

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: P855583

Luminaire Tested: **HLS4079FS1EWH-2700K**

Issue Date: 7/16/2024

Tested By:

Approved By:



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Test Information

Test Method: LM-79-08
 Report Number: P855583
 Test Lab:
 Issue Date: 7/16/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: HALO
 Catalog Number: HLS4079FS1EWH-2700K
 Description: 4IN 750LM, 90CRI, DIMMING TO 10%, DAMP LOCATION
 Light Source: SELECTABLE CCT 90CRI / 2700K CCT
 Ballast/Driver: -

Summary

Lumens per Lamp: 770.28 (1 lamp)
 Luminaire Lumens: 745.0 lumens
 Efficiency: 96.7%
 Efficacy: 81.9 lumens/watt
 Spacing Criteria (0/90/45): 1.25 / 1.25 / 1.37
 Luminous Opening: Circular (Dia: 0.33' x H: 0')
 CIE Type: Direct

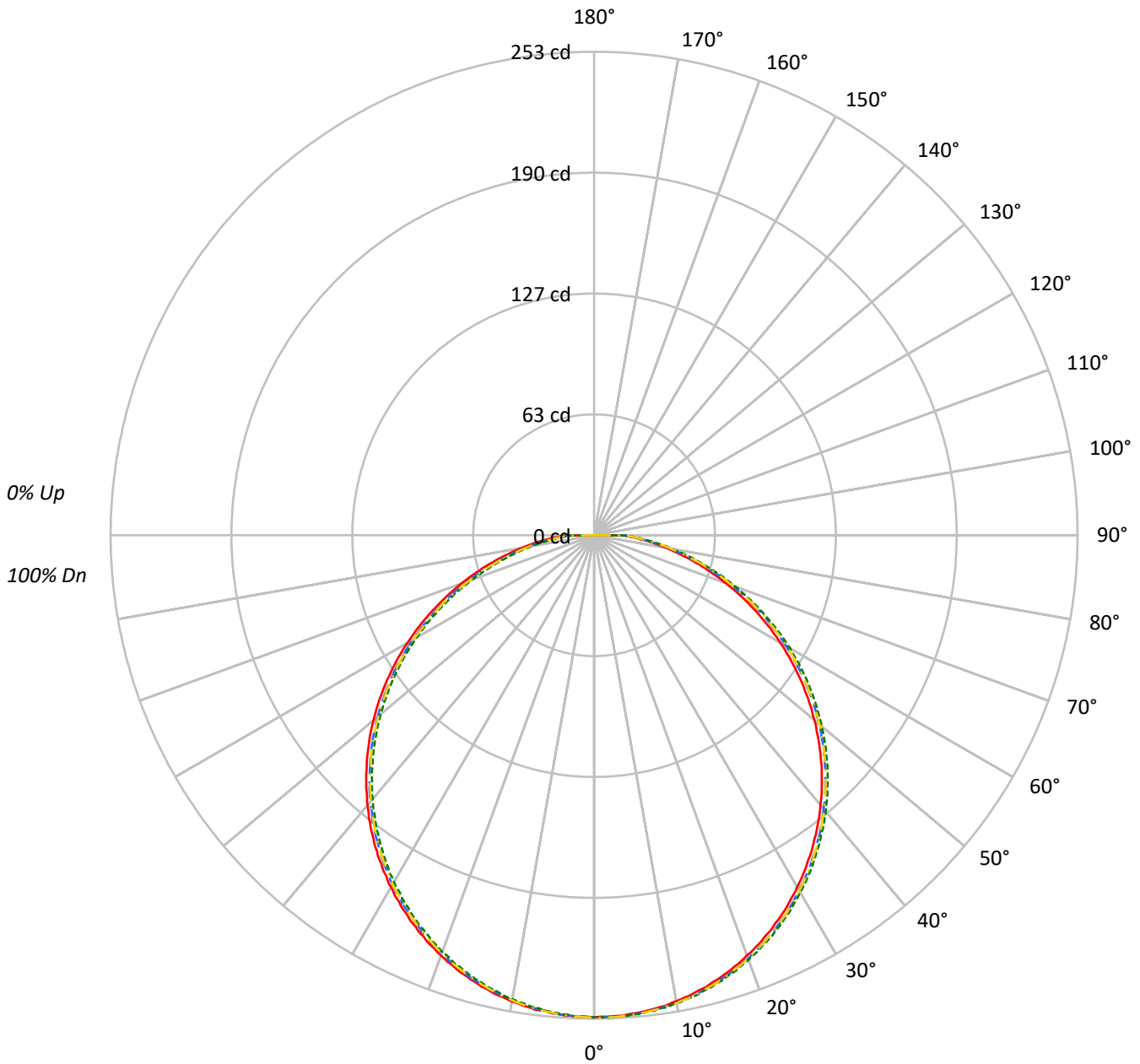
Input Watts (W): 9.1
 Input Voltage (V): NR
 Input Current (Ain): NR
 Voltage Rise (V): NR
 Power Factor: NR
 Total Harmonic Distortion (THDi): NR
 Frequency (hertz): 60
 Stabilization Time: NR
 Operation Time: NR
 Ambient Temperature (°C): NR
 Test Distance: 25 FT



