

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: HALO

Report Number: P256760

Luminaire Tested: **HLB6099FS1EMW-2700K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P256760
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A1806645B001)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: HLB6099FS1EMW-2700K
Description: 6 IN HALO BLADE (900 LUMEN) - 2700K
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1037.3 lumens
Efficiency: N/A
Efficacy: 64.8 lumens/watt
Spacing Criteria (0/90/45): 1.33 / 1.33 / 1.41
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

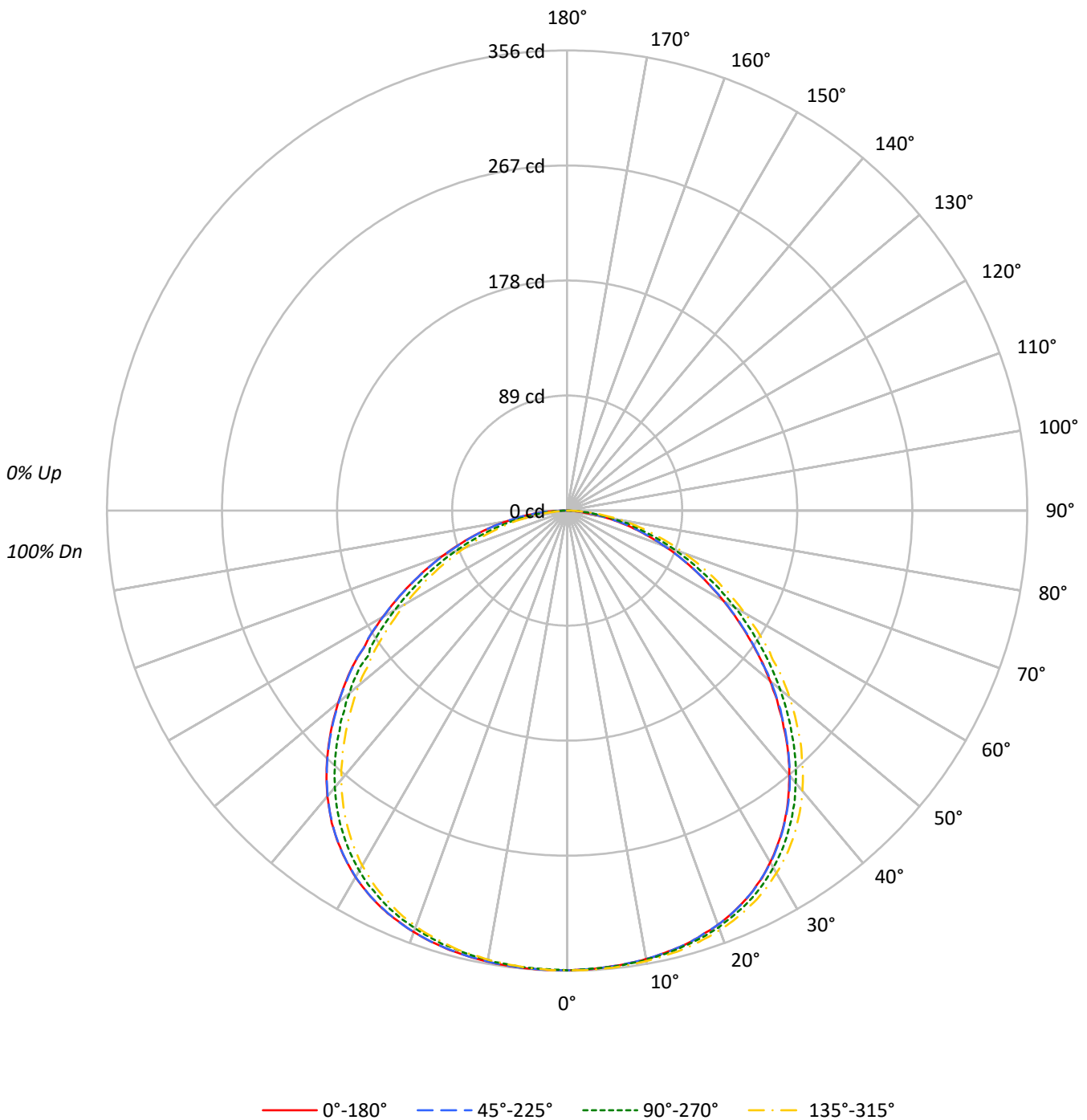
Input Watts (W): 16
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	72	70
3	90	80	72	65	88	78	71	65	75	69	64	73	67	63	70	65	61	59
4	83	71	62	55	81	70	61	55	67	60	54	65	59	54	63	57	53	51
5	76	63	54	48	74	62	54	47	60	53	47	58	52	46	56	51	46	44
6	70	57	48	42	68	56	48	41	54	47	41	53	46	41	51	45	40	38
7	65	52	43	37	63	51	43	37	49	42	36	48	41	36	47	40	36	34
8	61	47	39	33	59	46	38	33	45	38	32	44	37	32	43	37	32	30
9	57	43	35	29	55	43	35	29	41	34	29	40	34	29	39	33	29	27
10	53	40	32	27	52	39	32	27	38	31	27	37	31	26	37	31	26	25

