

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: P585270

Luminaire Tested: **HC880D010-HM86080927-81WWW**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P585270  
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-HM86080927-81WWW  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4933.2 lumens  
Efficiency: N/A  
Efficacy: 70.5 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

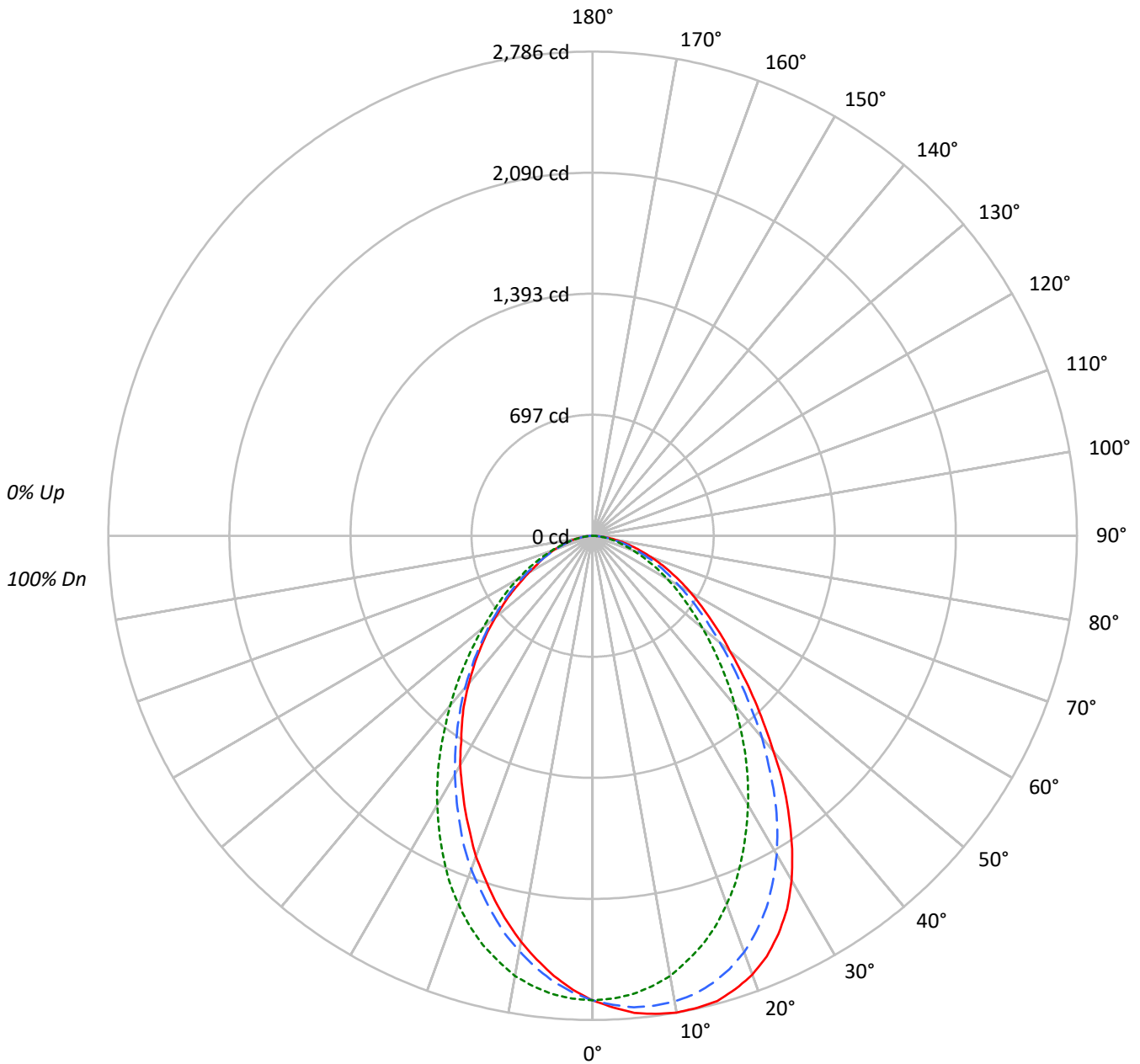
Input Watts (W): 70  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P585270