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	50	30	10	0
RCR																					
0	115	115	115	115	112	112	112	112	107	107	107	103	103	103	99	99	99	99	99	99	97
1	104	99	95	91	102	97	93	89	93	90	87	89	86	84	86	83	81	86	83	81	79
2	95	86	79	73	92	84	78	73	81	76	71	78	73	69	75	71	68	75	71	68	65
3	86	76	67	61	84	74	66	60	71	65	59	68	63	58	66	61	57	66	61	57	55
4	79	67	58	51	76	65	57	51	63	56	50	61	55	50	59	53	49	59	53	49	47
5	72	60	51	44	70	59	50	44	56	49	43	54	48	43	53	47	42	53	47	42	40
6	67	54	45	38	65	53	44	38	51	43	38	49	43	38	48	42	37	48	42	37	35
7	62	49	40	34	60	48	40	34	46	39	34	45	38	33	44	38	33	44	38	33	31
8	58	44	36	30	56	44	36	30	42	35	30	41	35	30	40	34	30	40	34	30	28
9	54	41	33	27	52	40	32	27	39	32	27	38	31	27	37	31	27	37	31	27	25
10	50	38	30	25	49	37	30	25	36	29	24	35	29	24	34	28	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	31752	31752	31752	31752
5°	31709	31785	31734	31633
10°	31641	31794	31667	31501
15°	31504	31738	31517	31322
20°	31339	31674	31352	31084
25°	31132	31549	31146	30757
30°	30880	31360	30880	30430
35°	30619	31172	30635	30035
40°	30278	31001	30311	29604
45°	29900	30755	29936	29135
50°	29466	30465	29486	28546
55°	28962	30125	29028	27865
60°	28341	29801	28417	27033
65°	27664	29362	27813	26026
70°	27008	28995	27192	24948
75°	26695	29029	26889	24021
80°	27830	30512	28047	24061
85°	35810	39276	35955	29312

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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	23.9	3.2	3.1
10°-20°	68.3	9.2	8.9
20°-30°	103.4	13.9	13.4
30°-40°	124.7	16.7	16.2
40°-50°	129.7	17.4	16.8
50°-60°	118.1	15.9	15.3
60°-70°	92.1	12.4	12.0
70°-80°	58.2	7.8	7.6
80°-90°	26.6	3.6	3.5
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°	195.6	26.3	25.4
0°-40°	320.3	43.0	41.6
0°-60°	568.1	76.3	73.8
0°-90°	745.0	100.0	96.7
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°	745.0	100.0	96.7

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	252	252	252	252	252	
5°	251	252	251	250	251	24
15°	242	244	242	240	242	68
25°	224	227	224	222	224	103
35°	199	203	199	196	199	125
45°	168	173	168	164	168	130
55°	132	137	132	127	132	118
65°	93	99	93	87	93	92
75°	55	60	55	49	55	58
85°	25	27	25	20	25	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°	252.3	252.3	252.3	252.3	252.3	252.3	252.3	252.3	252.3	252.3	252.3
0.5°	252.0	252.2	252.4	252.5	252.2	252.6	252.5	252.1	252.1	252.0	252.3
1°	252.0	252.2	252.4	252.5	252.4	252.6	252.5	252.3	251.9	252.2	252.2
1.5°	252.2	252.1	252.0	252.9	252.5	252.5	252.6	252.3	252.2	251.9	251.9
2°	251.9	252.2	252.2	252.6	252.5	252.3	252.4	252.1	252.1	251.7	252.0
2.5°	251.8	252.1	252.4	252.4	252.1	252.5	252.5	251.9	251.8	251.8	252.0
3°	251.8	251.9	252.0	252.3	252.0	252.4	252.3	252.0	251.7	251.8	251.5
3.5°	251.8	251.8	251.8	252.5	252.2	252.3	251.9	251.7	251.8	251.2	251.4
4°	251.4	251.8	251.8	252.3	252.1	251.9	251.9	251.3	251.4	251.5	251.5
4.5°	251.1	251.5	251.7	252.0	251.7	252.1	251.9	251.5	251.2	251.1	251.1
5°	251.0	251.1	251.4	251.7	251.6	251.8	251.5	251.3	251.2	250.6	250.7
5.5°	250.8	251.1	251.2	251.7	251.6	251.3	251.3	250.9	250.8	250.5	250.7
6°	250.6	250.9	251.3	251.5	251.1	251.2	251.2	250.8	250.1	250.6	250.2
6.5°	250.3	250.6	250.7	251.2	250.9	251.2	250.9	250.7	250.2	249.8	249.9
7°	250.0	250.3	250.3	250.8	250.9	250.7	250.5	250.2	250.3	249.7	249.6
7.5°	249.6	250.0	250.3	250.5	250.5	250.6	250.4	249.9	249.6	249.5	249.4
8°	249.3	249.8	249.9	250.4	250.0	250.4	250.0	249.6	249.2	249.0	248.9
8.5°	249.1	249.4	249.4	249.9	250.0	250.0	249.6	249.5	249.0	248.4	248.3
9°	248.6	249.0	249.2	249.5	249.8	249.5	249.2	249.0	248.5	248.3	247.9
9.5°	247.9	248.7	248.8	249.3	249.0	249.2	249.0	248.3	248.0	247.8	247.7
10°	247.6	248.1	248.2	248.9	248.8	249.0	248.7	248.0	247.8	247.1	247.1
10.5°	247.2	247.6	247.9	248.6	248.5	248.5	248.0	247.9	247.2	246.5	246.5
11°	246.6	247.4	247.4	248.1	247.9	247.8	247.6	247.0	246.6	246.3	246.1
11.5°	246.2	246.8	247.3	247.4	247.3	247.3	247.3	246.6	246.1	245.6	245.6
12°	245.7	246.2	246.5	247.1	247.1	247.0	246.6	246.3	245.8	245.1	244.9
12.5°	245.0	245.6	245.9	246.7	246.6	246.5	246.1	245.8	245.1	244.7	244.1
13°	244.3	245.3	245.5	246.1	246.0	246.0	245.6	245.1	244.4	244.1	243.9
13.5°	244.0	244.5	245.1	245.2	245.3	245.5	245.0	244.3	243.8	243.1	243.3
14°	243.4	244.1	244.2	244.7	244.8	244.9	244.3	243.7	243.4	242.8	242.3
14.5°	242.6	243.2	243.8	244.4	244.4	244.2	243.7	243.4	242.5	242.2	241.6
15°	241.8	242.6	243.1	243.7	243.6	243.5	243.2	242.5	241.9	241.2	241.2
15.5°	241.4	242.0	242.3	242.9	243.0	243.0	242.7	241.8	241.3	240.6	240.4
16°	240.6	241.5	241.6	242.3	242.5	242.3	241.7	241.2	240.4	240.1	239.6
16.5°	239.8	240.5	241.1	241.5	241.6	241.4	241.1	240.5	239.7	239.1	239.1
17°	239.1	239.9	240.4	240.9	240.8	240.8	240.6	239.8	239.2	238.5	238.1
17.5°	238.4	239.3	239.5	240.2	240.3	240.3	239.8	239.1	238.4	237.7	237.1
18°	237.4	238.4	238.8	239.1	239.8	239.4	238.8	238.4	237.4	236.7	236.5
18.5°	236.8	237.7	238.2	238.6	238.8	238.8	238.3	237.5	236.6	235.8	235.7
19°	235.9	237.0	237.2	238.0	237.9	238.1	237.5	236.3	235.9	235.4	234.7
19.5°	235.0	235.8	236.4	237.0	237.3	237.2	236.5	235.9	234.9	234.2	233.8
20°	234.0	235.0	235.9	236.1	236.5	236.2	235.7	235.1	234.1	233.2	233.0
20.5°	233.3	234.4	234.7	235.3	235.3	235.2	234.9	233.9	233.3	232.3	231.9
21°	232.4	233.4	233.6	234.5	234.7	234.5	233.9	233.1	232.2	231.5	231.0
21.5°	231.4	232.3	233.1	233.5	234.0	233.7	233.1	232.3	231.2	230.5	230.3
22°	230.6	231.5	232.1	232.4	232.9	232.7	232.2	231.1	230.6	229.7	229.2