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	19500	19500	19500	19500
5°	19508	19513	19563	19530
10°	19611	19633	19728	19639
15°	19756	19801	19966	19836
20°	19893	20010	20243	20063
25°	19973	20154	20517	20263
30°	19895	20187	20731	20358
35°	19629	20043	20793	20284
40°	19136	19687	20646	20009
45°	18366	19087	20281	19498
50°	17500	18336	19718	18737
55°	16420	17462	18934	17815
60°	15306	16402	18091	16896
65°	14100	15306	17200	15877
70°	12759	14185	16413	14794
75°	11332	12942	15653	13535
80°	9218	11365	15027	12281
85°	4466	8428	14781	10127



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	33.8	3.3
10°-20°	98.9	9.5
20°-30°	154.1	14.9
30°-40°	188.5	18.2
40°-50°	192.0	18.5
50°-60°	165.1	15.9
60°-70°	119.5	11.5
70°-80°	67.2	6.5
80°-90°	18.2	1.7
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	286.8	27.7
0°-40°	475.3	45.8
0°-60°	832.4	80.2
0°-90°	1037.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1037.3	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	356	356	356	356	356	
5°	354	355	356	355	354	34
15°	348	349	352	350	348	98
25°	330	333	339	335	330	152
35°	293	300	311	303	293	183
45°	237	246	262	252	237	183
55°	172	183	198	186	172	154
65°	109	118	133	122	109	108
75°	54	61	74	64	54	57
85°	7	13	24	16	7	11
90°	0	0	4	0	0	