CATALOG NUMBER: HC880D010-HM86080927-81WWW

### Luminous Intensity Polar Plot





TEST NUMBER: P585270

CATALOG NUMBER: HC880D010-HM86080927-81WWW

**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	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	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°	82425	82425	82425
5°	85325	81957	78698
10°	87220	80519	74269
15°	88462	77805	69355
20°	88191	74028	64387
25°	86010	69229	59107
30°	81490	63665	54240
35°	74140	57618	49288
40°	65115	51247	44529
45°	56783	45079	39697
50°	49412	39496	34972
55°	44068	34708	30418
60°	40038	30423	25946
65°	35994	26457	23553
70°	32043	22567	21260
75°	28094	19015	18145
80°	23831	15449	16106
85°	17973	11569	12843



TEST NUMBER: P585270

CATALOG NUMBER: HC880D010-HM86080927-81WWW

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	250.4	5.1
10°-20°	689.9	14.0
20°-30°	957.6	19.4
30°-40°	990.0	20.1
40°-50°	829.0	16.8
50°-60°	601.8	12.2
60°-70°	379.8	7.7
70°-80°	188.1	3.8
80°-90°	46.8	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°	1897.8	38.5
0°-40°	2887.8	58.5
0°-60°	4318.5	87.5
0°-90°	4933.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4933.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2673	2673	2673	2673	2673	
5°	2756	2724	2648	2575	2542	264
15°	2771	2666	2437	2241	2172	780
25°	2528	2365	2035	1814	1737	1158
35°	1970	1824	1531	1356	1309	1226
45°	1302	1208	1034	932	910	1007
55°	820	747	646	591	566	740
65°	493	432	363	319	323	492
75°	236	196	160	152	152	253
85°	51	40	33	36	36	62
90°	0	0	0	0	0	



