7	324.0	324.0	323.5	323.7	323.6	323.6	323.1	323.0	323.1
5.5°	323.6	323.5	323.6	324.0	323.4	323.6	323.0	323.2	322.7	323.0	323.0
6°	323.1	323.2	323.2	323.3	323.0	323.0	322.6	323.1	322.4	322.3	322.4
6.5°	322.7	322.8	322.8	323.0	322.5	322.8	322.4	322.3	322.3	321.9	321.9
7°	322.4	322.4	322.6	323.0	322.3	322.5	321.8	322.3	321.5	321.4	321.5
7.5°	322.2	321.9	322.3	322.2	321.7	321.7	321.3	321.7	321.0	320.7	321.1
8°	321.5	321.5	321.8	321.6	321.1	321.3	321.1	321.2	320.7	320.3	320.6
8.5°	320.9	321.0	321.3	321.3	320.9	321.0	320.5	320.8	319.9	320.1	320.3
9°	320.6	320.6	320.6	320.8	320.3	320.3	319.9	320.2	319.4	319.5	319.6
9.5°	319.9	320.1	320.2	320.1	319.5	320.0	319.7	319.3	319.1	318.9	318.9
10°	319.4	319.4	319.8	320.0	319.2	319.2	318.9	319.3	318.1	318.0	318.3
10.5°	318.9	318.9	319.2	318.9	318.6	318.5	318.0	318.3	317.7	317.4	317.8
11°	318.1	318.2	318.4	318.3	317.8	318.1	317.8	317.7	317.2	316.9	317.0
11.5°	317.5	317.6	317.8	317.9	317.4	317.4	317.0	317.0	316.1	316.1	316.3
12°	317.1	317.1	317.0	317.2	316.7	316.6	316.2	316.3	315.3	315.4	315.7
12.5°	316.0	316.4	316.4	316.3	315.7	316.2	315.6	315.7	314.9	314.7	314.8
13°	315.3	315.4	315.8	316.0	315.1	314.9	314.7	314.7	313.8	313.7	314.0
13.5°	314.7	314.7	314.9	314.9	314.4	314.2	313.7	314.1	313.1	313.2	313.3
14°	313.9	314.3	314.1	314.0	313.4	313.6	313.3	313.3	312.6	312.0	312.2
14.5°	313.1	313.1	313.4	313.5	312.7	312.8	312.2	312.1	311.2	311.2	311.4
15°	312.4	312.5	312.2	312.6	312.0	311.8	311.4	311.6	310.4	310.7	310.7
15.5°	311.1	311.5	311.3	311.4	310.8	310.8	310.4	310.5	309.8	309.5	309.6
16°	310.3	310.5	310.7	310.8	310.0	309.9	309.5	309.6	308.5	308.3	308.6
16.5°	309.5	309.6	309.8	309.7	309.2	309.3	308.4	308.7	307.6	307.7	307.7
17°	308.5	308.9	308.7	308.6	308.0	308.0	307.9	307.6	306.7	306.6	306.5
17.5°	307.4	307.5	307.9	308.0	307.2	307.3	306.7	306.7	305.3	305.3	305.5
18°	306.4	306.8	306.8	306.8	306.0	306.1	305.5	305.6	304.1	304.5	304.6
18.5°	305.3	305.7	305.6	305.6	304.7	304.8	304.4	304.5	303.5	303.2	303.4
19°	304.2	304.5	304.7	304.7	304.1	304.0	303.4	303.6	302.2	301.9	302.1
19.5°	303.2	303.3	303.7	303.6	302.8	302.8	302.3	302.2	301.0	301.1	301.1
20°	302.1	302.5	302.3	302.3	301.5	301.7	301.2	301.1	299.9	299.9	300.2
20.5°	300.9	301.2	301.3	301.4	300.6	300.7	299.9	300.1	298.6	298.4	298.8
21°	299.8	300.1	300.2	300.1	299.2	299.1	298.8	298.7	297.2	297.6	297.5
21.5°	298.6	298.9	298.7	298.9	298.0	298.0	297.6	297.7	296.3	296.0	296.4
22°	297.2	297.6	297.6	297.8	297.0	297.0	296.3	296.2	294.9	294.6	294.9

