

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 COMMERCIAL

Report Number: P585235

Luminaire Tested: **HC880D010-HM86080835-81WWBB**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P585235
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-17)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 10/21/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC880D010-HM86080835-81WWBB
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6196.0 lumens
Efficiency: N/A
Efficacy: 88.5 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.07 / 1.16
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

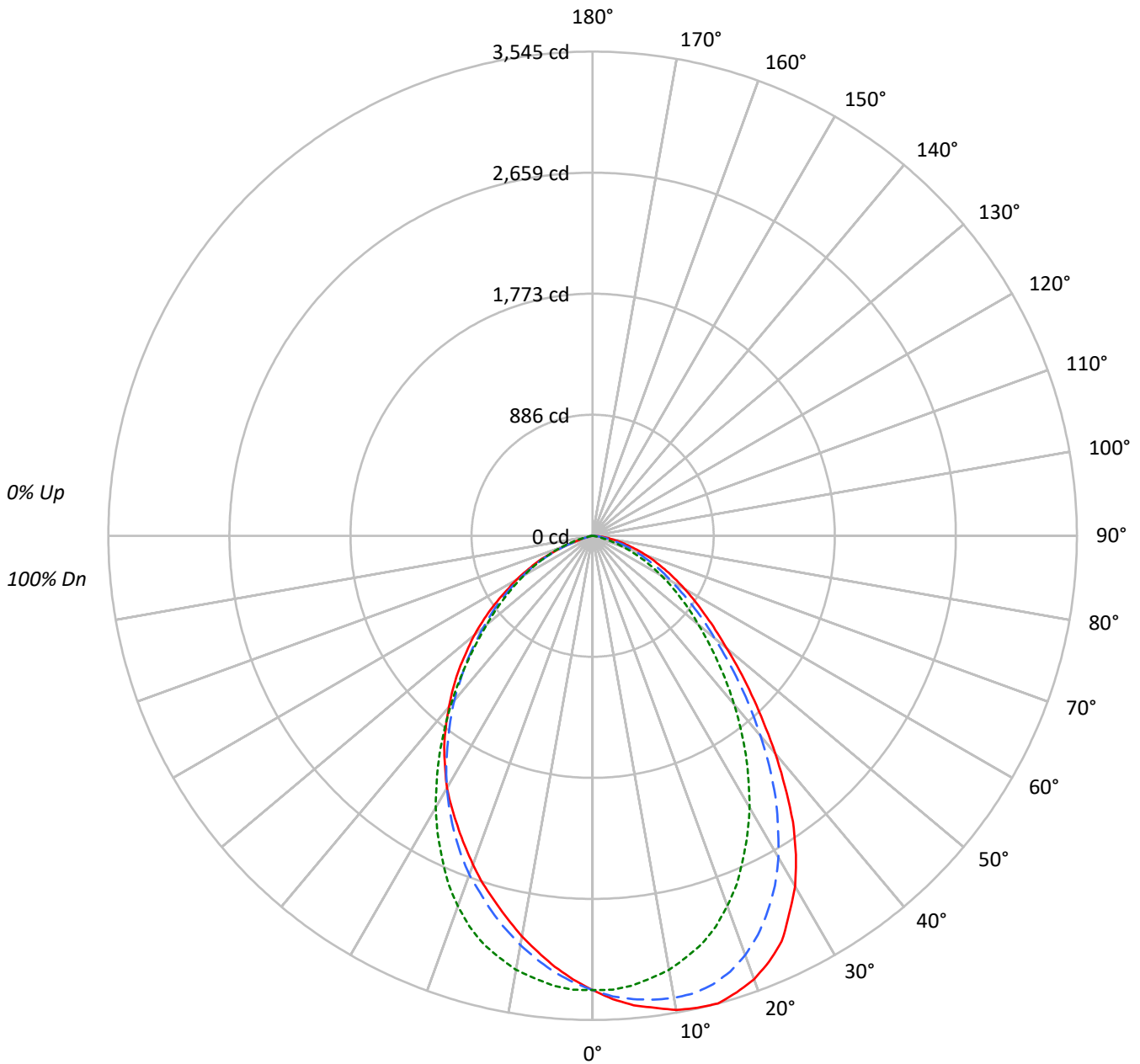
Input Watts (W): 70
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88																			
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79	77																			
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	67																			
4	88	78	70	64	86	76	69	64	74	68	63	72	66	62	70	65	61	59																			
5	82	70	63	57	80	69	62	56	67	61	56	65	60	55	64	59	55	53																			
6	76	64	56	51	74	63	56	50	62	55	50	60	54	50	58	53	49	47																			
7	71	59	51	45	69	58	51	45	57	50	45	55	49	45	54	49	44	43																			
8	66	54	46	41	65	53	46	41	52	46	41	51	45	41	50	44	40	39																			
9	62	50	43	37	61	50	42	37	48	42	37	47	41	37	46	41	37	35																			
10	59	47	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	102571	102571	102571
5°	106813	102350	98041
10°	110384	101041	93257
15°	113174	98732	88411
20°	113397	94633	84027
25°	111483	88643	79681
30°	105513	81792	75953
35°	96203	73557	71313
40°	83664	64849	65847
45°	71772	56160	60277
50°	61300	48419	54147
55°	53729	41703	47047
60°	47839	35573	39551
65°	42451	29018	31565
70°	37660	21512	17933
75°	31394	11259	5326
80°	24719	3534	888
85°	17584	1769	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	313.4	5.1
10°-20°	878.5	14.2
20°-30°	1243.4	20.1
30°-40°	1300.9	21.0
40°-50°	1085.0	17.5
50°-60°	769.4	12.4
60°-70°	443.1	7.2
70°-80°	142.6	2.3
80°-90°	19.6	0.3
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°	2435.3	39.3
0°-40°	3736.2	60.3
0°-60°	5590.6	90.2