TEST NUMBER: P585270

CATALOG NUMBER: HC880D010-HM86080927-81WWW

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2673.0	2673.0	2673.0	2673.0	2673.0	2673.0	2673.0	2673.0	2673.0	2673.0	2673.0
2.5°	2716.5	2716.5	2720.2	2716.5	2716.5	2716.5	2712.9	2712.9	2709.3	2709.3	2702.0
5°	2756.5	2749.2	2756.5	2749.2	2749.2	2749.2	2745.5	2738.3	2734.7	2727.4	2723.8
7.5°	2774.5	2771.0	2771.0	2767.3	2767.3	2763.7	2760.0	2756.5	2742.0	2738.3	2727.4
10°	2785.5	2781.8	2781.8	2778.2	2771.0	2771.0	2763.7	2760.0	2742.0	2734.7	2720.2
12.5°	2781.8	2781.8	2781.8	2778.2	2767.3	2763.7	2756.5	2745.5	2731.0	2716.5	2702.0
15°	2771.0	2771.0	2763.7	2760.0	2749.2	2742.0	2738.3	2720.2	2705.7	2687.5	2665.7
17.5°	2734.7	2734.7	2731.0	2723.8	2712.9	2705.7	2698.4	2680.2	2665.7	2636.7	2615.0
20°	2687.5	2683.9	2680.2	2669.4	2658.5	2654.9	2644.0	2618.7	2600.5	2578.7	2549.7
22.5°	2618.7	2615.0	2611.4	2604.1	2586.0	2578.7	2571.5	2553.4	2520.7	2498.9	2462.7
25°	2527.9	2527.9	2520.7	2509.9	2491.7	2484.4	2473.6	2455.4	2426.4	2393.7	2364.7
27.5°	2422.7	2419.1	2408.2	2400.9	2386.4	2375.6	2357.4	2335.7	2306.7	2281.3	2245.1
30°	2288.6	2288.6	2281.3	2270.4	2252.3	2245.1	2230.6	2205.1	2176.1	2143.5	2118.1
32.5°	2136.3	2136.3	2125.3	2118.1	2107.3	2089.1	2085.5	2056.5	2031.0	2005.7	1976.7
35°	1969.5	1973.0	1965.8	1951.3	1933.1	1933.1	1925.8	1900.5	1871.5	1846.0	1824.3
37.5°	1802.5	1791.7	1788.0	1780.8	1769.9	1755.4	1748.2	1737.2	1711.9	1693.7	1661.2
40°	1617.6	1621.2	1613.9	1606.7	1603.1	1592.2	1588.6	1570.4	1552.4	1530.6	1516.1
42.5°	1450.7	1450.7	1450.7	1443.4	1436.2	1425.4	1421.7	1410.9	1389.1	1374.6	1352.8
45°	1302.1	1291.1	1291.1	1287.6	1283.9	1276.6	1265.8	1258.6	1244.1	1233.1	1207.8
47.5°	1157.0	1160.6	1157.0	1153.3	1142.5	1138.8	1135.3	1120.8	1106.2	1095.3	1077.2
50°	1030.0	1037.3	1030.0	1030.0	1022.8	1019.2	1012.0	1001.0	990.2	972.0	953.8
52.5°	924.8	924.8	921.2	917.6	906.7	899.5	895.8	892.2	874.0	859.5	845.0
55°	819.7	823.3	823.3	812.4	808.8	801.5	797.9	787.0	779.7	758.0	747.2
57.5°	729.0	725.4	729.0	721.7	714.5	707.2	703.7	696.4	685.5	671.0	656.4
60°	649.2	641.9	641.9	638.4	631.1	627.4	620.2	609.4	598.4	583.9	573.1
62.5°	569.4	565.8	562.2	558.6	551.3	547.7	544.1	533.1	522.3	511.4	500.6
65°	493.3	493.3	489.6	482.4	478.7	475.1	471.4	464.2	449.7	442.4	431.6
67.5°	424.4	420.7	420.7	413.4	406.2	402.6	402.6	395.3	384.4	373.6	366.3
70°	355.4	359.1	355.4	351.8	344.6	344.6	337.3	333.6	319.1	315.6	304.6
72.5°	293.8	293.8	290.1	290.1	282.9	279.3	279.3	272.0	264.8	257.5	250.3
75°	235.8	235.8	235.8	232.1	228.5	221.3	221.3	217.6	210.3	203.1	195.8
77.5°	185.0	181.3	181.3	177.8	174.1	170.5	170.5	166.8	159.6	156.0	148.7
80°	134.2	130.6	130.6	130.6	123.3	127.0	123.3	119.7	116.0	112.5	108.8
82.5°	87.0	90.7	90.7	87.0	83.5	83.5	83.5	79.8	79.8	76.2	72.5
85°	50.8	50.8	50.8	50.8	47.2	47.2	47.2	43.5	43.5	43.5	40.0
87.5°	21.8	21.8	21.8	21.8	21.8	21.8	18.2	18.2	18.2	18.2	18.2
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: P585270