TEST NUMBER: P256760

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CANDELA DISTRIBUTION (FULL):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
0°	355.7	355.7	355.7	355.7	355.7	355.7	355.7	355.7	355.7	355.7	355.7
1°	355.5	355.6	355.2	355.4	355.5	355.8	355.7	355.7	355.5	355.3	355.6
2°	355.3	355.3	355.2	355.2	355.7	355.8	355.7	355.8	355.6	355.3	356.0
3°	355.2	355.1	355.0	354.9	355.3	355.8	355.7	355.7	355.5	355.1	355.5
4°	354.9	354.9	354.9	354.9	355.6	355.7	355.7	355.7	355.4	355.1	355.4
5°	354.5	354.6	354.5	354.6	355.3	355.6	355.5	355.6	355.4	354.9	355.4
6°	354.2	354.2	354.2	354.6	355.3	355.5	355.4	355.5	355.2	354.7	354.7
7°	353.9	353.8	353.7	354.2	354.7	355.3	355.2	355.2	355.1	354.2	354.4
8°	353.3	353.3	353.3	353.7	354.5	355.0	354.9	355.1	354.8	353.9	354.1
9°	352.9	352.8	352.8	353.5	353.6	354.8	354.8	354.9	354.5	353.7	353.7
10°	352.3	352.4	352.2	352.7	353.3	354.4	354.4	354.5	354.0	352.8	353.2
11°	351.7	351.6	351.6	352.2	352.9	353.8	354.0	354.1	353.6	352.6	352.2
12°	350.7	350.8	350.7	351.6	352.0	353.5	353.5	353.7	353.1	352.0	351.5
13°	349.9	350.0	350.0	350.9	351.5	352.8	353.0	353.2	352.6	351.3	351.1
14°	349.1	349.1	349.0	349.9	350.9	352.4	352.4	352.6	352.1	350.4	350.7
15°	348.1	348.1	348.0	348.9	350.2	351.6	351.8	352.0	351.3	349.5	349.3
16°	346.9	346.9	346.9	348.1	349.1	350.7	351.0	351.2	350.6	349.0	348.4
17°	345.6	345.7	345.6	347.0	347.9	349.9	350.1	350.5	349.7	347.8	347.2
18°	343.9	343.9	343.9	345.8	346.8	348.7	349.3	349.6	348.8	346.6	346.2
19°	342.7	342.5	342.6	344.4	345.7	347.8	348.2	348.5	347.7	345.5	344.8
20°	341.0	341.1	341.0	343.0	344.0	346.6	347.0	347.4	346.6	343.9	343.5
21°	339.2	339.0	339.2	341.0	342.6	345.3	345.8	346.0	345.2	342.4	341.3
22°	337.2	337.2	337.2	339.4	341.1	343.7	344.0	344.7	343.8	341.0	340.1
23°	335.0	335.0	335.1	337.4	339.0	342.1	342.6	343.0	342.3	339.1	337.9
24°	332.7	332.8	332.8	335.6	337.0	340.4	341.1	341.5	340.4	337.2	335.6
25°	330.2	330.0	330.3	333.2	335.1	338.4	339.2	339.5	338.6	335.0	333.3
26°	327.5	327.7	327.7	330.8	332.9	336.4	337.2	337.6	336.6	332.6	331.0
27°	324.3	324.5	324.7	328.2	330.2	334.2	335.0	335.5	334.4	330.0	328.3
28°	321.6	321.3	321.4	325.3	327.6	331.9	332.6	333.1	332.0	327.8	325.5
29°	317.8	317.9	318.4	322.2	324.4	329.1	330.1	330.5	329.4	324.7	322.3
30°	314.3	314.3	314.6	318.9	321.4	326.3	327.5	328.0	326.6	321.6	319.4
31°	310.6	310.7	311.3	315.7	318.3	323.4	324.4	324.9	323.4	318.3	315.8
32°	306.4	306.7	306.9	312.0	314.8	320.1	321.1	321.9	320.5	314.8	312.3
33°	302.3	302.5	303.2	308.1	311.4	316.9	317.9	318.4	316.9	311.2	308.2
34°	297.9	298.1	298.6	304.1	306.9	313.2	314.1	315.0	313.6	307.1	304.2
35°	293.3	293.5	293.9	299.5	303.3	309.5	310.7	311.2	309.6	303.1	299.9
36°	288.6	288.9	289.2	295.4	298.6	305.5	306.4	307.3	305.7	299.0	295.6
37°	283.6	283.9	284.3	290.3	293.8	301.1	302.6	302.8	301.2	294.3	290.9
38°	278.3	278.7	279.1	285.9	289.1	296.8	297.8	298.8	296.8	289.8	286.1
39°	272.9	273.3	273.9	280.3	284.6	291.7	293.2	293.7	292.2	284.6	280.9
40°	267.4	267.8	268.3	275.1	279.2	287.3	288.5	289.4	287.3	279.6	275.0
41°	261.8	262.1	262.6	269.8	273.8	281.9	283.5	284.0	282.3	274.3	270.3
42°	255.8	255.7	256.8	264.3	268.5	277.1	278.3	279.2	277.0	268.8	264.1
43°	249.9	250.2	250.8	258.4	262.4	271.1	272.9	273.3	271.7	263.2	258.6
44°	243.7	243.6	244.7	252.4	256.0	266.1	267.3	268.4	266.0	257.3	252.2