0°-90°	6196.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6196.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3326	3326	3326	3326	3326	
5°	3451	3406	3306	3207	3167	331
15°	3545	3401	3093	2849	2769	997
25°	3277	3033	2605	2396	2342	1495
35°	2556	2332	1954	1850	1894	1584
45°	1646	1512	1288	1303	1382	1275
55°	999	895	776	815	875	903
65°	582	487	398	398	433	581
75°	264	194	94	45	45	286
85°	50	25	5	0	0	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	3326.3	3326.3	3326.3	3326.3	3326.3	3326.3	3326.3	3326.3	3326.3	3326.3	3326.3
2.5°	3396.0	3391.0	3386.0	3391.0	3386.0	3391.0	3386.0	3386.0	3381.0	3376.0	3376.0
5°	3450.7	3445.7	3445.7	3445.7	3440.7	3435.7	3435.7	3430.7	3420.9	3415.9	3405.9
7.5°	3485.4	3490.4	3490.4	3490.4	3480.4	3480.4	3470.6	3460.6	3450.7	3440.7	3425.7
10°	3525.3	3525.3	3520.3	3515.3	3505.4	3500.4	3495.4	3485.4	3470.6	3450.7	3435.7
12.5°	3540.1	3540.1	3535.1	3525.3	3520.3	3515.3	3510.3	3495.4	3475.6	3450.7	3430.7
15°	3545.1	3535.1	3530.3	3525.3	3515.3	3500.4	3500.4	3480.4	3455.6	3425.7	3400.9
17.5°	3505.4	3510.3	3500.4	3490.4	3475.6	3465.6	3450.7	3435.7	3405.9	3371.1	3346.2
20°	3455.6	3450.7	3445.7	3430.7	3410.9	3405.9	3391.0	3366.2	3341.3	3301.5	3266.7
22.5°	3376.0	3371.1	3361.2	3351.2	3331.3	3321.4	3306.5	3276.6	3241.8	3202.1	3162.3
25°	3276.6	3266.7	3251.8	3231.9	3217.0	3207.0	3187.1	3157.3	3117.6	3072.7	3033.0
27.5°	3117.6	3132.4	3122.6	3092.7	3077.7	3057.9	3052.9	3013.2	2978.3	2933.5	2888.8
30°	2963.3	2963.3	2948.5	2933.5	2908.7	2893.8	2873.9	2844.1	2809.3	2754.6	2719.7
32.5°	2769.4	2764.5	2744.6	2739.7	2719.7	2689.9	2685.0	2645.2	2610.3	2570.6	2525.8
35°	2555.6	2545.8	2525.8	2510.9	2500.9	2486.1	2471.1	2436.4	2401.5	2361.7	2332.0
37.5°	2312.0	2312.0	2307.0	2282.2	2272.3	2262.3	2247.4	2212.6	2192.8	2152.9	2123.1
40°	2078.4	2073.4	2058.5	2053.5	2043.5	2028.7	2018.7	1998.8	1969.0	1939.1	1909.3
42.5°	1849.6	1854.6	1834.7	1839.7	1819.8	1809.9	1804.9	1775.1	1760.1	1730.4	1705.4
45°	1645.8	1640.8	1630.8	1625.8	1616.0	1606.0	1596.0	1581.1	1556.3	1526.4	1511.6
47.5°	1456.9	1441.9	1441.9	1436.9	1432.0	1412.1	1407.1	1392.2	1377.3	1347.5	1327.5
50°	1277.8	1277.8	1277.8	1272.8	1258.0	1253.0	1243.0	1228.1	1213.3	1193.3	1163.4
52.5°	1133.6	1133.6	1133.6	1128.7	1108.7	1103.9	1098.9	1078.9	1059.0	1044.2	1024.2