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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°	229.6	230.7	231.2	231.7	231.7	231.8	231.2	230.2	229.6	228.7	228.0
23°	228.4	229.5	230.2	230.8	231.0	231.0	230.2	229.5	228.3	227.7	227.0
23.5°	227.4	228.6	229.2	230.0	230.2	230.0	229.3	228.5	227.5	226.5	226.3
24°	226.7	227.7	228.1	228.7	229.3	228.9	228.4	227.3	226.5	225.6	224.8
24.5°	225.5	226.4	227.2	227.6	228.1	227.9	227.1	226.4	225.2	224.4	223.8
25°	224.2	225.4	226.1	226.8	227.2	227.0	226.3	225.3	224.3	223.3	222.8
25.5°	223.3	224.7	225.1	225.8	226.2	225.9	225.3	224.0	223.4	222.2	221.8
26°	222.2	223.4	223.9	224.5	225.0	224.6	224.0	222.9	221.9	221.3	220.5
26.5°	221.1	222.0	222.7	223.4	223.8	223.7	223.0	222.2	220.8	220.0	219.5
27°	220.1	221.2	221.7	222.5	222.8	222.6	222.1	221.0	220.0	219.0	218.4
27.5°	218.8	220.1	220.8	221.5	221.8	221.5	220.7	219.7	218.8	217.8	217.2
28°	217.5	218.7	219.5	220.1	220.6	220.3	219.6	218.4	217.3	216.5	215.6
28.5°	216.3	217.6	218.4	218.9	219.3	219.2	218.7	217.5	216.3	215.3	214.7
29°	215.2	216.4	217.0	217.8	218.3	217.9	217.3	216.2	215.3	214.3	213.7
29.5°	214.0	214.9	216.1	216.7	217.1	216.7	215.9	215.1	213.7	212.9	212.1
30°	212.5	213.8	214.5	215.6	215.8	215.7	214.9	213.7	212.5	211.5	210.8
30.5°	211.4	212.8	213.3	214.1	214.7	214.4	213.7	212.6	211.6	210.4	209.8
31°	210.1	211.4	212.3	212.7	213.6	213.1	212.3	211.5	210.1	209.1	208.3
31.5°	208.9	210.1	211.1	211.7	212.2	211.8	211.2	209.9	208.6	207.7	206.8
32°	207.5	208.9	209.5	210.6	210.9	210.7	210.0	208.6	207.6	206.4	205.6
32.5°	206.3	207.6	208.4	209.1	209.7	209.4	208.5	207.5	206.2	205.1	204.3
33°	204.7	206.2	207.0	207.7	208.5	207.9	207.1	206.1	204.6	203.7	202.9
33.5°	203.3	204.8	205.8	206.3	207.1	206.6	206.0	204.6	203.5	202.4	201.4
34°	202.1	203.6	204.3	205.0	205.7	205.5	204.7	203.2	202.3	201.1	200.2
34.5°	200.8	202.1	202.9	203.8	204.4	203.9	203.1	202.2	200.6	199.5	198.7
35°	199.3	200.6	201.7	202.5	202.9	202.5	201.9	200.7	199.4	198.0	197.1
35.5°	197.9	199.3	200.3	200.9	201.5	201.3	200.5	199.2	198.1	196.7	195.8
36°	196.3	197.9	198.7	199.4	200.3	199.9	199.0	197.9	196.3	195.3	194.4
36.5°	195.0	196.5	197.4	198.3	198.9	198.5	197.6	196.5	194.9	193.7	192.8
37°	193.5	194.9	196.0	196.7	197.2	197.0	196.3	194.9	193.7	192.3	191.2
37.5°	192.0	193.5	194.5	195.1	195.8	195.5	194.7	193.4	192.1	190.9	190.0
38°	190.6	192.1	193.0	193.6	194.6	194.2	193.3	191.9	190.5	189.2	188.4
38.5°	189.0	190.5	191.5	192.4	193.2	192.6	191.6	190.5	189.2	187.8	186.6
39°	187.4	188.9	190.2	190.9	191.6	191.0	190.3	189.0	187.5	186.4	185.0
39.5°	186.0	187.6	188.5	189.3	190.1	189.6	188.8	187.4	185.9	184.5	183.7
40°	184.3	185.8	186.9	187.6	188.7	188.1	187.1	185.9	184.5	183.1	182.1
40.5°	182.7	184.1	185.5	186.2	187.0	186.6	185.6	184.4	183.0	181.6	180.5
41°	181.3	182.7	183.9	184.7	185.4	184.9	184.1	182.6	181.1	179.9	178.9
41.5°	179.7	181.3	182.2	183.1	184.0	183.5	182.5	181.1	179.6	178.3	177.3
42°	178.0	179.5	180.8	181.4	182.5	182.1	181.0	179.8	178.1	176.8	175.4
42.5°	176.4	177.9	179.2	179.9	180.7	180.2	179.5	178.0	176.5	175.0	174.1
43°	174.6	176.3	177.4	178.5	179.1	178.7	177.8	176.2	174.9	173.4	172.5
43.5°	173.0	174.7	175.8	176.7	177.6	177.2	175.9	174.7	173.3	171.8	170.6
44°	171.5	173.0	174.3	174.8	175.9	175.4	174.6	173.1	171.5	170.1	168.8
44.5°	169.9	171.4	172.7	173.4	174.4	173.7	172.9	171.4	169.8	168.3	167.4