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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°	295.9	296.2	296.5	296.3	295.4	295.5	295.0	294.9	293.5	293.8	293.7
23°	294.9	295.3	295.1	295.0	294.3	294.2	293.7	293.9	292.2	292.3	292.5
23.5°	293.5	294.0	294.0	294.0	293.0	293.0	292.4	292.2	290.9	290.8	291.1
24°	292.1	292.4	292.6	292.5	291.6	291.5	291.3	291.1	289.2	289.5	289.4
24.5°	290.9	291.2	290.9	291.3	290.1	290.4	289.5	289.7	288.0	287.9	288.3
25°	289.3	289.9	289.8	289.8	288.9	288.7	288.1	288.0	286.8	286.6	286.8
25.5°	287.9	288.1	288.5	288.1	287.4	287.4	287.1	286.9	285.2	285.5	285.2
26°	286.7	286.9	286.9	287.0	286.0	286.2	285.3	285.4	283.8	283.8	283.9
26.5°	285.0	285.5	285.7	285.5	284.5	284.4	283.9	284.0	282.0	282.1	282.3
27°	283.6	283.9	284.1	283.9	282.9	282.8	282.6	282.4	280.5	280.8	280.8
27.5°	282.1	282.5	282.4	282.6	281.6	281.7	280.9	280.7	279.1	279.2	279.5
28°	280.7	281.2	281.1	281.0	280.1	279.8	279.3	279.5	277.6	277.5	277.7
28.5°	278.9	279.1	279.5	279.1	278.4	278.4	278.0	277.8	275.9	276.1	275.9
29°	277.7	277.8	278.0	277.9	277.1	276.9	276.2	276.0	274.4	274.3	274.6
29.5°	275.9	276.3	276.5	276.3	275.2	275.1	274.7	274.7	272.5	272.8	272.9
30°	274.4	274.6	274.7	274.6	273.6	273.6	273.3	272.8	271.0	271.2	271.2
30.5°	272.6	272.9	272.9	273.0	272.0	272.2	271.3	271.2	269.3	269.3	269.5
31°	271.0	271.5	271.5	271.2	270.6	270.3	269.7	269.7	267.6	267.5	267.9
31.5°	269.1	269.4	269.8	269.5	268.7	268.7	268.2	267.8	265.9	266.1	265.9
32°	267.7	267.9	268.0	268.1	267.2	266.8	266.3	266.1	264.4	264.2	264.4
32.5°	265.9	266.3	266.3	266.2	265.2	265.0	264.6	264.6	262.4	262.5	262.7
33°	264.2	264.4	264.6	264.5	263.4	263.2	263.0	262.6	260.6	260.7	260.8
33.5°	262.4	262.5	262.9	262.9	261.9	261.7	261.0	261.1	258.9	258.8	259.0
34°	260.7	261.2	261.2	261.0	260.0	259.8	259.3	259.1	256.9	256.9	257.4
34.5°	258.7	258.9	259.3	259.1	258.2	258.0	257.5	257.2	255.3	255.4	255.2
35°	256.9	257.2	257.4	257.4	256.4	255.9	255.6	255.5	253.4	253.2	253.3
35.5°	255.3	255.6	255.7	255.5	254.6	254.4	253.7	253.5	251.5	251.5	251.7
36°	253.3	253.6	253.6	253.7	252.6	252.4	252.0	251.8	249.5	249.7	249.6
36.5°	251.4	251.6	251.9	251.8	250.7	250.5	249.9	249.8	247.8	247.7	247.8
37°	249.6	249.9	250.1	249.8	248.8	248.9	248.2	247.9	245.7	245.6	245.9
37.5°	247.4	247.7	248.1	248.1	247.0	246.7	246.3	246.1	243.7	243.8	243.7
38°	245.6	245.9	246.1	246.1	245.0	244.6	244.4	243.8	241.8	241.8	241.8
38.5°	243.7	244.0	244.1	244.1	242.9	242.9	242.3	242.0	239.9	239.8	239.9
