

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: P256764

Luminaire Tested: **HLB6099FS1EMW-5000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P256764
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-5000K
Description: 6 IN HALO BLADE (900 LUMEN) - 5000K
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1103.4 lumens
Efficiency: N/A
Efficacy: 69.0 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

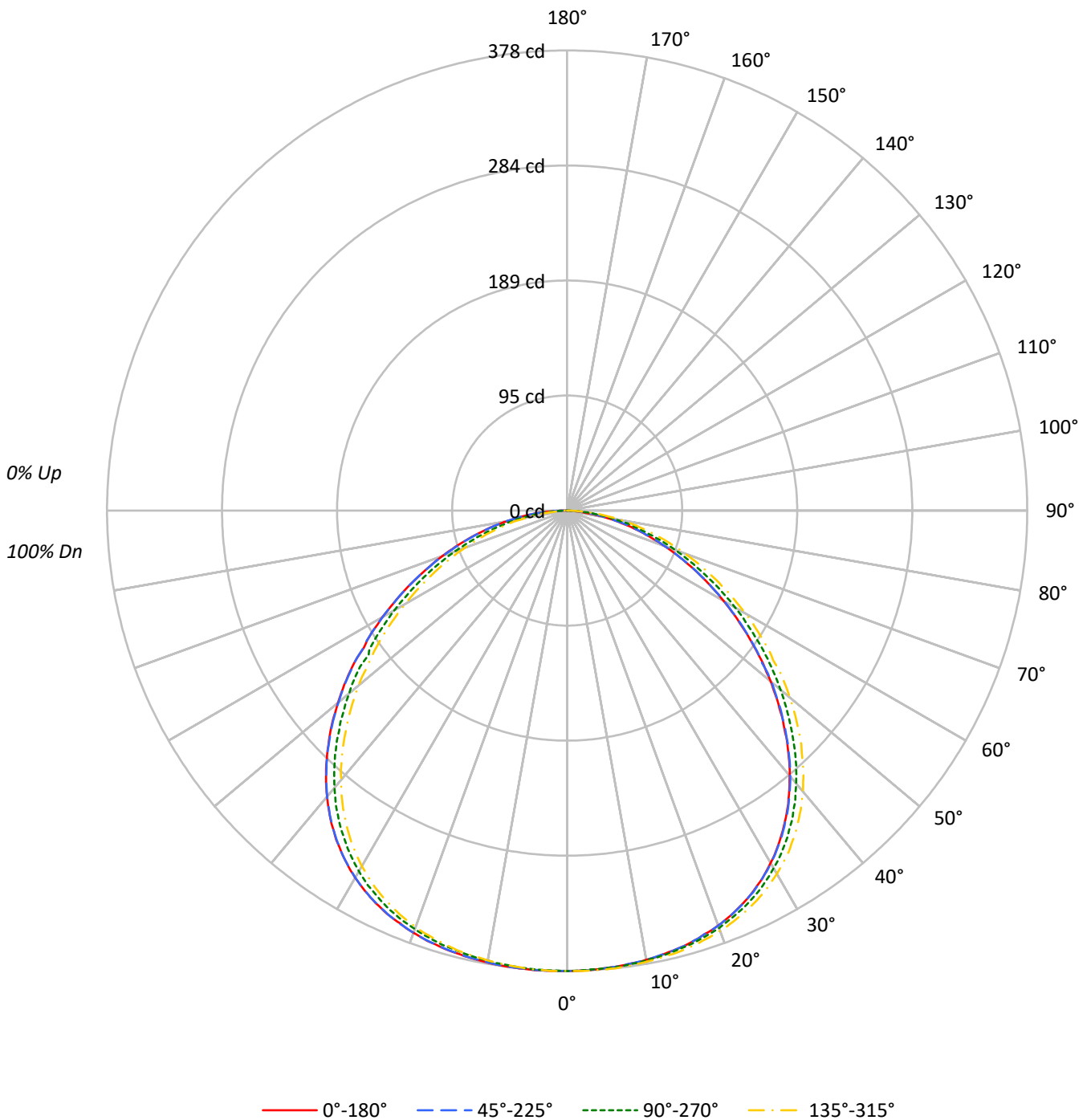
Input Watts (W): 16
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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CATALOG NUMBER: HLB6099FS1EMW-5000K

