

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: P585287

Luminaire Tested: **HC880D010-HM86080930-81WWW**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P585287
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-16)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 10/21/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC880D010-HM86080930-81WWW
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5277.5 lumens
Efficiency: N/A
Efficacy: 75.4 lumens/watt
Spacing Criteria (0/90/45): 1.09 / 1.04 / 1.13
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

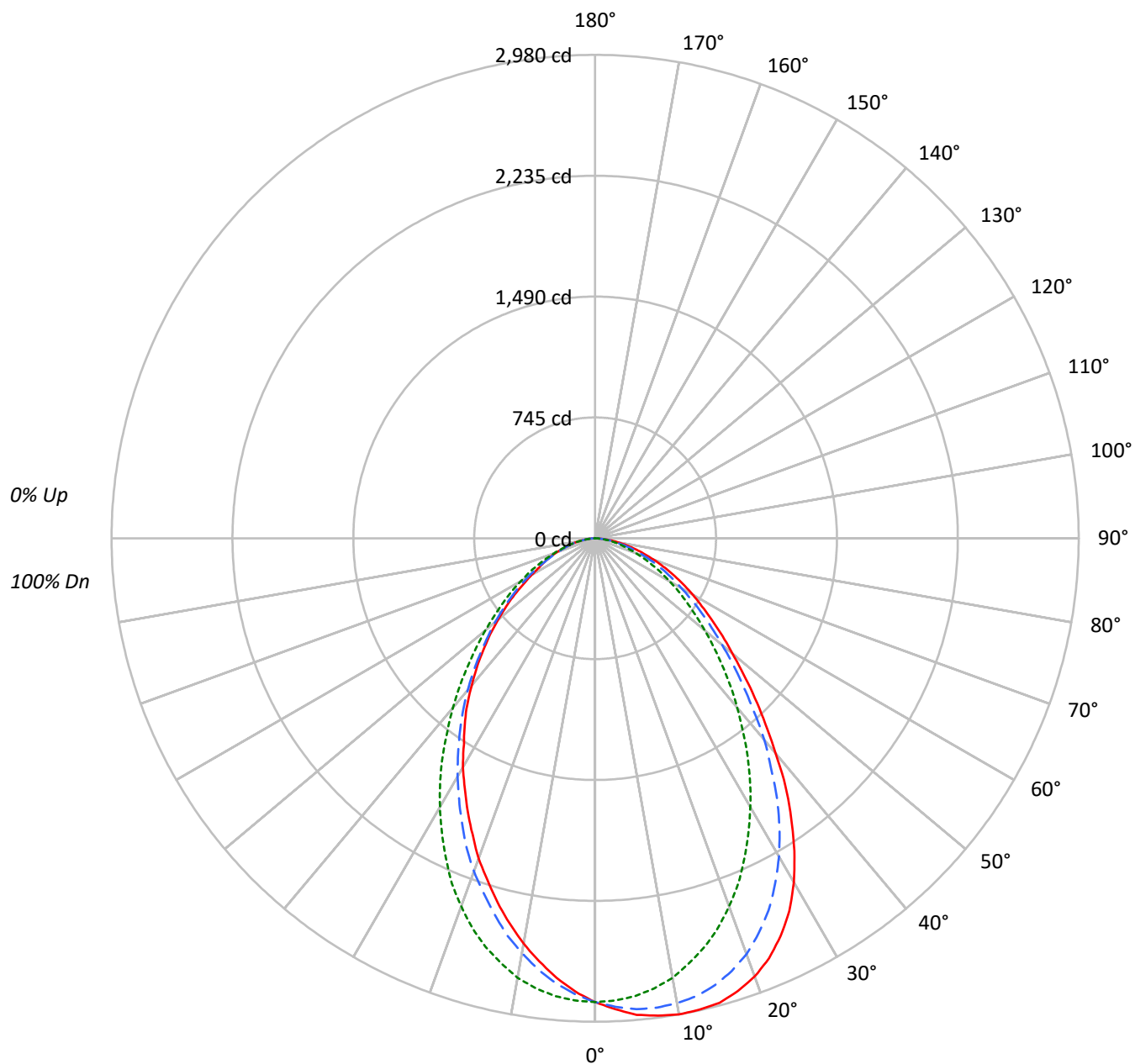
Input Watts (W): 70
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P585287