39°	241.7	242.0	242.1	242.3	241.2	240.8	240.3	240.3	237.7	237.9	237.7
39.5°	239.6	239.8	240.2	240.0	239.2	238.8	238.2	238.0	235.8	235.7	235.8
40°	237.9	238.2	238.3	238.2	236.9	236.8	236.4	236.0	233.7	233.5	233.9
40.5°	235.5	235.9	236.0	236.3	235.2	234.8	234.3	233.9	231.6	231.8	231.7
41°	233.5	233.8	234.2	233.9	232.9	232.6	232.2	231.8	229.6	229.5	229.5
41.5°	231.6	231.9	232.0	232.1	230.8	230.8	230.1	229.9	227.6	227.4	227.6
42°	229.5	229.8	229.8	230.1	228.9	228.6	228.0	227.7	225.4	225.5	225.5
42.5°	227.3	227.6	227.9	227.6	226.7	226.3	225.9	225.8	223.2	223.1	223.3
43°	225.4	225.7	225.8	225.8	224.5	224.4	223.9	223.5	221.1	220.9	221.2
43.5°	223.1	223.3	223.4	223.7	222.7	222.2	221.8	221.3	218.9	219.0	218.9
44°	220.9	221.0	221.5	221.3	220.3	219.9	219.5	219.4	216.7	216.7	216.6
44.5°	218.7	219.1	219.2	219.3	218.0	217.8	217.4	217.0	214.6	214.4	214.7

TEST NUMBER: P855589  
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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	216.7	217.1	217.0	217.2	216.1	215.7	215.4	214.9	212.4	212.4	212.4
45.5°	214.3	214.6	215.0	214.8	213.8	213.5	212.9	212.8	210.1	210.1	210.1
46°	212.3	212.6	212.6	212.9	211.5	211.2	210.9	210.3	208.0	207.6	207.9
46.5°	210.0	210.3	210.5	210.5	209.4	209.0	208.6	208.3	205.8	205.7	205.6
47°	207.7	207.9	208.3	208.2	207.0	206.7	206.4	206.1	203.3	203.3	203.3
47.5°	205.4	205.8	206.0	206.1	204.8	204.7	204.1	203.7	201.1	201.0	201.1
48°	203.3	203.5	203.8	203.8	202.7	202.2	201.9	201.5	198.9	198.7	198.7
48.5°	200.8	201.1	201.4	201.3	200.2	200.0	199.4	199.1	196.5	196.5	196.4
49°	198.6	198.9	199.2	199.3	198.0	197.6	197.3	196.9	194.2	193.9	194.2
49.5°	196.5	196.7	197.0	196.9	195.6	195.3	195.0	194.6	191.9	191.8	191.6
50°	194.0	194.1	194.5	194.6	193.3	193.1	192.7	192.2	189.4	189.2	189.2
50.5°	191.5	191.8	192.0	192.0	191.1	190.8	190.3	189.9	187.1	187.0	187.0
51°	189.2	189.6	189.8	189.7	188.7	188.3	188.0	187.4	184.9	184.7	184.7
51.5°	186.9	187.1	187.5	187.5	186.3	186.0	185.3	185.1	182.3	182.2	182.3
52°	184.6	184.8	185.0	185.1	184.1	183.6	183.2	182.7	179.9	179.7	179.9
52.5°	182.2	182.3	182.9	182.7	181.5	181.1	180.8	180.3	177.6	177.5	177.4
53°	179.7	179.9	180.3	180.5	179.0	178.8	178.4	178.0	175.1	174.9	174.9
53.5°	177.3	177.5	177.8	177.8	176.8	176.3	175.9	175.4	172.7	172.5	172.5
54°	174.9	175.1	175.4	175.4	174.2	173.9	173.7	172.9	170.3	170.1	170.1
54.5°	172.5	172.6	172.8	173.2	171.9	171.6	170.9	170.7	167.8	167.5	167.6
55°	170.0	170.3	170.5	170.6	169.5	168.9	168.8	168.1	165.2	165.0	165.1