CATALOG NUMBER: HC880D010-HM86080927-81WWW

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2673.0	2673.0	2673.0	2673.0	2673.0	2673.0	2673.0	2673.0	2673.0	2673.0	2673.0
2.5°	2702.0	2694.7	2691.2	2687.5	2687.5	2683.9	2680.2	2673.0	2673.0	2665.7	2662.2
5°	2716.5	2705.7	2698.4	2691.2	2687.5	2680.2	2673.0	2662.2	2658.5	2647.7	2636.7
7.5°	2720.2	2702.0	2694.7	2680.2	2673.0	2665.7	2651.2	2640.4	2625.9	2615.0	2600.5
10°	2705.7	2691.2	2673.0	2654.9	2651.2	2640.4	2618.7	2604.1	2586.0	2571.5	2549.7
12.5°	2683.9	2662.2	2644.0	2622.2	2611.4	2600.5	2578.7	2556.9	2531.6	2506.2	2484.4
15°	2647.7	2622.2	2596.9	2571.5	2556.9	2546.1	2520.7	2495.4	2469.9	2437.2	2415.5
17.5°	2593.2	2564.2	2538.9	2506.2	2491.7	2480.8	2448.2	2419.1	2386.4	2353.9	2332.1
20°	2524.4	2488.1	2459.0	2422.7	2411.9	2393.7	2361.1	2328.4	2292.2	2255.9	2230.6
22.5°	2433.6	2397.4	2364.7	2328.4	2310.3	2292.2	2259.6	2219.6	2183.4	2154.3	2129.0
25°	2328.4	2295.8	2255.9	2223.3	2201.6	2179.8	2143.5	2110.8	2078.3	2034.7	2009.3
27.5°	2212.4	2172.5	2143.5	2100.0	2078.3	2063.7	2023.8	1980.3	1951.3	1911.3	1882.3
30°	2081.8	2045.6	2013.0	1969.5	1947.6	1933.1	1896.8	1857.0	1828.0	1788.0	1759.0
32.5°	1944.0	1904.1	1864.2	1835.2	1809.8	1795.3	1755.4	1730.0	1693.7	1661.2	1628.5
35°	1795.3	1755.4	1726.4	1686.5	1672.0	1657.5	1624.9	1592.2	1559.6	1530.6	1505.2
37.5°	1635.7	1606.7	1574.1	1545.1	1534.2	1519.7	1479.8	1450.7	1425.4	1396.4	1374.6
40°	1479.8	1454.4	1432.6	1403.6	1385.4	1374.6	1345.6	1320.1	1291.1	1273.1	1251.3
42.5°	1338.3	1309.3	1287.6	1265.8	1247.6	1236.8	1211.4	1193.3	1171.5	1153.3	1128.0
45°	1189.6	1175.1	1149.8	1131.6	1120.8	1106.2	1088.1	1066.3	1048.2	1033.7	1015.5
47.5°	1059.0	1044.5	1026.5	1004.7	997.5	986.5	968.3	953.8	939.3	924.8	906.7
50°	939.3	921.2	906.7	892.2	885.0	874.0	856.0	848.7	837.8	823.3	812.4
52.5°	830.5	816.0	801.5	783.4	779.7	772.5	761.7	747.2	736.2	729.0	721.7
55°	732.7	718.2	707.2	692.7	689.1	681.9	667.4	660.1	652.9	645.6	638.4
57.5°	645.6	631.1	616.6	609.4	602.1	594.9	591.2	580.4	573.1	569.4	562.2
60°	565.8	551.3	540.4	529.6	525.9	522.3	515.1	507.8	500.6	493.3	489.6
62.5°	489.6	475.1	467.9	460.6	453.4	453.4	446.1	438.9	431.6	427.9	420.7
65°	420.7	413.4	402.6	391.7	388.1	388.1	377.2	373.6	369.9	362.6	355.4
67.5°	355.4	348.1	337.3	333.6	330.1	326.4	322.8	315.6	308.3	304.6	297.4
70°	297.4	290.1	282.9	279.3	275.6	272.0	264.8	261.1	253.9	250.3	246.6
72.5°	239.3	235.8	228.5	224.8	221.3	217.6	214.0	210.3	203.1	199.5	195.8
75°	192.3	188.6	181.3	177.8	174.1	174.1	170.5	163.2	159.6	159.6	156.0
77.5°	145.1	141.5	137.8	134.2	130.6	130.6	127.0	123.3	119.7	119.7	116.0
80°	105.2	101.5	98.0	98.0	98.0	94.3	90.7	90.7	87.0	87.0	83.5
82.5°	69.0	69.0	65.3	65.3	65.3	61.7	61.7	58.0	58.0	58.0	58.0
85°	40.0	40.0	40.0	36.3	36.3	36.3	36.3	36.3	36.3	32.7	36.3
87.5°	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	14.5	14.5	14.5
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: P585270