TEST NUMBER: P855583
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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	168.0	169.8	170.9	171.8	172.8	172.3	171.2	169.7	168.2	166.8	165.4
45.5°	166.2	167.9	169.3	170.2	171.2	170.6	169.5	168.2	166.6	165.1	163.9
46°	164.8	166.1	167.7	168.4	169.4	168.7	167.9	166.4	164.8	163.4	162.2
46.5°	162.9	164.7	165.8	166.5	167.5	167.1	166.0	164.7	163.0	161.6	160.4
47°	161.1	162.9	164.1	165.1	166.0	165.4	164.5	162.9	161.4	159.9	158.5
47.5°	159.5	161.1	162.5	163.4	164.5	163.8	162.8	161.3	159.6	158.1	156.9
48°	157.6	159.4	160.7	161.4	162.5	162.1	161.0	159.5	157.9	156.2	155.1
48.5°	155.7	157.7	158.9	159.6	160.8	160.3	159.0	157.8	156.1	154.7	153.2
49°	154.2	155.7	157.2	158.0	159.1	158.6	157.4	155.8	154.5	152.8	151.4
49.5°	152.6	153.9	155.5	156.3	157.2	156.6	155.7	154.3	152.6	150.9	149.8
50°	150.5	152.4	153.7	154.5	155.6	155.1	154.0	152.5	150.6	149.1	147.8
50.5°	148.6	150.4	151.8	152.6	153.9	153.4	152.1	150.5	148.8	147.4	146.1
51°	147.0	148.5	150.0	150.9	152.0	151.5	150.4	148.7	147.1	145.5	144.2
51.5°	145.1	146.7	148.4	149.1	150.1	149.5	148.5	147.0	145.3	143.7	142.4
52°	143.2	145.1	146.5	147.3	148.4	147.8	146.7	145.3	143.5	141.9	140.4
52.5°	141.4	143.1	144.6	145.4	146.6	146.1	145.0	143.3	141.7	139.9	138.6
53°	139.5	141.3	142.7	143.5	144.8	144.3	143.1	141.5	139.8	138.0	136.8
53.5°	137.5	139.4	140.9	141.8	142.9	142.3	141.3	139.6	137.8	136.4	134.8
54°	135.8	137.4	139.1	140.0	141.1	140.6	139.3	137.8	136.1	134.3	132.9
54.5°	134.0	135.5	137.1	138.0	139.3	138.6	137.4	135.9	134.2	132.4	131.0
55°	132.0	133.9	135.4	136.2	137.3	136.8	135.7	134.1	132.3	130.5	129.0
55.5°	130.0	131.9	133.6	134.3	135.6	134.9	133.8	132.1	130.2	128.7	127.3
56°	128.1	129.9	131.6	132.4	133.8	133.2	131.8	130.2	128.4	126.7	125.3
56.5°	126.2	127.9	129.5	130.4	131.6	131.0	130.0	128.3	126.6	124.7	123.3
57°	124.2	126.1	127.7	128.4	129.7	129.2	128.1	126.3	124.5	122.8	121.3
57.5°	122.4	124.2	125.9	126.7	127.8	127.4	126.2	124.4	122.6	120.8	119.5
58°	120.5	122.2	123.9	124.8	126.1	125.4	124.1	122.6	120.7	118.9	117.5
58.5°	118.3	120.3	121.9	122.9	124.0	123.4	122.3	120.5	118.8	117.1	115.6
59°	116.6	118.3	120.0	120.8	122.0	121.7	120.5	118.7	116.9	115.1	113.5
59.5°	114.6	116.4	118.0	118.8	120.1	119.6	118.3	116.8	114.9	113.0	111.6
60°	112.6	114.4	116.1	117.0	118.4	117.7	116.4	114.7	112.9	111.1	109.5
60.5°	110.5	112.6	114.1	115.0	116.2	115.6	114.5	112.7	110.9	109.1	107.7
61°	108.7	110.5	112.3	113.0	114.3	113.8	112.5	111.0	108.9	107.2	105.6
61.5°	106.7	108.5	110.1	111.0	112.5	111.8	110.6	108.9	107.1	105.2	103.7
62°	104.8	106.6	108.3	109.1	110.4	109.8	108.6	106.9	105.1	103.3	101.7
62.5°	102.7	104.7	106.3	107.3	108.4	107.9	106.7	104.9	103.1	101.1	99.7
63°	100.8	102.6	104.4	105.1	106.5	105.9	104.7	103.0	101.1	99.2	97.7
63.5°	98.7	100.6	102.3	103.1	104.4	103.9	102.6	101.0	99.1	97.4	95.7
64°	96.8	98.8	100.3	101.1	102.5	101.9	100.7	99.0	97.2	95.3	93.7
64.5°	94.9	96.8	98.4	99.1	100.4	99.9	98.8	97.0	95.3	93.2	91.8
65°	92.9	94.7	96.5	97.3	98.6	98.0	96.8	95.0	93.4	91.4	89.7
65.5°	90.8	92.8	94.4	95.2	96.5	95.9	94.8	93.0	91.2	89.5	87.9
66°	89.0	90.8	92.4	93.2	94.5	94.0	92.9	91.1	89.3	87.4	85.9
66.5°	87.0	88.8	90.4	91.3	92.5	92.0	90.8	89.3	87.4	85.5	83.8
67°	85.0	86.8	88.5	89.3	90.6	90.0	88.9	87.2	85.5	83.5	81.9