55.5°	167.6	167.7	168.1	168.1	166.8	166.5	166.2	165.7	162.7	162.7	162.6
56°	164.9	165.1	165.4	165.7	164.3	164.2	163.7	163.1	160.5	160.0	159.9
56.5°	162.5	162.7	163.0	163.0	162.0	161.6	161.2	160.7	157.7	157.6	157.5
57°	160.0	160.3	160.7	160.6	159.4	159.1	158.7	158.2	155.2	155.1	154.9
57.5°	157.5	157.7	158.0	158.3	157.1	156.6	156.0	155.7	152.8	152.5	152.5
58°	154.9	155.2	155.5	155.6	154.3	154.0	153.8	153.1	150.2	150.0	150.0
58.5°	152.5	152.6	153.0	153.0	151.8	151.5	151.3	150.7	147.6	147.6	147.3
59°	149.8	150.0	150.3	150.7	149.4	149.0	148.6	148.0	145.1	144.9	144.6
59.5°	147.3	147.6	147.9	148.0	146.8	146.4	146.1	145.6	142.5	142.3	142.2
60°	144.8	145.0	145.4	145.4	144.3	143.8	143.4	143.0	139.9	139.7	139.6
60.5°	142.2	142.4	142.7	142.9	141.7	141.3	140.9	140.3	137.4	137.0	137.0
61°	139.6	139.8	140.1	140.2	139.0	138.7	138.4	137.9	134.9	134.6	134.5
61.5°	137.1	137.1	137.6	137.8	136.5	136.2	135.8	135.2	132.2	132.1	131.8
62°	134.4	134.7	135.0	135.2	133.9	133.6	133.2	132.6	129.6	129.3	129.1
62.5°	131.8	132.1	132.4	132.5	131.3	130.9	130.5	130.1	127.0	126.6	126.7
63°	129.1	129.4	129.8	129.9	128.7	128.4	128.0	127.4	124.4	124.1	123.9
63.5°	126.7	126.8	127.1	127.3	126.1	125.8	125.3	124.9	121.8	121.5	121.2
64°	124.0	124.2	124.5	124.7	123.4	123.1	122.8	122.2	119.2	118.9	118.8
64.5°	121.3	121.6	121.8	122.1	120.7	120.5	120.0	119.6	116.5	116.3	116.1
65°	118.7	118.9	119.2	119.5	118.3	117.8	117.5	117.0	114.0	113.6	113.3
65.5°	116.1	116.3	116.7	116.8	115.6	115.3	115.0	114.4	111.4	111.0	110.8
66°	113.4	113.7	114.0	114.1	113.0	112.7	112.3	111.8	108.7	108.3	108.0
66.5°	110.8	111.0	111.3	111.5	110.2	109.9	109.6	109.2	106.1	105.7	105.4
67°	108.1	108.3	108.8	108.9	107.5	107.3	107.0	106.5	103.6	103.1	102.9



TEST NUMBER: P855589  
 CATALOG NUMBER: HLS6099FS1EWH-3000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	105.5	105.7	106.0	106.2	105.0	104.7	104.3	103.9	100.8	100.5	100.2
68°	102.9	103.1	103.4	103.6	102.4	102.0	101.7	101.2	98.2	97.9	97.5
68.5°	100.3	100.5	100.9	100.9	99.7	99.5	99.2	98.6	95.7	95.2	94.9
69°	97.5	97.8	98.2	98.2	97.1	96.8	96.4	96.1	93.0	92.6	92.3
69.5°	95.0	95.1	95.6	95.7	94.4	94.1	93.8	93.4	90.4	90.1	89.6
70°	92.4	92.5	92.9	93.0	91.7	91.6	91.3	90.8	87.9	87.5	87.1
70.5°	89.8	89.9	90.3	90.4	89.3	88.9	88.6	88.3	85.3	84.9	84.5
71°	87.1	87.3	87.6	87.7	86.7	86.4	86.1	85.7	82.8	82.3	81.9
71.5°	84.4	84.7	85.0	85.0	84.0	83.8	83.6	83.2	80.2	79.8	79.4
72°	81.9	82.1	82.4	82.6	81.4	81.2	81.0	80.6	77.6	77.2	76.9
72.5°	79.4	79.6	79.8	80.0	78.8	78.6	78.4	78.0	75.0	74.6	74.1