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CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
45°	236.9	237.9	238.5	246.2	251.7	259.9	261.6	262.2	260.3	251.5	246.2
46°	231.2	231.1	231.7	240.2	244.4	254.5	255.7	256.2	254.5	244.8	240.1
47°	224.2	225.4	225.9	234.0	238.5	248.0	249.9	250.2	248.5	239.5	233.7
48°	218.4	218.3	219.0	227.8	232.3	241.9	243.8	244.2	242.3	232.3	227.5
49°	211.2	211.8	213.0	221.4	226.2	235.6	237.4	237.9	236.0	226.8	221.2
50°	205.2	205.5	205.9	215.0	219.7	229.4	231.2	231.7	229.7	219.7	214.9
51°	198.1	198.8	200.0	208.6	213.0	223.1	224.8	225.3	223.3	214.1	208.3
52°	192.3	192.4	189.5	202.1	206.7	216.7	218.3	219.0	217.0	207.0	201.7
53°	185.0	185.9	185.2	195.7	200.0	210.1	211.8	212.4	210.4	200.4	195.1
54°	178.4	179.2	178.6	189.3	189.6	203.6	205.2	205.9	203.3	189.4	188.5
55°	171.8	172.8	172.0	182.7	186.0	197.1	198.1	199.4	196.6	186.4	182.1
56°	165.3	166.1	165.5	175.6	179.3	190.6	189.4	189.5	190.2	179.9	174.9
57°	158.7	159.5	159.1	169.6	172.5	184.2	184.1	185.3	184.1	173.5	168.9
58°	152.4	153.2	152.6	162.5	166.1	177.7	178.0	178.8	177.0	166.9	161.7
59°	145.9	146.6	146.1	156.8	160.1	171.2	170.9	172.2	170.5	160.6	156.0
60°	139.6	139.7	139.9	149.6	153.6	164.6	165.0	165.2	163.9	154.1	149.0
61°	133.2	133.9	133.6	143.6	146.6	158.0	157.9	159.2	157.4	147.5	143.1
62°	126.9	126.9	127.3	136.7	140.4	151.6	151.5	152.1	151.0	141.1	136.3
63°	120.8	121.3	121.2	131.0	134.6	145.2	145.1	146.3	144.6	134.8	130.1
64°	114.7	114.6	115.1	124.2	128.0	138.2	138.9	139.2	138.1	128.6	123.9
65°	108.7	109.2	109.1	118.0	122.2	132.5	132.6	133.5	131.8	122.4	117.8
66°	102.8	102.5	103.3	111.8	116.1	125.6	126.4	126.6	125.5	116.2	111.8
67°	97.0	96.8	97.5	105.9	110.1	119.5	120.3	121.0	119.3	110.1	105.8
68°	91.4	91.0	91.6	100.0	104.1	113.4	114.2	114.3	113.3	104.1	99.8
69°	85.7	85.4	85.6	94.2	97.9	107.3	108.2	108.8	107.3	98.2	94.2
70°	79.6	79.7	80.6	88.5	92.2	101.3	102.4	102.2	101.4	92.3	88.3
71°	74.7	74.4	74.7	82.9	86.5	95.5	96.5	96.4	95.7	86.0	82.8
72°	68.9	69.0	69.9	77.2	80.9	89.6	90.8	90.6	89.5	80.9	77.1
73°	63.6	64.1	64.3	71.7	75.2	83.9	85.0	85.0	84.3	74.8	71.6
74°	58.5	59.0	59.7	65.9	69.7	78.3	79.4	79.4	78.3	69.7	66.2
75°	53.5	54.1	54.4	61.1	64.3	72.7	73.9	74.0	73.3	63.9	60.8
76°	48.6	49.3	49.9	56.0	58.9	67.3	68.6	68.7	67.6	58.7	55.6
77°	43.1	45.4	44.8	50.8	53.8	62.1	63.3	63.4	62.8	53.7	50.4
78°	38.4	39.3	40.1	48.3	48.6	56.9	58.2	58.3	57.2	48.6	48.2
79°	33.8	34.7	35.7	40.7	43.5	51.8	52.5	53.2	52.3	43.8	39.7
80°	29.2	30.3	31.3	36.0	38.7	48.1	47.6	48.3	48.3	38.9	34.8
81°	24.8	25.7	27.2	31.1	34.1	40.5	42.9	43.6	42.0	34.4	29.8
82°	20.0	21.5	22.8	26.7	29.2	35.4	37.8	38.6	37.3	29.6	25.2
83°	15.7	17.4	18.5	22.3	24.4	30.4	32.9	33.8	32.4	24.9	20.6
84°	11.2	13.1	14.6	17.6	19.9	25.3	27.8	29.3	27.9	20.5	15.8
85°	7.1	9.2	10.8	13.4	15.5	20.6	23.5	24.9	23.6	16.1	11.3
86°	3.6	5.5	7.1	9.6	10.9	16.0	18.8	20.2	19.1	11.8	7.5
87°	1.0	2.0	3.2	6.6	7.6	11.7	14.4	16.2	14.9	8.3	4.3
88°	0.0	0.0	0.0	3.4	4.4	8.3	10.6	11.7	10.9	4.7	2.0
89°	0.0	0.0	0.0	0.3	1.9	4.8	6.6	7.6	6.9	1.9	0.1