TEST NUMBER: P855583
 CATALOG NUMBER: HLS4079FS1EWH-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	83.0	85.0	86.4	87.3	88.6	88.1	87.0	85.2	83.5	81.6	80.1
68°	81.1	82.9	84.5	85.3	86.5	86.1	85.0	83.3	81.5	79.7	78.1
68.5°	79.1	80.9	82.6	83.3	84.6	84.2	82.9	81.3	79.7	77.7	76.2
69°	77.2	79.1	80.6	81.4	82.7	82.2	81.0	79.5	77.8	75.8	74.3
69.5°	75.3	77.1	78.7	79.4	80.7	80.3	79.1	77.6	75.8	73.8	72.3
70°	73.4	75.1	76.7	77.4	78.8	78.4	77.1	75.7	73.9	71.9	70.3
70.5°	71.4	73.2	74.8	75.5	76.9	76.5	75.1	73.7	72.0	70.1	68.5
71°	69.6	71.3	72.7	73.5	74.9	74.5	73.4	71.7	70.1	68.2	66.6
71.5°	67.7	69.5	70.8	71.6	72.9	72.5	71.5	69.9	68.2	66.3	64.6
72°	65.7	67.5	69.0	69.7	71.0	70.7	69.5	68.0	66.3	64.4	62.7
72.5°	64.0	65.7	67.1	67.8	69.3	68.7	67.7	66.1	64.5	62.4	61.0
73°	62.1	63.8	65.1	65.9	67.1	66.8	65.8	64.2	62.5	60.7	59.1
73.5°	60.3	61.9	63.2	64.0	65.2	64.9	63.9	62.3	60.8	58.9	57.2
74°	58.4	60.1	61.5	62.1	63.4	62.9	61.9	60.6	59.0	57.0	55.4
74.5°	56.7	58.4	59.7	60.3	61.5	61.1	60.2	58.7	57.2	55.2	53.6
75°	54.9	56.5	57.8	58.4	59.7	59.3	58.4	56.9	55.3	53.4	51.9
75.5°	53.1	54.7	55.9	56.6	57.9	57.5	56.5	55.1	53.6	51.7	50.2
76°	51.4	52.9	54.2	54.7	56.0	55.6	54.7	53.3	51.9	50.0	48.4
76.5°	49.7	51.3	52.4	52.9	54.2	53.8	52.9	51.6	50.1	48.3	46.6
77°	48.0	49.5	50.7	51.2	52.3	52.0	51.2	49.8	48.4	46.5	44.9
77.5°	46.3	47.8	49.0	49.5	50.7	50.3	49.5	48.1	46.8	44.9	43.3
78°	44.7	46.1	47.3	47.8	48.9	48.6	47.7	46.5	45.1	43.2	41.7
78.5°	43.0	44.5	45.5	46.0	47.2	46.8	46.1	44.8	43.4	41.7	40.1
79°	41.5	42.7	43.9	44.3	45.4	45.1	44.4	43.1	41.9	40.1	38.5
79.5°	40.0	41.3	42.3	42.6	43.7	43.5	42.7	41.6	40.4	38.5	36.9
80°	38.4	39.7	40.6	41.1	42.1	41.9	41.2	40.0	38.7	37.0	35.4
80.5°	36.8	38.1	39.0	39.5	40.5	40.2	39.6	38.4	37.3	35.5	33.9
81°	35.4	36.5	37.5	37.9	38.9	38.6	38.0	36.9	35.8	34.0	32.5
81.5°	34.0	35.1	36.0	36.3	37.3	37.1	36.4	35.4	34.3	32.6	31.1
82°	32.8	33.7	34.5	34.9	35.7	35.5	34.9	33.9	32.9	31.2	29.7
82.5°	31.4	32.4	33.1	33.5	34.2	34.0	33.5	32.6	31.5	29.8	28.3
83°	30.0	31.1	31.8	32.2	32.8	32.7	32.0	31.2	30.1	28.4	26.9
83.5°	28.6	29.7	30.4	30.7	31.4	31.2	30.6	29.7	28.8	27.2	25.7
84°	27.4	28.3	29.0	29.3	30.0	29.7	29.3	28.4	27.5	25.8	24.4
84.5°	26.1	27.0	27.6	27.9	28.6	28.4	27.9	27.1	26.2	24.6	23.3
85°	24.8	25.7	26.3	26.6	27.2	27.1	26.6	25.8	24.9	23.4	22.0
85.5°	23.6	24.4	25.0	25.3	25.9	25.7	25.3	24.5	23.7	22.3	20.9
86°	22.5	23.3	23.8	24.0	24.6	24.5	24.0	23.4	22.6	21.1	19.7
86.5°	21.3	22.1	22.6	22.9	23.5	23.3	22.9	22.2	21.4	20.0	18.7
87°	20.1	20.9	21.5	21.7	22.3	22.1	21.7	21.0	20.2	18.9	17.6
87.5°	19.0	19.8	20.3	20.5	21.1	21.0	20.6	19.9	19.1	17.8	16.5
88°	17.9	18.7	19.2	19.4	20.0	19.8	19.5	18.8	18.1	16.7	15.6
88.5°	16.8	17.6	18.1	18.3	18.9	18.7	18.4	17.8	17.0	15.8	14.6
89°	15.8	16.5	17.1	17.3	17.8	17.6	17.3	16.7	15.9	14.8	13.8
89.5°	14.8	15.5	16.1	16.2	16.7	16.6	16.3	15.7	15.0	14.0	12.9