73°	76.8	77.0	77.3	77.3	76.3	76.1	75.8	75.4	72.6	72.1	71.6
73.5°	74.2	74.4	74.7	74.8	73.8	73.5	73.2	73.0	70.0	69.7	69.1
74°	71.7	71.8	72.1	72.2	71.1	71.0	70.8	70.5	67.5	67.2	66.7
74.5°	69.1	69.4	69.7	69.7	68.6	68.4	68.2	67.9	65.1	64.6	64.1
75°	66.7	66.9	67.1	67.2	66.1	65.8	65.7	65.4	62.6	62.2	61.6
75.5°	64.3	64.4	64.6	64.6	63.6	63.5	63.3	63.0	60.3	59.7	59.1
76°	61.7	61.9	62.2	62.1	61.1	60.9	60.8	60.6	57.9	57.3	56.8
76.5°	59.3	59.4	59.6	59.6	58.6	58.5	58.3	58.2	55.4	55.0	54.5
77°	57.0	57.2	57.2	57.3	56.2	56.0	56.0	55.8	53.1	52.6	52.0
77.5°	54.6	54.8	54.9	54.8	53.9	53.7	53.6	53.5	50.9	50.3	49.6
78°	52.2	52.4	52.5	52.5	51.4	51.4	51.3	51.2	48.6	48.0	47.5
78.5°	50.0	50.0	50.1	50.1	49.0	49.0	48.9	48.8	46.2	45.8	45.1
79°	47.7	47.9	48.0	47.9	46.8	46.7	46.6	46.6	44.2	43.6	42.9
79.5°	45.5	45.6	45.6	45.6	44.6	44.5	44.4	44.4	41.9	41.4	40.8
80°	43.2	43.4	43.4	43.3	42.3	42.3	42.3	42.2	39.9	39.3	38.7
80.5°	41.2	41.2	41.2	41.2	40.1	40.1	40.1	40.1	37.8	37.3	36.6
81°	39.0	39.1	39.2	39.0	38.0	38.1	38.1	38.1	35.8	35.3	34.6
81.5°	37.0	37.0	37.1	36.9	35.9	35.9	35.9	36.0	33.8	33.2	32.6
82°	35.2	35.2	35.2	35.0	33.9	33.8	33.9	34.1	32.0	31.4	30.6
82.5°	33.3	33.3	33.2	33.1	31.9	31.9	32.0	32.0	30.0	29.5	28.8
83°	31.5	31.5	31.4	31.2	29.9	30.0	30.1	30.2	28.3	27.7	27.0
83.5°	29.5	29.6	29.4	29.2	28.1	28.2	28.3	28.4	26.5	26.0	25.3
84°	27.7	27.7	27.6	27.2	26.3	26.4	26.5	26.6	24.8	24.4	23.6
84.5°	26.0	25.9	25.8	25.6	24.6	24.7	24.8	25.0	23.2	22.7	22.0
85°	24.4	24.4	24.1	23.8	22.9	22.9	23.1	23.3	21.6	21.2	20.4
85.5°	22.7	22.7	22.4	22.2	21.3	21.4	21.5	21.7	20.0	19.6	19.0
86°	21.2	21.2	20.8	20.5	19.6	19.8	20.0	20.2	18.7	18.2	17.5
86.5°	19.7	19.6	19.4	19.0	18.2	18.3	18.6	18.8	17.2	16.8	16.2
87°	18.3	18.3	17.9	17.5	16.7	16.9	17.1	17.3	15.9	15.5	15.0
87.5°	16.9	16.8	16.5	16.2	15.4	15.6	15.8	16.0	14.7	14.2	13.7
88°	15.7	15.6	15.2	14.9	14.1	14.2	14.5	14.8	13.4	13.0	12.6
88.5°	14.3	14.2	13.9	13.6	12.9	13.0	13.3	13.5	12.3	11.9	11.5
89°	13.2	13.0	12.8	12.4	11.8	11.9	12.2	12.4	11.1	10.8	10.4
89.5°	12.0	12.0	11.7	11.2	10.6	10.7	11.0	11.2	10.0	9.9	9.6

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

  
NVLAP Lab Code: 200050-0



TEST NUMBER: P855589  
CATALOG NUMBER: HLS6099FS1EWH-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: P855589  
 CATALOG NUMBER: HLS6099FS1EWH-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	325.0	325.0	325.0	325.0	325.0	325.0
0.5°	325.1	325.0	325.1	324.8	324.9	325.0
1°	325.0	324.9	324.9	324.9	325.1	325.0
1.5°	325.0	324.7	325.3	324.6	324.9	325.0