CATALOG NUMBER: HC880D010-HM86080930-81WWW

Luminous Intensity Polar Plot





TEST NUMBER: P585287

CATALOG NUMBER: HC880D010-HM86080930-81WWW

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	93	91	89	87		
2	102	95	89	84	99	93	88	83	90	85	81	86	83	79	83	80	78	76		
3	94	85	78	72	92	83	77	71	81	75	70	78	73	69	75	71	68	66		
4	87	76	69	63	85	75	68	62	73	67	62	71	65	61	68	64	60	58		
5	81	69	61	55	79	68	61	55	66	60	54	64	59	54	63	57	53	51		
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46		
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	41		
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38		
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34		
10	58	46	39	34	57	45	38	34	44	38	33	44	38	33	43	37	33	32		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	88176	88176	88176
5°	91277	87674	84195
10°	93307	86139	79457
15°	94636	83239	74195
20°	94347	79196	68883
25°	92015	74060	63234
30°	87176	68112	58025
35°	79313	61639	52724
40°	69659	54822	47637
45°	60743	48223	42471
50°	52866	42254	37414
55°	47143	37133	32542
60°	42832	32545	27753
65°	38504	28310	25195
70°	34279	24145	22738
75°	30048	20338	19420
80°	25483	16533	17225
85°	19212	12383	13728



TEST NUMBER: P585287

CATALOG NUMBER: HC880D010-HM86080930-81WWW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	267.8	5.1
10°-20°	738.0	14.0
20°-30°	1024.4	19.4
30°-40°	1059.1	20.1
40°-50°	886.8	16.8
50°-60°	643.8	12.2
60°-70°	406.3	7.7
70°-80°	201.3	3.8
80°-90°	50.0	0.9
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°	2030.2	38.5
0°-40°	3089.4	58.5
0°-60°	4620.0	87.5
0°-90°	5277.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5277.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2860	2860	2860	2860	2860	
5°	2949	2914	2832	2755	2720	282
15°	2964	2852	2607	2398	2324	834
25°	2704	2530	2177	1940	1858	1239
35°	2107	1952	1637	1451	1401	1312
45°	1393	1292	1106	997	974	1077
55°	877	799	691	632	605	791
65°	528	462	388	342	345	526
75°	252	210	171	163	163	270
85°	54	43	35	39	39	66
90°	0	0	0	0	0	