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



TEST NUMBER: P855583
CATALOG NUMBER: HLS4079FS1EWH-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: P855583
 CATALOG NUMBER: HLS4079FS1EWH-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	252.3	252.3	252.3	252.3	252.3	252.3
0.5°	252.6	252.2	252.3	252.4	252.3	252.0
1°	252.3	252.0	252.3	252.3	251.9	252.0
1.5°	252.2	251.8	252.4	252.1	251.8	252.2
2°	252.2	252.1	252.1	252.0	252.2	251.9
2.5°	252.3	251.8	251.8	252.1	251.9	251.8
3°	252.0	251.3	251.9	251.8	251.5	251.8
3.5°	251.6	251.2	251.5	251.6	251.6	251.8
4°	251.4	251.2	251.0	251.5	251.3	251.4
4.5°	251.3	250.7	251.0	251.2	251.0	251.1
5°	251.0	250.4	250.9	250.7	250.7	251.0
5.5°	250.4	250.3	250.6	250.7	250.7	250.8
6°	250.4	250.0	250.1	250.5	250.3	250.6
6.5°	250.3	249.4	249.8	250.0	249.9	250.3
7°	249.9	249.0	249.6	249.6	249.5	250.0
7.5°	249.3	248.9	249.3	249.4	249.6	249.6
8°	248.9	248.4	248.7	249.1	249.1	249.3
8.5°	248.6	247.8	248.2	248.6	248.4	249.1
9°	248.4	247.5	247.9	248.1	248.1	248.6
9.5°	247.7	247.0	247.4	247.7	247.8	247.9
10°	247.0	246.5	246.6	247.0	247.1	247.6
10.5°	246.5	246.1	246.3	246.4	246.7	247.2
11°	246.2	245.5	246.0	246.2	246.1	246.6
11.5°	245.7	244.8	245.3	245.6	246.0	246.2
12°	244.8	244.1	244.5	244.8	245.1	245.7
12.5°	244.3	243.6	244.3	244.3	244.4	245.0
13°	243.7	243.1	243.4	243.7	244.0	244.3
13.5°	243.1	242.4	242.6	243.0	243.5	244.0
14°	242.4	241.5	242.0	242.4	242.6	243.4
14.5°	241.6	240.9	241.6	241.7	242.1	242.6
15°	241.1	240.4	240.6	240.8	241.3	241.8
15.5°	240.6	239.4	240.0	240.3	240.6	241.4
16°	239.5	238.9	239.2	239.7	240.0	240.6
16.5°	238.7	238.0	238.5	238.7	239.2	239.8
17°	237.9	237.0	237.6	237.9	238.5	239.1
17.5°	237.3	236.2	236.9	237.2	237.5	238.4
18°	236.3	235.7	236.1	236.3	236.7	237.4
18.5°	235.4	234.7	235.3	235.5	236.1	236.8
19°	234.7	233.6	234.3	234.7	235.2	235.9
19.5°	233.9	232.7	233.3	233.7	234.3	235.0
20°	232.7	232.1	232.3	232.7	233.6	234.0
20.5°	231.7	231.0	231.6	231.9	232.5	233.3
21°	230.8	229.8	230.6	231.2	231.4	232.4
21.5°	230.0	229.1	229.6	229.9	230.7	231.4
22°	229.1	228.1	228.6	228.9	229.9	230.6