2°	324.8	324.7	324.9	324.8	324.8	324.8
2.5°	324.7	324.5	324.6	324.5	324.8	324.9
3°	324.6	324.1	324.7	324.4	324.6	324.5
3.5°	324.1	324.1	324.3	324.1	324.3	324.3
4°	323.9	323.9	324.0	324.1	324.2	324.3
4.5°	323.8	323.6	324.1	323.5	323.7	324.1
5°	323.4	323.4	323.5	323.5	323.4	323.8
5.5°	323.2	322.7	323.3	323.1	323.3	323.6
6°	323.0	322.5	322.8	322.7	323.0	323.1
6.5°	322.1	322.3	322.5	322.4	322.4	322.7
7°	321.7	321.7	322.3	321.8	322.3	322.4
7.5°	321.3	321.3	321.5	321.3	321.4	322.2
8°	320.7	320.8	321.2	321.1	321.0	321.5
8.5°	320.4	320.1	320.8	320.4	320.6	320.9
9°	319.9	319.9	320.0	320.1	320.0	320.6
9.5°	319.1	319.2	319.7	319.5	319.5	319.9
10°	318.4	318.4	319.0	318.6	318.9	319.4
10.5°	317.9	318.0	318.2	318.1	317.9	318.9
11°	317.2	317.3	318.0	317.6	317.7	318.1
11.5°	316.7	316.4	316.8	316.9	317.1	317.5
12°	315.7	316.1	316.1	316.4	316.3	317.1
12.5°	314.9	315.1	315.8	315.3	315.7	316.0
13°	314.5	314.2	314.6	314.5	314.7	315.3
13.5°	313.5	313.7	313.9	313.9	313.8	314.7
14°	312.5	312.7	313.3	313.1	313.3	313.9
14.5°	311.9	311.7	312.0	312.0	312.2	313.1
15°	310.7	311.2	311.3	311.4	311.3	312.4
15.5°	309.9	310.0	310.5	310.3	310.7	311.1
16°	309.1	308.9	309.6	309.4	309.5	310.3
16.5°	307.8	308.3	308.6	308.5	308.4	309.5
17°	306.8	307.1	307.4	307.4	307.7	308.5
17.5°	306.1	306.0	306.4	306.5	306.6	307.4
18°	304.7	305.2	305.6	305.6	305.5	306.4
18.5°	303.5	304.0	304.4	304.2	304.5	305.3
19°	302.7	302.8	303.3	303.2	303.2	304.2
19.5°	301.4	301.7	302.1	302.2	302.1	303.2
20°	300.1	300.5	300.7	300.9	301.1	302.1
20.5°	298.9	299.4	299.8	299.7	299.8	300.9
21°	297.6	298.3	298.5	298.8	298.8	299.8
21.5°	296.6	296.9	297.3	297.3	297.4	298.6
22°	295.1	295.6	296.3	296.0	295.9	297.2

TEST NUMBER: P855589  
 CATALOG NUMBER: HLS6099FS1EWH-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	293.8	294.3	294.6	294.9	294.9	295.9
23°	292.7	293.0	293.2	293.5	293.5	294.9
23.5°	291.1	291.7	292.3	292.1	292.2	293.5
24°	289.8	290.3	290.6	290.9	290.9	292.1
24.5°	288.4	288.9	289.2	289.2	289.1	290.9
25°	287.0	287.8	287.9	287.9	288.0	289.3
25.5°	285.6	285.7	286.3	286.7	286.7	287.9
26°	284.0	284.5	285.0	285.1	284.9	286.7
26.5°	282.3	283.1	283.4	283.5	283.7	285.0
27°	281.2	281.7	282.0	282.0	282.1	283.6
27.5°	279.3	280.0	280.6	280.5	280.5	282.1
28°	277.8	278.7	278.7	279.0	279.2	280.7
28.5°	276.4	276.9	277.3	277.4	277.5	278.9
29°	274.6	275.2	275.7	275.7	275.8	277.7
29.5°	272.8	273.7	274.0	274.3	274.3	275.9
30°	271.5	272.1	272.4	272.5	272.4	274.4
30.5°	269.5	270.4	270.8	270.8	270.9	272.6