55°	999.4	1004.3	999.4	989.5	974.5	974.5	959.6	949.7	929.8	914.8	895.0
57.5°	885.1	885.1	875.1	870.1	860.1	855.2	845.3	835.3	810.4	795.6	770.7
60°	775.7	770.7	770.7	760.7	750.7	740.9	735.9	721.0	711.0	686.2	666.3
62.5°	676.2	676.2	666.3	666.3	646.3	646.3	641.3	626.5	611.6	586.7	576.8
65°	581.8	581.8	576.8	571.8	556.9	551.9	546.9	532.0	517.1	502.2	487.3
67.5°	497.2	497.2	487.3	482.3	472.4	467.4	457.4	447.5	432.6	417.7	402.7
70°	417.7	412.7	407.7	402.7	392.8	387.9	377.9	368.0	353.0	343.0	328.2
72.5°	338.2	338.2	333.2	323.2	318.2	313.3	308.3	298.3	283.5	268.5	258.6
75°	263.5	263.5	263.5	253.6	243.6	238.6	238.6	228.8	218.8	203.9	193.9
77.5°	203.9	198.9	193.9	193.9	183.9	178.9	174.1	169.1	154.1	149.2	139.2
80°	139.2	144.2	139.2	134.2	129.2	124.3	124.3	114.4	109.4	99.4	89.5
82.5°	94.5	89.5	89.5	84.5	84.5	79.5	79.5	69.6	64.7	59.7	54.7
85°	49.7	49.7	44.7	44.7	44.7	39.8	39.8	34.8	34.8	29.8	24.9
87.5°	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.9	10.0	10.0	10.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	3326.3	3326.3	3326.3	3326.3	3326.3	3326.3	3326.3	3326.3	3326.3	3326.3	3326.3
2.5°	3371.1	3361.2	3356.2	3356.2	3351.2	3346.2	3341.3	3336.3	3326.3	3326.3	3316.4
5°	3396.0	3386.0	3381.0	3366.2	3356.2	3356.2	3336.3	3331.3	3316.4	3306.5	3296.5
7.5°	3415.9	3396.0	3381.0	3366.2	3356.2	3346.2	3326.3	3306.5	3286.6	3266.7	3256.8
10°	3415.9	3396.0	3371.1	3346.2	3336.3	3326.3	3301.5	3271.7	3246.8	3226.9	3202.1
12.5°	3405.9	3376.0	3346.2	3326.3	3306.5	3291.5	3261.7	3231.9	3202.1	3162.3	3142.4
15°	3376.0	3336.3	3306.5	3271.7	3256.8	3231.9	3207.0	3162.3	3127.4	3092.7	3067.9
17.5°	3316.4	3266.7	3231.9	3197.1	3172.3	3157.3	3117.6	3077.7	3038.0	2998.2	2968.3
20°	3226.9	3182.1	3142.4	3097.6	3077.7	3057.9	3008.2	2968.3	2928.6	2883.8	2854.0
22.5°	3117.6	3072.7	3018.0	2983.3	2953.5	2928.6	2883.8	2839.1	2799.3	2759.6	2719.7
25°	2983.3	2938.5	2888.8	2834.1	2814.2	2789.4	2739.7	2694.9	2650.2	2605.3	2570.6
27.5°	2839.1	2779.4	2739.7	2680.0	2660.0	2635.2	2580.5	2530.8	2491.1	2456.2	2416.4
30°	2665.0	2620.3	2565.6	2510.9	2491.1	2466.2	2421.4	2376.7	2336.9	2297.1	2257.3
32.5°	2476.1	2431.4	2376.7	2336.9	2307.0	2287.2	2242.5	2202.6	2162.9	2123.1	2088.2