TEST NUMBER: P855583
 CATALOG NUMBER: HLS4079FS1EWH-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	227.9	226.8	227.6	228.2	228.7	229.6
23°	226.8	225.7	226.5	227.1	227.7	228.4
23.5°	225.8	224.8	225.3	225.8	226.6	227.4
24°	224.8	223.9	224.2	224.9	225.7	226.7
24.5°	223.7	222.7	223.2	223.8	224.5	225.5
25°	222.5	221.5	222.1	222.5	223.5	224.2
25.5°	221.4	220.5	220.9	221.5	222.4	223.3
26°	220.3	219.3	219.7	220.5	221.2	222.2
26.5°	219.2	217.9	218.8	219.2	220.0	221.1
27°	218.1	216.9	217.7	218.0	219.0	220.1
27.5°	216.7	215.8	216.3	216.9	217.9	218.8
28°	215.5	214.5	214.9	215.7	216.6	217.5
28.5°	214.2	212.9	213.9	214.3	215.3	216.3
29°	213.1	211.9	212.5	213.2	214.0	215.2
29.5°	211.9	210.8	211.2	212.0	213.1	214.0
30°	210.6	209.4	210.0	210.7	211.7	212.5
30.5°	209.1	207.9	208.8	209.3	210.3	211.4
31°	207.7	207.0	207.4	208.0	209.1	210.1
31.5°	206.5	205.4	206.1	206.6	207.8	208.9
32°	205.3	203.9	204.5	205.5	206.2	207.5
32.5°	203.9	202.7	203.3	203.9	205.0	206.3
33°	202.5	201.3	201.8	202.6	203.8	204.7
33.5°	201.1	199.8	200.4	201.3	202.4	203.3
34°	199.7	198.4	199.1	199.9	200.9	202.1
34.5°	198.3	197.0	197.8	198.3	199.6	200.8
35°	196.7	195.5	196.0	197.1	198.2	199.3
35.5°	195.3	194.0	194.5	195.4	196.5	197.9
36°	193.7	192.6	193.2	193.8	195.1	196.3
36.5°	192.5	191.3	191.9	192.6	193.7	195.0
37°	190.9	189.8	190.1	191.2	192.2	193.5
37.5°	189.3	188.1	188.7	189.4	190.7	192.0
38°	187.7	186.4	187.3	187.9	189.1	190.6
38.5°	186.4	184.9	185.6	186.5	187.6	189.0
39°	184.6	183.6	183.9	184.7	186.2	187.4
39.5°	183.2	181.9	182.5	183.3	184.5	186.0
40°	181.4	180.2	180.9	181.8	183.0	184.3
40.5°	179.9	178.8	179.4	180.2	181.5	182.7
41°	178.4	177.0	177.7	178.4	179.8	181.3
41.5°	176.7	175.4	175.9	176.8	178.0	179.7
42°	175.0	173.6	174.4	175.3	176.6	178.0
42.5°	173.4	172.1	172.8	173.5	175.0	176.4
43°	171.7	170.4	170.9	171.9	173.2	174.6
43.5°	170.1	168.7	169.2	170.3	171.6	173.0
44°	168.2	166.8	167.6	168.5	170.0	171.5
44.5°	166.6	165.2	166.1	166.7	168.2	169.9