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°	20738	20738	20738	20738
5°	20752	20757	20812	20774
10°	20858	20880	20986	20891
15°	21016	21067	21237	21101
20°	21165	21288	21533	21340
25°	21243	21437	21824	21558
30°	21161	21472	22048	21655
35°	20880	21322	22118	21576
40°	20352	20946	21963	21283
45°	19537	20304	21576	20739
50°	18618	19505	20972	19931
55°	17471	18580	20138	18953
60°	16282	17455	19242	17970
65°	14995	16279	18290	16876
70°	13576	15083	17455	15740
75°	12052	13768	16648	14403
80°	9787	12091	15974	13070
85°	4717	8995	15725	10756



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.0	3.3
10°-20°	105.2	9.5
20°-30°	163.9	14.9
30°-40°	200.5	18.2
40°-50°	204.2	18.5
50°-60°	175.7	15.9
60°-70°	127.1	11.5
70°-80°	71.5	6.5
80°-90°	19.3	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°	305.1	27.7
0°-40°	505.6	45.8
0°-60°	885.5	80.2
0°-90°	1103.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1103.4	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	378	378	378	378	378	
5°	377	377	378	378	377	36
15°	370	371	374	372	370	105
25°	351	354	361	356	351	162
35°	312	319	330	322	312	195
45°	252	262	278	268	252	194
55°	183	194	211	198	183	164
65°	116	126	141	130	116	115
75°	57	65	79	68	57	60
85°	8	14	25	17	8	11
90°	0	0	4	0	0	