35°	2277.3	2227.5	2187.8	2147.9	2123.1	2098.2	2053.5	2018.7	1988.8	1954.0	1919.3
37.5°	2073.4	2038.5	1998.8	1954.0	1929.2	1909.3	1874.5	1834.7	1809.9	1780.1	1755.2
40°	1874.5	1834.7	1799.9	1760.1	1740.2	1725.4	1690.5	1660.7	1635.8	1611.0	1596.0
42.5°	1670.7	1635.8	1601.0	1576.1	1561.3	1546.3	1521.4	1486.7	1471.7	1446.9	1432.0
45°	1481.7	1451.9	1427.0	1392.2	1382.2	1372.3	1342.5	1317.6	1302.7	1287.8	1277.8
47.5°	1302.7	1282.8	1253.0	1233.1	1218.1	1208.3	1188.3	1168.4	1153.6	1143.6	1133.6
50°	1148.6	1123.7	1103.9	1083.9	1074.0	1059.0	1039.2	1029.2	1019.3	1009.3	1009.3
52.5°	1004.3	979.5	959.6	944.7	934.8	924.8	909.9	904.9	895.0	895.0	890.0
55°	870.1	855.2	835.3	815.4	810.4	805.4	795.6	785.6	780.6	775.7	780.6
57.5°	755.7	740.9	721.0	706.0	701.0	696.0	691.2	681.2	676.2	676.2	676.2
60°	651.3	636.5	621.5	606.6	606.6	596.6	591.6	586.7	581.8	576.8	576.8
62.5°	556.9	541.9	527.1	517.1	512.1	507.1	497.2	492.2	487.3	487.3	482.3
65°	472.4	452.4	447.5	432.6	427.6	422.7	417.7	407.7	402.7	397.7	392.8
67.5°	387.9	377.9	363.0	353.0	348.0	343.0	338.2	328.2	323.2	318.2	308.3
70°	313.3	303.3	293.3	283.5	278.5	273.5	263.5	253.6	248.6	238.6	223.8
72.5°	243.6	233.6	223.8	213.8	208.8	203.9	193.9	183.9	174.1	164.1	154.1
75°	183.9	174.1	159.1	149.2	144.2	144.2	129.2	119.4	109.4	94.5	84.5
77.5°	129.2	114.4	109.4	99.4	94.5	84.5	74.6	64.7	54.7	49.7	39.8
80°	84.5	74.6	64.7	59.7	54.7	49.7	44.7	34.8	24.9	19.9	14.9
82.5°	49.7	44.7	39.8	34.8	29.8	24.9	19.9	19.9	14.9	10.0	5.0
85°	24.9	19.9	14.9	14.9	10.0	10.0	10.0	5.0	5.0	5.0	5.0
87.5°	10.0	5.0	5.0	5.0	5.0	5.0	5.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	3326.3	3326.3	3326.3	3326.3	3326.3	3326.3	3326.3	3326.3	3326.3	3326.3	3326.3
2.5°	3311.5	3306.5	3301.5	3296.5	3296.5	3286.6	3286.6	3281.6	3271.7	3266.7	3266.7
5°	3281.6	3266.7	3256.8	3251.8	3246.8	3231.9	3226.9	3217.0	3207.0	3197.1	3192.1
7.5°	3236.8	3212.0	3202.1	3197.1	3182.1	3167.3	3157.3	3142.4	3127.4	3112.6	3107.6
10°	3182.1	3157.3	3132.4	3122.6	3107.6	3097.6	3077.7	3057.9	3042.9	3028.0	3013.2
12.5°	3112.6	3082.7	3057.9	3047.9	3033.0	3013.2	2983.3	2973.3	2948.5	2938.5	2918.6
15°	3033.0	2998.2	2973.3	2958.5	2943.5	2913.6	2893.8	2873.9	2849.1	2839.1	2819.2