TEST NUMBER: P585287

CATALOG NUMBER: HC880D010-HM86080930-81WWW

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2859.5	2859.5	2859.5	2859.5	2859.5	2859.5	2859.5	2859.5	2859.5	2859.5	2859.5
2.5°	2906.2	2906.2	2910.1	2906.2	2906.2	2906.2	2902.2	2902.2	2898.4	2898.4	2890.7
5°	2948.8	2941.1	2948.8	2941.1	2941.1	2941.1	2937.2	2929.5	2925.5	2917.8	2913.9
7.5°	2968.2	2964.4	2964.4	2960.5	2960.5	2956.6	2952.8	2948.8	2933.4	2929.5	2917.8
10°	2979.9	2975.9	2975.9	2972.1	2964.4	2964.4	2956.6	2952.8	2933.4	2925.5	2910.1
12.5°	2975.9	2975.9	2975.9	2972.1	2960.5	2956.6	2948.8	2937.2	2921.7	2906.2	2890.7
15°	2964.4	2964.4	2956.6	2952.8	2941.1	2933.4	2929.5	2910.1	2894.5	2875.1	2851.8
17.5°	2925.5	2925.5	2921.7	2913.9	2902.2	2894.5	2886.8	2867.4	2851.8	2820.8	2797.5
20°	2875.1	2871.2	2867.4	2855.7	2844.1	2840.2	2828.5	2801.4	2782.0	2758.7	2727.7
22.5°	2801.4	2797.5	2793.7	2785.8	2766.4	2758.7	2751.0	2731.6	2696.7	2673.3	2634.6
25°	2704.4	2704.4	2696.7	2685.0	2665.6	2657.9	2646.2	2626.7	2595.7	2560.9	2529.8
27.5°	2591.9	2588.0	2576.3	2568.6	2553.0	2541.5	2522.0	2498.8	2467.8	2440.5	2401.8
30°	2448.3	2448.3	2440.5	2428.9	2409.5	2401.8	2386.2	2359.1	2328.1	2293.1	2266.0
32.5°	2285.4	2285.4	2273.7	2266.0	2254.3	2235.0	2231.0	2200.0	2172.8	2145.7	2114.6
35°	2106.9	2110.7	2103.0	2087.5	2068.0	2068.0	2060.3	2033.2	2002.2	1974.9	1951.6
37.5°	1928.4	1916.8	1912.9	1905.1	1893.5	1877.9	1870.2	1858.5	1831.4	1812.0	1777.1
40°	1730.5	1734.4	1726.7	1718.8	1715.0	1703.4	1699.4	1680.1	1660.7	1637.4	1621.9
42.5°	1552.0	1552.0	1552.0	1544.3	1536.5	1524.9	1521.0	1509.3	1486.0	1470.6	1447.3
45°	1392.9	1381.3	1381.3	1377.5	1373.5	1365.8	1354.2	1346.4	1330.8	1319.2	1292.1
47.5°	1237.7	1241.7	1237.7	1233.8	1222.2	1218.4	1214.4	1199.0	1183.4	1171.8	1152.4
50°	1102.0	1109.7	1102.0	1102.0	1094.1	1090.3	1082.6	1070.9	1059.3	1039.9	1020.4
52.5°	989.4	989.4	985.6	981.6	970.0	962.3	958.3	954.5	935.1	919.6	904.0
55°	876.9	880.8	880.8	869.2	865.2	857.5	853.6	841.9	834.2	810.9	799.2
57.5°	779.9	776.1	779.9	772.1	764.4	756.6	752.8	745.0	733.4	717.8	702.3
60°	694.5	686.8	686.8	682.8	675.1	671.2	663.5	651.8	640.2	624.7	613.0
62.5°	609.1	605.3	601.4	597.5	589.7	585.9	582.0	570.4	558.7	547.1	535.4
65°	527.7	527.7	523.8	516.0	512.2	508.3	504.4	496.6	481.1	473.3	461.7
67.5°	454.0	450.0	450.0	442.3	434.6	430.7	430.7	422.9	411.3	399.6	391.9
70°	380.2	384.2	380.2	376.3	368.6	368.6	360.9	356.9	341.5	337.6	325.9
72.5°	314.3	314.3	310.4	310.4	302.6	298.8	298.8	290.9	283.2	275.5	267.8
75°	252.2	252.2	252.2	248.4	244.5	236.7	236.7	232.8	225.1	217.2	209.5
77.5°	197.8	194.0	194.0	190.1	186.2	182.4	182.4	178.5	170.7	166.8	159.1
80°	143.5	139.7	139.7	139.7	132.0	135.8	132.0	128.1	124.1	120.3	116.4
82.5°	93.1	97.0	97.0	93.1	89.3	89.3	89.3	85.4	85.4	81.4	77.6
85°	54.3	54.3	54.3	54.3	50.4	50.4	50.4	46.6	46.6	46.6	42.7
87.5°	23.3	23.3	23.3	23.3	23.3	23.3	19.4	19.4	19.4	19.4	19.4
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: P585287