31°	268.0	268.8	268.9	269.2	269.3	271.0
31.5°	266.2	267.2	267.5	267.6	267.5	269.1
32°	264.3	265.2	265.5	265.7	265.9	267.7
32.5°	262.6	263.3	263.6	264.2	264.1	265.9
33°	261.1	261.7	262.2	262.2	262.2	264.2
33.5°	259.1	259.9	260.1	260.2	260.6	262.4
34°	257.4	258.2	258.3	258.6	258.6	260.7
34.5°	255.5	256.4	256.7	256.9	256.8	258.7
35°	253.6	254.3	254.7	254.9	255.2	256.9
35.5°	251.8	252.4	252.7	253.2	252.9	255.3
36°	249.9	250.7	251.0	251.2	251.1	253.3
36.5°	248.0	248.8	248.9	249.1	249.5	251.4
37°	246.2	246.7	247.0	247.4	247.3	249.6
37.5°	243.9	245.0	245.2	245.3	245.5	247.4
38°	242.1	242.8	243.0	243.3	243.5	245.6
38.5°	240.2	240.8	241.2	241.7	241.4	243.7
39°	238.1	238.9	239.2	239.4	239.4	241.7
39.5°	236.1	236.8	237.0	237.2	237.5	239.6
40°	234.0	234.7	235.1	235.5	235.3	237.9
40.5°	231.8	232.9	232.9	233.3	233.3	235.5
41°	229.8	230.5	230.8	231.1	231.3	233.5
41.5°	227.8	228.4	228.9	229.2	229.1	231.6
42°	225.5	226.6	226.5	226.9	227.1	229.5
42.5°	223.5	224.3	224.4	224.7	225.1	227.3
43°	221.1	222.1	222.5	222.8	222.7	225.4
43.5°	218.9	220.1	220.2	220.5	220.7	223.1
44°	217.0	217.7	218.0	218.5	218.5	220.9
44.5°	214.7	215.6	215.9	216.3	216.3	218.7

TEST NUMBER: P855589

CATALOG NUMBER: HLS6099FS1EWH-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	212.4	213.5	213.5	213.9	214.1	216.7
45.5°	210.3	211.1	211.3	211.7	211.7	214.3
46°	207.9	209.1	209.2	209.6	209.6	212.3
46.5°	205.8	206.9	206.9	207.3	207.4	210.0
47°	203.4	204.4	204.8	205.0	205.0	207.7
47.5°	201.1	202.1	202.2	202.6	202.9	205.4
48°	198.8	199.9	200.0	200.4	200.5	203.3
48.5°	196.5	197.6	197.7	198.2	198.2	200.8
49°	194.1	195.2	195.4	195.7	196.0	198.6
49.5°	191.9	192.9	193.1	193.4	193.5	196.5
50°	189.4	190.5	190.7	191.1	191.3	194.0
50.5°	187.1	188.2	188.2	188.6	188.9	191.5
51°	184.8	185.8	186.0	186.3	186.5	189.2
51.5°	182.2	183.4	183.5	184.0	184.2	186.9
52°	179.9	181.0	181.2	181.4	181.7	184.6
52.5°	177.6	178.5	178.8	179.1	179.2	182.2
53°	174.9	176.0	176.2	176.8	176.9	179.7
53.5°	172.6	173.7	173.8	174.1	174.4	177.3
54°	170.2	171.2	171.5	171.7	171.9	174.9
54.5°	167.6	168.7	168.9	169.3	169.4	172.5
55°	165.2	166.2	166.5	166.8	167.0	170.0
55.5°	162.7	163.8	164.0	164.3	164.5	167.6
56°	160.0	161.2	161.4	161.9	162.0	164.9
56.5°	157.7	158.7	158.9	159.1	159.4	162.5
57°	155.0	156.2	156.4	156.7	157.1	160.0
57.5°	152.5	153.6	153.9	154.2	154.3	157.5
58°	150.0	151.1	151.3	151.6	151.9	154.9
58.5°	147.5	148.6	148.8	149.0	149.4	152.5
59°	144.8	146.0	146.1	146.5	146.6	149.8
59.5°	142.4	143.4	143.5	143.8	144.3	147.3