TEST NUMBER: P256764

CATALOG NUMBER: HLB6099FS1EMW-5000K

CANDELA DISTRIBUTION (FULL):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
0°	378.3	378.3	378.3	378.3	378.3	378.3	378.3	378.3	378.3	378.3	378.3
1°	378.2	378.3	377.9	378.1	378.2	378.5	378.4	378.4	378.2	378.0	378.3
2°	378.0	378.0	377.9	377.9	378.4	378.5	378.4	378.5	378.3	378.0	378.7
3°	377.9	377.8	377.7	377.5	378.0	378.5	378.4	378.4	378.2	377.8	378.2
4°	377.6	377.5	377.5	377.5	378.3	378.4	378.4	378.4	378.1	377.8	378.1
5°	377.1	377.2	377.1	377.2	378.0	378.3	378.2	378.3	378.1	377.5	378.1
6°	376.8	376.8	376.8	377.2	378.0	378.2	378.1	378.2	377.9	377.3	377.3
7°	376.4	376.3	376.2	376.8	377.3	378.0	377.9	377.9	377.8	376.8	377.0
8°	375.8	375.8	375.8	376.2	377.1	377.7	377.6	377.8	377.4	376.4	376.7
9°	375.4	375.3	375.2	376.0	376.1	377.4	377.4	377.5	377.1	376.2	376.2
10°	374.7	374.8	374.6	375.1	375.8	377.0	377.0	377.1	376.5	375.3	375.7
11°	374.1	374.0	374.0	374.6	375.4	376.3	376.5	376.7	376.1	375.0	374.6
12°	373.1	373.2	373.0	374.0	374.4	376.0	376.0	376.2	375.6	374.4	373.9
13°	372.2	372.3	372.3	373.3	373.9	375.3	375.5	375.7	375.0	373.7	373.5
14°	371.4	371.4	371.3	372.2	373.3	374.8	374.8	375.0	374.5	372.7	373.0
15°	370.3	370.3	370.2	371.2	372.5	374.0	374.2	374.4	373.7	371.8	371.6
16°	369.0	369.0	369.0	370.3	371.4	373.0	373.4	373.6	372.9	371.3	370.6
17°	367.6	367.7	367.6	369.1	370.1	372.2	372.4	372.8	372.0	370.0	369.3
18°	365.8	365.8	365.8	367.8	368.9	371.0	371.6	371.9	371.1	368.6	368.2
19°	364.6	364.4	364.5	366.3	367.7	370.0	370.4	370.7	369.9	367.5	366.8
20°	362.8	362.9	362.8	364.9	365.9	368.7	369.1	369.5	368.6	365.8	365.4
21°	360.8	360.6	360.8	362.8	364.5	367.3	367.8	368.0	367.2	364.2	363.1
22°	358.7	358.7	358.7	361.0	362.9	365.6	365.9	366.7	365.7	362.8	361.7
23°	356.4	356.4	356.5	358.9	360.6	363.9	364.5	364.9	364.1	360.7	359.4
24°	353.9	354.0	354.0	357.0	358.5	362.1	362.9	363.3	362.1	358.7	357.0
25°	351.2	351.0	351.4	354.4	356.5	359.9	360.8	361.1	360.2	356.4	354.5
26°	348.3	348.6	348.6	351.9	354.1	357.9	358.7	359.1	358.1	353.8	352.1
27°	345.0	345.2	345.4	349.2	351.3	355.4	356.4	356.9	355.8	351.0	349.3
28°	342.1	341.8	341.9	346.0	348.4	353.0	353.8	354.3	353.1	348.7	346.2
29°	338.0	338.2	338.7	342.8	345.1	350.1	351.1	351.6	350.4	345.4	342.9
30°	334.3	334.3	334.7	339.2	341.9	347.1	348.3	348.9	347.4	342.1	339.7
31°	330.4	330.5	331.1	335.8	338.6	344.0	345.1	345.6	344.0	338.6	335.9
32°	325.9	326.2	326.4	331.9	334.9	340.5	341.6	342.4	340.9	334.9	332.2
33°	321.6	321.8	322.5	327.8	331.2	337.1	338.2	338.7	337.1	331.0	327.9
34°	316.9	317.1	317.6	323.5	326.4	333.1	334.1	335.1	333.5	326.6	323.6
35°	312.0	312.2	312.6	318.6	322.6	329.2	330.5	331.0	329.3	322.4	319.0
36°	307.0	307.3	307.7	314.3	317.6	324.9	325.9	326.8	325.2	318.0	314.5
37°	301.7	302.0	302.4	308.8	312.5	320.2	321.9	322.1	320.4	313.0	309.4
38°	296.0	296.5	296.9	304.1	307.6	315.7	316.8	317.8	315.7	308.3	304.3
39°	290.3	290.7	291.3	298.1	302.7	310.3	311.9	312.4	310.8	302.7	298.8
40°	284.4	284.8	285.4	292.7	297.0	305.6	306.9	307.9	305.6	297.4	292.6
41°	278.5	278.8	279.4	287.0	291.2	299.9	301.6	302.1	300.3	291.7	287.5
42°	272.1	272.0	273.2	281.1	285.7	294.8	296.0	297.0	294.7	286.0	280.9
43°	265.8	266.2	266.8	274.9	279.2	288.4	290.3	290.7	289.0	280.0	275.1
44°	259.2	259.1	260.3	268.5	272.3	283.0	284.3	285.5	282.9	273.7	268.3



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CANDELA DISTRIBUTION (continued):