CATALOG NUMBER: HC880D010-HM86080930-81WWW

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2859.5	2859.5	2859.5	2859.5	2859.5	2859.5	2859.5	2859.5	2859.5	2859.5	2859.5
2.5°	2890.7	2882.8	2879.0	2875.1	2875.1	2871.2	2867.4	2859.5	2859.5	2851.8	2848.0
5°	2906.2	2894.5	2886.8	2879.0	2875.1	2867.4	2859.5	2848.0	2844.1	2832.4	2820.8
7.5°	2910.1	2890.7	2882.8	2867.4	2859.5	2851.8	2836.4	2824.7	2809.1	2797.5	2782.0
10°	2894.5	2879.0	2859.5	2840.2	2836.4	2824.7	2801.4	2785.8	2766.4	2751.0	2727.7
12.5°	2871.2	2848.0	2828.5	2805.3	2793.7	2782.0	2758.7	2735.4	2708.3	2681.1	2657.9
15°	2832.4	2805.3	2778.1	2751.0	2735.4	2723.8	2696.7	2669.4	2642.3	2607.4	2584.2
17.5°	2774.3	2743.1	2716.0	2681.1	2665.6	2654.0	2619.0	2588.0	2553.0	2518.2	2494.9
20°	2700.6	2661.7	2630.7	2591.9	2580.2	2560.9	2525.9	2491.0	2452.2	2413.4	2386.2
22.5°	2603.6	2564.7	2529.8	2491.0	2471.6	2452.2	2417.2	2374.6	2335.8	2304.8	2277.6
25°	2491.0	2456.1	2413.4	2378.5	2355.2	2331.9	2293.1	2258.1	2223.3	2176.7	2149.6
27.5°	2366.8	2324.1	2293.1	2246.5	2223.3	2207.7	2165.1	2118.6	2087.5	2044.8	2013.7
30°	2227.1	2188.4	2153.4	2106.9	2083.6	2068.0	2029.3	1986.6	1955.5	1912.9	1881.8
32.5°	2079.7	2037.0	1994.3	1963.3	1936.2	1920.6	1877.9	1850.8	1812.0	1777.1	1742.1
35°	1920.6	1877.9	1846.9	1804.2	1788.7	1773.2	1738.3	1703.4	1668.4	1637.4	1610.3
37.5°	1749.9	1718.8	1684.0	1652.9	1641.3	1625.7	1583.0	1552.0	1524.9	1493.9	1470.6
40°	1583.0	1555.9	1532.6	1501.6	1482.2	1470.6	1439.5	1412.3	1381.3	1361.9	1338.6
42.5°	1431.8	1400.6	1377.5	1354.2	1334.8	1323.1	1295.9	1276.5	1253.2	1233.8	1206.7
45°	1272.7	1257.1	1230.0	1210.5	1199.0	1183.4	1164.0	1140.7	1121.3	1105.8	1086.4
47.5°	1133.0	1117.4	1098.0	1074.7	1067.0	1055.4	1036.0	1020.4	1004.9	989.4	970.0
50°	1004.9	985.6	970.0	954.5	946.7	935.1	915.6	907.9	896.3	880.8	869.2
52.5°	888.5	873.0	857.5	838.1	834.2	826.5	814.8	799.2	787.6	779.9	772.1
55°	783.8	768.2	756.6	741.1	737.2	729.5	713.9	706.1	698.4	690.7	682.8
57.5°	690.7	675.1	659.7	651.8	644.1	636.4	632.4	620.8	613.0	609.1	601.4
60°	605.3	589.7	578.1	566.4	562.6	558.7	551.0	543.3	535.4	527.7	523.8
62.5°	523.8	508.3	500.6	492.7	485.0	485.0	477.3	469.5	461.7	457.9	450.0
65°	450.0	442.3	430.7	419.0	415.2	415.2	403.5	399.6	395.8	388.0	380.2
67.5°	380.2	372.5	360.9	356.9	353.1	349.2	345.3	337.6	329.8	325.9	318.2
70°	318.2	310.4	302.6	298.8	294.9	290.9	283.2	279.4	271.6	267.8	263.8
72.5°	256.1	252.2	244.5	240.5	236.7	232.8	228.9	225.1	217.2	213.4	209.5
75°	205.7	201.8	194.0	190.1	186.2	186.2	182.4	174.5	170.7	170.7	166.8
77.5°	155.2	151.4	147.4	143.5	139.7	139.7	135.8	132.0	128.1	128.1	124.1
80°	112.5	108.7	104.8	104.8	104.8	100.8	97.0	97.0	93.1	93.1	89.3
82.5°	73.7	73.7	69.8	69.8	69.8	66.0	66.0	62.1	62.1	62.1	62.1
85°	42.7	42.7	42.7	38.8	38.8	38.8	38.8	38.8	38.8	35.0	38.8
87.5°	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	15.6	15.6	15.6
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: P585287