60°	139.6	141.0	141.1	141.4	141.7	144.8
60.5°	137.0	138.2	138.4	138.7	138.9	142.2
61°	134.6	135.6	135.8	136.2	136.4	139.6
61.5°	131.9	133.0	133.1	133.5	133.9	137.1
62°	129.2	130.3	130.5	130.8	131.2	134.4
62.5°	126.5	127.6	128.0	128.2	128.6	131.8
63°	123.8	125.3	125.4	125.7	126.1	129.1
63.5°	121.3	122.5	122.6	122.9	123.3	126.7
64°	118.7	119.8	120.0	120.4	120.7	124.0
64.5°	116.0	117.1	117.3	117.7	118.0	121.3
65°	113.4	114.5	114.7	115.1	115.5	118.7
65.5°	110.7	111.9	112.0	112.4	112.8	116.1
66°	108.0	109.3	109.4	109.8	110.2	113.4
66.5°	105.5	106.5	106.8	107.0	107.4	110.8
67°	102.7	103.8	104.1	104.5	104.8	108.1

TEST NUMBER: P855589  
 CATALOG NUMBER: HLS6099FS1EWH-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	100.1	101.2	101.4	101.7	102.3	105.5
68°	97.5	98.5	99.0	99.1	99.6	102.9
68.5°	94.7	96.0	96.2	96.6	96.9	100.3
69°	92.0	93.3	93.6	93.9	94.3	97.5
69.5°	89.6	90.6	90.8	91.2	91.6	95.0
70°	87.0	87.9	88.2	88.6	89.2	92.4
70.5°	84.4	85.3	85.5	86.0	86.4	89.8
71°	81.7	82.7	83.0	83.4	83.9	87.1
71.5°	79.1	80.0	80.4	80.8	81.2	84.4
72°	76.6	77.5	77.8	78.2	78.6	81.9
72.5°	73.9	74.9	75.1	75.5	76.2	79.4
73°	71.4	72.3	72.5	73.1	73.6	76.8
73.5°	68.8	69.7	70.0	70.4	71.0	74.2
74°	66.2	67.1	67.5	67.9	68.5	71.7
74.5°	63.8	64.7	65.0	65.4	66.0	69.1
75°	61.3	62.2	62.4	62.9	63.6	66.7
75.5°	58.8	59.6	60.1	60.5	61.1	64.3
76°	56.3	57.3	57.6	58.1	58.7	61.7
76.5°	54.0	54.8	55.1	55.6	56.2	59.3
77°	51.6	52.4	52.8	53.2	54.0	57.0
77.5°	49.2	50.0	50.5	51.0	51.6	54.6
78°	47.1	47.8	48.1	48.7	49.2	52.2
78.5°	44.7	45.5	45.8	46.4	47.1	50.0
79°	42.5	43.2	43.5	44.2	44.8	47.7
79.5°	40.2	41.1	41.4	41.9	42.6	45.5
80°	38.2	38.9	39.2	39.8	40.4	43.2
80.5°	36.1	36.8	37.1	37.8	38.4	41.2
81°	34.2	35.0	35.2	35.8	36.2	39.0
81.5°	32.1	33.0	33.2	33.9	34.4	37.0
82°	30.2	31.1	31.4	32.0	32.5	35.2
82.5°	28.3	29.1	29.4	30.1	30.6	33.3
83°	26.5	27.1	27.6	28.2	28.8	31.5
83.5°	24.9	25.5	25.8	26.3	27.0	29.5
84°	23.1	23.7	24.0	24.7	25.4	27.7
84.5°	21.5	22.2	22.4	23.0	23.7	26.0
85°	20.0	20.5	20.8	21.5	22.1	24.4
85.5°	18.5	19.1	19.3	19.9	20.5	22.7
86°	17.1	17.6	17.9	18.5	19.1	21.2
86.5°	15.8	16.3	16.5	17.0	17.6	19.7
87°	14.5	15.0	15.2	15.7	16.3	18.3
87.5°	13.3	13.7	13.9	14.4	15.1	16.9
88°	12.2	12.6	12.8	13.2	13.8	15.7
88.5°	11.0	11.5	11.7	12.1	12.7	14.3
89°	10.0	10.4	10.5	11.0	11.6	13.2
89.5°	9.2	9.4	9.6	10.0	10.5	12.0

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



TEST NUMBER: P855589  
CATALOG NUMBER: HLS6099FS1EWH-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)