	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
45°	252.0	253.1	253.7	261.9	267.7	276.4	278.3	278.9	276.9	267.5	261.9
46°	245.9	245.8	246.5	255.5	260.0	270.7	272.0	272.6	270.7	260.4	255.4
47°	238.5	239.8	240.3	248.9	253.7	263.8	265.8	266.2	264.4	254.7	248.6
48°	232.3	232.2	232.9	242.3	247.1	257.4	259.3	259.8	257.8	247.1	242.0
49°	224.7	225.3	226.6	235.5	240.6	250.7	252.5	253.1	251.1	241.2	235.3
50°	218.3	218.6	219.0	228.7	233.7	244.0	245.9	246.5	244.4	233.7	228.5
51°	210.7	211.5	212.7	221.9	226.6	237.3	239.1	239.6	237.6	227.7	221.5
52°	204.5	204.7	201.6	215.0	219.9	230.5	232.2	232.9	230.8	220.2	214.5
53°	196.8	197.7	197.0	208.2	212.7	223.5	225.3	225.9	223.8	213.1	207.5
54°	189.8	190.6	190.0	201.4	201.7	216.6	218.3	219.0	216.3	201.5	200.5
55°	182.8	183.8	183.0	194.4	197.8	209.7	210.7	212.1	209.2	198.3	193.7
56°	175.8	176.7	176.0	186.8	190.7	202.8	201.5	201.6	202.3	191.3	186.0
57°	168.8	169.7	169.2	180.4	183.5	196.0	195.8	197.1	195.9	184.5	179.7
58°	162.1	162.9	162.3	172.9	176.7	189.0	189.4	190.2	188.3	177.5	172.0
59°	155.2	155.9	155.4	166.8	170.3	182.1	181.8	183.2	181.4	170.8	166.0
60°	148.5	148.6	148.8	159.2	163.4	175.1	175.5	175.7	174.4	163.9	158.5
61°	141.7	142.4	142.1	152.8	155.9	168.1	168.0	169.3	167.5	156.9	152.3
62°	135.0	135.0	135.4	145.4	149.3	161.3	161.2	161.8	160.6	150.1	145.0
63°	128.5	129.0	128.9	139.4	143.1	154.5	154.4	155.6	153.8	143.4	138.4
64°	122.0	121.9	122.4	132.1	136.1	147.0	147.7	148.1	146.9	136.7	131.8
65°	115.6	116.2	116.0	125.5	129.9	140.9	141.0	142.0	140.2	130.1	125.3
66°	109.4	109.0	109.9	118.9	123.5	133.6	134.4	134.7	133.5	123.6	118.9
67°	103.2	103.0	103.7	112.6	117.1	127.1	127.9	128.7	126.9	117.2	112.5
68°	97.2	96.8	97.5	106.4	110.8	120.6	121.5	121.6	120.5	110.8	106.2
69°	91.2	90.9	91.1	100.2	104.2	114.1	115.1	115.7	114.1	104.5	100.2
70°	84.7	84.8	85.7	94.1	98.1	107.7	108.9	108.7	107.8	98.2	93.9
71°	79.4	79.1	79.4	88.2	92.0	101.5	102.7	102.6	101.7	91.5	88.1
72°	73.2	73.4	74.4	82.2	86.0	95.4	96.6	96.4	95.2	86.0	82.0
73°	67.7	68.2	68.4	76.3	80.0	89.3	90.4	90.4	89.7	79.5	76.2
74°	62.2	62.8	63.5	70.1	74.2	83.3	84.5	84.5	83.3	74.2	70.4
75°	56.9	57.5	57.8	65.0	68.4	77.3	78.6	78.7	78.0	68.0	64.7
76°	51.7	52.4	53.1	59.5	62.7	71.6	72.9	73.0	71.9	62.5	59.1
77°	45.9	48.3	47.7	54.1	57.2	66.0	67.4	67.5	66.8	57.1	53.7
78°	40.9	41.8	42.7	51.4	51.7	60.6	61.9	62.0	60.9	51.7	51.2
79°	35.9	36.9	37.9	43.3	46.3	55.1	55.9	56.6	55.6	46.6	42.2
80°	31.0	32.3	33.3	38.3	41.2	51.1	50.6	51.3	51.3	41.4	37.0
81°	26.4	27.3	28.9	33.1	36.3	43.1	45.6	46.4	44.6	36.6	31.6
82°	21.3	22.8	24.2	28.4	31.0	37.6	40.2	41.1	39.7	31.4	26.8
83°	16.7	18.5	19.7	23.7	26.0	32.4	35.0	35.9	34.5	26.5	21.9
84°	11.9	13.9	15.5	18.8	21.2	26.9	29.6	31.1	29.7	21.8	16.8
85°	7.5	9.7	11.5	14.3	16.5	21.9	25.0	26.5	25.1	17.1	12.0
86°	3.9	5.9	7.5	10.2	11.6	17.0	20.0	21.5	20.3	12.6	8.0
87°	1.1	2.1	3.4	7.0	8.1	12.5	15.3	17.2	15.8	8.8	4.6
88°	0.0	0.0	0.0	3.7	4.7	8.8	11.3	12.5	11.6	5.0	2.1
89°	0.0	0.0	0.0	0.3	2.0	5.1	7.0	8.1	7.3	2.0	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	2.1	3.9	4.8	3.1	0.3	0.0