17.5°	2933.5	2893.8	2868.9	2854.0	2844.1	2819.2	2789.4	2764.5	2739.7	2729.7	2714.7
20°	2814.2	2789.4	2754.6	2739.7	2729.7	2699.9	2670.0	2660.0	2640.2	2620.3	2605.3
22.5°	2680.0	2655.2	2620.3	2605.3	2600.5	2575.6	2550.6	2535.8	2520.9	2505.9	2491.1
25°	2540.8	2510.9	2481.1	2471.1	2461.2	2441.4	2421.4	2411.5	2396.5	2386.7	2376.7
27.5°	2391.6	2361.7	2336.9	2322.0	2312.0	2297.1	2287.2	2277.3	2267.3	2257.3	2252.3
30°	2232.5	2202.6	2182.8	2172.8	2162.9	2157.9	2142.9	2138.1	2133.1	2123.1	2128.1
32.5°	2073.4	2048.5	2028.7	2013.7	2013.7	2003.8	1998.8	1998.8	1993.8	1993.8	1993.8
35°	1899.3	1884.4	1869.5	1864.6	1859.6	1854.6	1849.6	1854.6	1849.6	1854.6	1859.6
37.5°	1740.2	1725.4	1715.4	1710.4	1705.4	1710.4	1705.4	1705.4	1710.4	1720.4	1725.4
40°	1576.1	1566.3	1556.3	1561.3	1556.3	1556.3	1556.3	1571.1	1576.1	1581.1	1586.1
42.5°	1422.0	1412.1	1407.1	1407.1	1412.1	1407.1	1417.1	1422.0	1432.0	1446.9	1456.9
45°	1272.8	1267.9	1267.9	1272.8	1267.9	1277.8	1277.8	1287.8	1302.7	1312.7	1322.6
47.5°	1133.6	1133.6	1133.6	1138.6	1138.6	1143.6	1153.6	1158.6	1168.4	1178.4	1188.3
50°	1004.3	1009.3	1014.3	1014.3	1014.3	1024.2	1034.2	1039.2	1044.2	1049.2	1064.0
52.5°	890.0	895.0	895.0	900.0	904.9	909.9	914.8	924.8	929.8	939.8	944.7
55°	780.6	780.6	790.6	795.6	795.6	795.6	805.4	805.4	815.4	820.4	830.4
57.5°	676.2	681.2	681.2	686.2	686.2	691.2	696.0	701.0	706.0	711.0	716.0
60°	576.8	576.8	576.8	581.8	586.7	591.6	586.7	596.6	596.6	606.6	611.6
62.5°	482.3	487.3	487.3	487.3	487.3	487.3	487.3	492.2	497.2	502.2	507.1
65°	392.8	392.8	392.8	387.9	392.8	387.9	392.8	397.7	397.7	402.7	407.7
67.5°	303.3	303.3	293.3	293.3	298.3	298.3	298.3	298.3	293.3	303.3	303.3
70°	218.8	213.8	208.8	203.9	203.9	198.9	198.9	193.9	193.9	193.9	193.9
72.5°	144.2	134.2	124.3	119.4	114.4	114.4	104.4	99.4	104.4	104.4	104.4
75°	74.6	64.7	59.7	54.7	49.7	49.7	44.7	44.7	44.7	44.7	44.7
77.5°	29.8	24.9	19.9	19.9	14.9	14.9	14.9	14.9	14.9	14.9	14.9
80°	10.0	10.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
82.5°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
85°	5.0	0.0	0.0	5.0	0.0	5.0	5.0	5.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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: P585235