CATALOG NUMBER: HC880D010-HM86080930-81WWW

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2859.5	2859.5	2859.5	2859.5	2859.5	2859.5	2859.5	2859.5	2859.5	2859.5	2859.5
2.5°	2844.1	2840.2	2832.4	2832.4	2824.7	2824.7	2820.8	2817.0	2813.1	2809.1	2805.3
5°	2817.0	2801.4	2793.7	2789.8	2782.0	2778.1	2766.4	2758.7	2754.8	2747.1	2739.3
7.5°	2766.4	2751.0	2735.4	2731.6	2727.7	2712.1	2700.6	2688.9	2681.1	2673.3	2665.6
10°	2708.3	2692.7	2673.3	2665.6	2657.9	2638.4	2622.9	2611.3	2595.7	2580.2	2576.3
12.5°	2638.4	2615.2	2591.9	2584.2	2572.5	2553.0	2537.6	2518.2	2506.5	2487.2	2483.2
15°	2556.9	2529.8	2510.5	2491.0	2483.2	2463.8	2436.6	2421.2	2397.9	2390.1	2370.7
17.5°	2459.9	2432.8	2405.6	2397.9	2386.2	2359.1	2331.9	2312.5	2289.2	2277.6	2266.0
20°	2359.1	2324.1	2297.0	2289.2	2273.7	2250.4	2223.3	2203.9	2184.4	2161.2	2149.6
22.5°	2242.7	2203.9	2180.6	2161.2	2157.3	2130.1	2099.1	2083.6	2068.0	2048.6	2033.2
25°	2114.6	2079.7	2052.6	2037.0	2029.3	2006.0	1982.7	1963.3	1940.0	1928.4	1908.9
27.5°	1982.7	1959.5	1924.5	1908.9	1897.4	1877.9	1850.8	1839.1	1815.8	1800.4	1788.7
30°	1854.7	1819.8	1800.4	1781.0	1769.4	1749.9	1726.7	1715.0	1695.6	1680.1	1668.4
32.5°	1715.0	1691.7	1664.6	1656.8	1641.3	1621.9	1606.3	1587.0	1571.4	1555.9	1552.0
35°	1587.0	1555.9	1528.7	1521.0	1509.3	1489.9	1482.2	1470.6	1451.2	1447.3	1431.8
37.5°	1447.3	1431.8	1400.6	1389.1	1385.2	1369.6	1354.2	1346.4	1334.8	1323.1	1319.2
40°	1315.4	1295.9	1280.4	1268.8	1261.1	1249.4	1233.8	1230.0	1222.2	1206.7	1202.8
42.5°	1191.1	1171.8	1156.3	1152.4	1140.7	1129.1	1121.3	1109.7	1105.8	1102.0	1094.1
45°	1070.9	1059.3	1043.7	1039.9	1036.0	1020.4	1012.7	1004.9	997.2	993.3	985.6
47.5°	962.3	950.6	939.0	935.1	927.3	923.5	911.8	907.9	896.3	892.5	888.5
50°	857.5	849.8	841.9	838.1	830.3	826.5	818.7	810.9	803.2	799.2	795.4
52.5°	764.4	756.6	748.8	745.0	741.1	733.4	725.5	717.8	713.9	710.1	706.1
55°	675.1	667.4	663.5	659.7	655.7	651.8	640.2	636.4	632.4	628.6	620.8
57.5°	593.7	585.9	578.1	578.1	574.3	570.4	562.6	554.9	554.9	547.1	539.3
60°	519.9	512.2	504.4	500.6	496.6	488.9	485.0	481.1	477.3	473.3	465.6
62.5°	442.3	438.5	430.7	430.7	422.9	419.0	415.2	411.3	407.4	399.6	395.8
65°	376.3	372.5	364.7	360.9	360.9	356.9	349.2	345.3	341.5	341.5	337.6
67.5°	314.3	310.4	302.6	298.8	298.8	294.9	290.9	290.9	287.1	283.2	287.1
70°	259.9	252.2	252.2	248.4	248.4	244.5	240.5	240.5	240.5	244.5	244.5
72.5°	205.7	201.8	197.8	197.8	197.8	197.8	194.0	194.0	197.8	201.8	201.8
75°	163.0	159.1	159.1	159.1	155.2	155.2	159.1	159.1	163.0	163.0	163.0
77.5°	120.3	120.3	120.3	120.3	120.3	120.3	124.1	124.1	128.1	128.1	128.1
80°	89.3	89.3	89.3	89.3	89.3	93.1	93.1	93.1	93.1	93.1	97.0
82.5°	62.1	62.1	62.1	62.1	62.1	62.1	62.1	66.0	66.0	66.0	66.0
85°	35.0	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8
87.5°	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6
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: P585287