TEST NUMBER: P855583
 CATALOG NUMBER: HLS4079FS1EWH-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	165.1	163.7	164.1	165.1	166.4	168.0
45.5°	163.4	161.9	162.4	163.4	164.9	166.2
46°	161.6	160.1	160.8	161.8	163.2	164.8
46.5°	159.7	158.4	159.1	159.9	161.3	162.9
47°	157.9	156.6	157.1	158.1	159.5	161.1
47.5°	156.1	154.7	155.5	156.3	157.9	159.5
48°	154.6	153.0	153.7	154.7	156.1	157.6
48.5°	152.7	151.3	151.9	152.7	154.4	155.7
49°	150.7	149.4	149.9	151.0	152.5	154.2
49.5°	149.0	147.5	148.0	149.2	150.7	152.6
50°	147.1	145.8	146.4	147.2	148.9	150.5
50.5°	145.4	143.9	144.7	145.4	147.0	148.6
51°	143.5	142.0	142.5	143.8	145.1	147.0
51.5°	141.6	140.2	140.7	141.9	143.5	145.1
52°	139.6	138.3	138.9	139.9	141.6	143.2
52.5°	137.9	136.3	137.0	137.9	139.6	141.4
53°	136.0	134.6	135.1	136.4	137.6	139.5
53.5°	134.0	132.7	133.3	134.3	135.9	137.5
54°	132.1	130.8	131.3	132.3	134.1	135.8
54.5°	130.4	128.7	129.2	130.5	132.1	134.0
55°	128.4	127.0	127.4	128.5	130.2	132.0
55.5°	126.5	125.0	125.7	126.5	128.2	130.0
56°	124.4	123.0	123.6	124.7	126.3	128.1
56.5°	122.5	121.1	121.6	122.7	124.4	126.2
57°	120.5	119.2	119.7	120.7	122.6	124.2
57.5°	118.7	117.2	117.8	118.8	120.5	122.4
58°	116.6	115.2	115.8	116.9	118.5	120.5
58.5°	114.7	113.2	113.7	114.8	116.6	118.3
59°	112.8	111.3	111.8	112.9	114.7	116.6
59.5°	110.7	109.2	109.9	110.9	112.7	114.6
60°	108.6	107.4	107.9	109.0	110.7	112.6
60.5°	106.7	105.3	105.8	107.0	108.7	110.5
61°	104.9	103.3	103.9	104.9	106.9	108.7
61.5°	102.8	101.3	101.9	102.9	104.7	106.7
62°	100.7	99.3	99.8	101.0	102.7	104.8
62.5°	98.8	97.4	97.9	99.1	100.7	102.7
63°	96.8	95.3	95.9	97.1	99.0	100.8
63.5°	94.8	93.3	93.9	95.0	96.8	98.7
64°	92.8	91.4	91.8	93.1	94.9	96.8
64.5°	90.7	89.5	89.8	91.0	92.9	94.9
65°	88.9	87.4	88.0	89.1	90.9	92.9
65.5°	87.0	85.4	85.9	87.2	88.9	90.8
66°	84.9	83.4	83.8	85.2	87.0	89.0
66.5°	82.8	81.4	81.9	83.1	85.1	87.0
67°	80.9	79.6	80.0	81.1	83.0	85.0

TEST NUMBER: P855583
 CATALOG NUMBER: HLS4079FS1EWH-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	79.0	77.6	78.1	79.3	81.0	83.0
68°	77.1	75.5	76.0	77.3	79.2	81.1
68.5°	75.1	73.5	74.1	75.3	77.2	79.1
69°	73.3	71.6	72.2	73.4	75.2	77.2
69.5°	71.3	69.7	70.3	71.4	73.3	75.3
70°	69.5	67.8	68.2	69.5	71.4	73.4
70.5°	67.5	65.9	66.4	67.6	69.6	71.4
71°	65.6	64.0	64.5	65.8	67.6	69.6
71.5°	63.6	62.0	62.5	63.9	65.7	67.7
72°	61.8	60.2	60.8	61.9	63.9	65.7
72.5°	60.0	58.4	58.9	60.1	62.0	64.0
73°	58.1	56.5	57.0	58.3	60.2	62.1
73.5°	56.3	54.6	55.2	56.5	58.3	60.3
74°	54.4	52.9	53.3	54.6	56.6	58.4
74.5°	52.6	51.2	51.7	52.8	54.7	56.7
75°	50.9	49.4	49.9	51.2	52.9	54.9
75.5°	49.1	47.7	48.2	49.4	51.3	53.1
76°	47.4	46.0	46.4	47.7	49.6	51.4
76.5°	45.6	44.2	44.7	46.0	47.8	49.7
77°	43.9	42.5	43.0	44.3	46.1	48.0
77.5°	42.3	41.0	41.5	42.6	44.5	46.3
78°	40.8	39.4	39.9	41.1	42.8	44.7
78.5°	39.1	37.8	38.3	39.5	41.3	43.0
79°	37.5	36.2	36.6	37.9	39.7	41.5
79.5°	35.9	34.6	35.1	36.4	38.1	40.0
80°	34.4	33.2	33.7	34.9	36.5	38.4
80.5°	33.0	31.9	32.4	33.5	35.1	36.8
81°	31.6	30.5	31.0	32.2	33.7	35.4
81.5°	30.1	29.1	29.6	30.8	32.4	34.0
82°	28.7	27.7	28.2	29.4	31.0	32.8
82.5°	27.4	26.4	26.9	28.0	29.7	31.4
83°	26.0	25.0	25.5	26.6	28.3	30.0
83.5°	24.7	23.8	24.2	25.3	26.9	28.6
84°	23.6	22.6	23.1	24.1	25.6	27.4
84.5°	22.4	21.4	21.9	23.0	24.4	26.1
85°	21.2	20.3	20.7	21.8	23.3	24.8
85.5°	20.0	19.2	19.6	20.6	22.1	23.6
86°	18.9	18.0	18.5	19.5	21.0	22.5
86.5°	17.8	17.0	17.4	18.4	19.9	21.3
87°	16.7	15.9	16.4	17.4	18.7	20.1
87.5°	15.7	15.0	15.4	16.4	17.7	19.0
88°	14.8	14.1	14.4	15.4	16.7	17.9
88.5°	13.9	13.2	13.6	14.4	15.7	16.8
89°	13.0	12.3	12.7	13.6	14.7	15.8
89.5°	12.1	11.4	11.8	12.7	13.9	14.8

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


NVLAP Lab Code: 200050-0



TEST NUMBER: P855583
CATALOG NUMBER: HLS4079FS1EWH-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)