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CANDELA DISTRIBUTION (continued):

	330°	360°
0°	378.3	378.3
1°	378.3	378.2
2°	378.2	378.0
3°	377.8	377.9
4°	377.7	377.6
5°	377.5	377.1
6°	377.0	376.8
7°	376.5	376.4
8°	376.0	375.8
9°	375.4	375.4
10°	374.9	374.7
11°	374.1	374.1
12°	373.5	373.1
13°	372.6	372.2
14°	371.6	371.4
15°	370.4	370.3
16°	369.1	369.0
17°	367.7	367.6
18°	366.1	365.8
19°	364.8	364.6
20°	362.8	362.8
21°	361.0	360.8
22°	358.7	358.7
23°	356.6	356.4
24°	354.0	353.9
25°	351.2	351.2
26°	348.6	348.3
27°	345.6	345.0
28°	342.0	342.1
29°	338.4	338.0
30°	334.9	334.3
31°	330.8	330.4
32°	326.5	325.9
33°	322.4	321.6
34°	317.5	316.9
35°	312.7	312.0
36°	307.3	307.0
37°	302.4	301.7
38°	296.5	296.0
39°	291.2	290.3
40°	284.8	284.4
41°	279.5	278.5
42°	272.7	272.1
43°	266.7	265.8
44°	259.8	259.2



TEST NUMBER: P256764

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CANDELA DISTRIBUTION (continued):

	330°	360°
45°	253.2	252.0
46°	246.4	245.9
47°	239.7	238.5
48°	233.0	232.3
49°	226.1	224.7
50°	219.3	218.3
51°	212.3	210.7
52°	201.3	204.5
53°	197.4	196.8
54°	190.5	189.8
55°	183.5	182.8
56°	176.6	175.8
57°	169.7	168.8
58°	162.9	162.1
59°	156.1	155.2
60°	149.3	148.5
61°	142.0	141.7
62°	135.8	135.0
63°	128.7	128.5
64°	122.7	122.0
65°	115.7	115.6
66°	110.1	109.4
67°	103.3	103.2
68°	97.1	97.2
69°	91.1	91.2
70°	85.1	84.7
71°	79.3	79.4
72°	73.6	73.2
73°	68.1	67.7
74°	62.7	62.2
75°	57.3	56.9
76°	52.0	51.7
77°	46.8	45.9
78°	41.6	40.9
79°	36.5	35.9
80°	31.4	31.0
81°	26.4	26.4
82°	21.8	21.3
83°	17.0	16.7
84°	12.7	11.9
85°	8.2	7.5
86°	4.1	3.9
87°	1.4	1.1
88°	0.0	0.0
89°	0.0	0.0



TEST NUMBER: P256764

CATALOG NUMBER: HLB6099FS1EMW-5000K

CANDELA DISTRIBUTION (continued):

	330°	360°
90°	0.0	0.0

(END OF REPORT)