CATALOG NUMBER: HC880D010-HM86080930-81WWW

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2859.5	2859.5	2859.5	2859.5	2859.5	2859.5	2859.5	2859.5
2.5°	2801.4	2801.4	2801.4	2805.3	2797.5	2797.5	2797.5	2797.5
5°	2735.4	2731.6	2727.7	2731.6	2723.8	2723.8	2720.0	2720.0
7.5°	2654.0	2650.0	2646.2	2646.2	2638.4	2638.4	2634.6	2630.7
10°	2564.7	2556.9	2560.9	2553.0	2549.2	2545.3	2541.5	2537.6
12.5°	2467.8	2459.9	2456.1	2448.3	2440.5	2436.6	2440.5	2432.8
15°	2362.9	2351.4	2347.4	2339.7	2331.9	2328.1	2328.1	2324.1
17.5°	2246.5	2238.8	2235.0	2227.1	2223.3	2215.5	2211.7	2207.7
20°	2137.9	2118.6	2122.4	2114.6	2110.7	2095.3	2095.3	2099.1
22.5°	2017.6	2006.0	1998.2	1990.5	1986.6	1978.9	1978.9	1974.9
25°	1897.4	1885.8	1881.8	1874.1	1870.2	1862.4	1858.5	1858.5
27.5°	1781.0	1765.4	1765.4	1757.7	1749.9	1746.0	1742.1	1738.3
30°	1656.8	1645.1	1641.3	1641.3	1637.4	1637.4	1625.7	1629.6
32.5°	1540.3	1532.6	1528.7	1521.0	1521.0	1517.0	1517.0	1505.5
35°	1423.9	1412.3	1416.2	1408.5	1404.6	1400.6	1404.6	1400.6
37.5°	1311.5	1303.7	1303.7	1295.9	1295.9	1292.1	1288.2	1295.9
40°	1199.0	1195.1	1191.1	1187.3	1191.1	1187.3	1179.5	1183.4
42.5°	1086.4	1086.4	1082.6	1082.6	1078.7	1078.7	1078.7	1078.7
45°	985.6	981.6	981.6	977.8	977.8	977.8	977.8	973.9
47.5°	884.6	880.8	880.8	880.8	876.9	876.9	873.0	876.9
50°	787.6	787.6	783.8	783.8	787.6	783.8	779.9	779.9
52.5°	698.4	698.4	694.5	694.5	690.7	686.8	690.7	690.7
55°	617.0	613.0	609.1	609.1	605.3	601.4	601.4	605.3
57.5°	539.3	535.4	531.6	531.6	523.8	519.9	519.9	519.9
60°	465.6	457.9	457.9	454.0	454.0	450.0	450.0	450.0
62.5°	395.8	391.9	391.9	391.9	391.9	388.0	388.0	388.0
65°	337.6	337.6	337.6	341.5	341.5	345.3	345.3	345.3
67.5°	290.9	294.9	294.9	294.9	298.8	298.8	298.8	294.9
70°	248.4	248.4	248.4	252.2	252.2	252.2	252.2	252.2
72.5°	205.7	205.7	205.7	205.7	205.7	205.7	205.7	205.7
75°	163.0	166.8	166.8	166.8	163.0	166.8	166.8	163.0
77.5°	128.1	128.1	128.1	128.1	128.1	128.1	128.1	128.1
80°	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0
82.5°	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0
85°	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8
87.5°	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Report Generated By 670245859 / DESKTOP-HRDQ47P





— 0°-180° - - 45°-225° - - - 90°-270°













(END OF REPORT)