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CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
90°	0.0	0.0	0.0	0.0	0.3	2.0	3.6	4.5	3.0	0.3	0.0



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CANDELA DISTRIBUTION (continued):

	330°	360°
0°	355.7	355.7
1°	355.6	355.5
2°	355.5	355.3
3°	355.1	355.2
4°	355.0	354.9
5°	354.9	354.5
6°	354.4	354.2
7°	354.0	353.9
8°	353.5	353.3
9°	352.9	352.9
10°	352.5	352.3
11°	351.7	351.7
12°	351.1	350.7
13°	350.3	349.9
14°	349.3	349.1
15°	348.2	348.1
16°	347.0	346.9
17°	345.7	345.6
18°	344.2	343.9
19°	342.9	342.7
20°	341.0	341.0
21°	339.4	339.2
22°	337.2	337.2
23°	335.2	335.0
24°	332.8	332.7
25°	330.2	330.2
26°	327.7	327.5
27°	324.9	324.3
28°	321.5	321.6
29°	318.1	317.8
30°	314.8	314.3
31°	311.0	310.6
32°	307.0	306.4
33°	303.1	302.3
34°	298.5	297.9
35°	294.0	293.3
36°	288.9	288.6
37°	284.3	283.6
38°	278.7	278.3
39°	273.8	272.9
40°	267.8	267.4
41°	262.7	261.8
42°	256.3	255.8
43°	250.7	249.9
44°	244.2	243.7



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CANDELA DISTRIBUTION (continued):

	330°	360°
45°	238.0	236.9
46°	231.6	231.2
47°	225.3	224.2
48°	219.1	218.4
49°	212.6	211.2
50°	206.2	205.2
51°	199.6	198.1
52°	189.2	192.3
53°	185.6	185.0
54°	179.1	178.4
55°	172.5	171.8
56°	166.0	165.3
57°	159.5	158.7
58°	153.2	152.4
59°	146.8	145.9
60°	140.4	139.6
61°	133.5	133.2
62°	127.7	126.9
63°	121.0	120.8
64°	115.4	114.7
65°	108.8	108.7
66°	103.5	102.8
67°	97.1	97.0
68°	91.3	91.4
69°	85.6	85.7
70°	80.0	79.6
71°	74.6	74.7
72°	69.2	68.9
73°	64.0	63.6
74°	58.9	58.5
75°	53.9	53.5
76°	48.9	48.6
77°	44.0	43.1
78°	39.1	38.4
79°	34.3	33.8
80°	29.6	29.2
81°	24.8	24.8
82°	20.5	20.0
83°	16.0	15.7
84°	11.9	11.2
85°	7.7	7.1
86°	3.8	3.6
87°	1.3	1.0
88°	0.0	0.0
89°	0.0	0.0



TEST NUMBER: P256760

CATALOG NUMBER: HLB6099FS1EMW-2700K

CANDELA DISTRIBUTION (continued):

	330°	360°
90°	0.0	0.0

(END OF REPORT)