CATALOG NUMBER: HC880D010-HM86080835-81WWBB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	3326.3	3326.3	3326.3	3326.3	3326.3	3326.3	3326.3	3326.3
2.5°	3261.7	3261.7	3256.8	3261.7	3251.8	3256.8	3251.8	3251.8
5°	3187.1	3177.2	3177.2	3177.2	3172.3	3172.3	3167.3	3167.3
7.5°	3097.6	3092.7	3087.7	3082.7	3077.7	3072.7	3072.7	3072.7
10°	3008.2	2998.2	2998.2	2993.2	2983.3	2978.3	2978.3	2978.3
12.5°	2903.8	2898.8	2893.8	2893.8	2873.9	2878.8	2873.9	2873.9
15°	2804.3	2799.3	2799.3	2784.4	2774.4	2774.4	2774.4	2769.4
17.5°	2699.9	2694.9	2689.9	2680.0	2670.0	2670.0	2665.0	2670.0
20°	2590.5	2585.5	2575.6	2575.6	2570.6	2565.6	2555.6	2560.6
22.5°	2481.1	2471.1	2466.2	2466.2	2461.2	2461.2	2451.2	2451.2
25°	2366.7	2361.7	2356.8	2361.7	2351.8	2351.8	2341.9	2341.9
27.5°	2247.4	2242.5	2242.5	2242.5	2237.5	2242.5	2237.5	2237.5
30°	2128.1	2128.1	2123.1	2123.1	2128.1	2123.1	2128.1	2133.1
32.5°	1998.8	1998.8	2003.8	2003.8	2008.7	2008.7	2008.7	2008.7
35°	1864.6	1874.5	1874.5	1879.5	1884.4	1889.4	1889.4	1894.4
37.5°	1740.2	1745.2	1750.2	1755.2	1765.1	1765.1	1765.1	1765.1
40°	1606.0	1611.0	1621.0	1616.0	1635.8	1640.8	1635.8	1635.8
42.5°	1466.8	1476.7	1481.7	1491.6	1496.6	1506.6	1511.6	1511.6
45°	1337.5	1342.5	1352.4	1362.4	1367.4	1382.2	1382.2	1382.2
47.5°	1203.3	1213.3	1218.1	1228.1	1233.1	1248.0	1253.0	1248.0
50°	1074.0	1083.9	1093.9	1093.9	1108.7	1113.7	1123.7	1128.7
52.5°	949.7	954.6	964.6	969.5	979.5	989.5	994.5	999.4
55°	830.4	835.3	845.3	845.3	860.1	865.1	875.1	875.1
57.5°	721.0	725.9	735.9	730.9	740.9	750.7	750.7	745.9
60°	616.5	616.5	616.5	626.5	631.5	636.5	641.3	641.3
62.5°	507.1	517.1	522.1	522.1	527.1	532.0	532.0	527.1
65°	407.7	417.7	422.7	422.7	427.6	427.6	427.6	432.6
67.5°	308.3	308.3	308.3	313.3	308.3	308.3	308.3	308.3
70°	193.9	193.9	193.9	193.9	188.9	193.9	193.9	198.9
72.5°	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4
75°	44.7	44.7	44.7	49.7	44.7	44.7	44.7	44.7
77.5°	19.9	14.9	19.9	19.9	14.9	14.9	14.9	14.9
80°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
82.5°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
85°	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - - 90°-270°













(END OF REPORT)