CATALOG NUMBER: HC880D010-HM86080927-81WWW

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2673.0	2673.0	2673.0	2673.0	2673.0	2673.0	2673.0	2673.0	2673.0	2673.0	2673.0
2.5°	2658.5	2654.9	2647.7	2647.7	2640.4	2640.4	2636.7	2633.2	2629.5	2625.9	2622.2
5°	2633.2	2618.7	2611.4	2607.7	2600.5	2596.9	2586.0	2578.7	2575.1	2567.9	2560.6
7.5°	2586.0	2571.5	2556.9	2553.4	2549.7	2535.2	2524.4	2513.4	2506.2	2498.9	2491.7
10°	2531.6	2517.1	2498.9	2491.7	2484.4	2466.3	2451.7	2440.9	2426.4	2411.9	2408.2
12.5°	2466.3	2444.5	2422.7	2415.5	2404.6	2386.4	2371.9	2353.9	2342.9	2324.9	2321.2
15°	2390.1	2364.7	2346.6	2328.4	2321.2	2303.1	2277.6	2263.1	2241.4	2234.1	2216.1
17.5°	2299.4	2274.1	2248.6	2241.4	2230.6	2205.1	2179.8	2161.6	2139.8	2129.0	2118.1
20°	2205.1	2172.5	2147.1	2139.8	2125.3	2103.6	2078.3	2060.1	2042.0	2020.2	2009.3
22.5°	2096.3	2060.1	2038.3	2020.2	2016.5	1991.2	1962.1	1947.6	1933.1	1915.0	1900.5
25°	1976.7	1944.0	1918.6	1904.1	1896.8	1875.1	1853.3	1835.2	1813.5	1802.5	1784.5
27.5°	1853.3	1831.5	1799.0	1784.5	1773.5	1755.4	1730.0	1719.2	1697.4	1682.9	1672.0
30°	1733.7	1701.0	1682.9	1664.7	1653.9	1635.7	1613.9	1603.1	1584.9	1570.4	1559.6
32.5°	1603.1	1581.4	1555.9	1548.7	1534.2	1516.1	1501.6	1483.4	1468.9	1454.4	1450.7
35°	1483.4	1454.4	1428.9	1421.7	1410.9	1392.7	1385.4	1374.6	1356.4	1352.8	1338.3
37.5°	1352.8	1338.3	1309.3	1298.4	1294.8	1280.3	1265.8	1258.6	1247.6	1236.8	1233.1
40°	1229.5	1211.4	1196.8	1186.0	1178.8	1167.8	1153.3	1149.8	1142.5	1128.0	1124.3
42.5°	1113.5	1095.3	1080.8	1077.2	1066.3	1055.5	1048.2	1037.3	1033.7	1030.0	1022.8
45°	1001.0	990.2	975.6	972.0	968.3	953.8	946.6	939.3	932.1	928.5	921.2
47.5°	899.5	888.5	877.7	874.0	866.8	863.2	852.3	848.7	837.8	834.2	830.5
50°	801.5	794.3	787.0	783.4	776.2	772.5	765.2	758.0	750.7	747.2	743.5
52.5°	714.5	707.2	700.0	696.4	692.7	685.5	678.2	671.0	667.4	663.7	660.1
55°	631.1	623.9	620.2	616.6	612.9	609.4	598.4	594.9	591.2	587.6	580.4
57.5°	554.9	547.7	540.4	540.4	536.8	533.1	525.9	518.6	518.6	511.4	504.1
60°	485.9	478.7	471.4	467.9	464.2	456.9	453.4	449.7	446.1	442.4	435.2
62.5°	413.4	409.8	402.6	402.6	395.3	391.7	388.1	384.4	380.8	373.6	369.9
65°	351.8	348.1	340.9	337.3	337.3	333.6	326.4	322.8	319.1	319.1	315.6
67.5°	293.8	290.1	282.9	279.3	279.3	275.6	272.0	272.0	268.4	264.8	268.4
70°	243.0	235.8	235.8	232.1	232.1	228.5	224.8	224.8	224.8	228.5	228.5
72.5°	192.3	188.6	185.0	185.0	185.0	185.0	181.3	181.3	185.0	188.6	188.6
75°	152.3	148.7	148.7	148.7	145.1	145.1	148.7	148.7	152.3	152.3	152.3
77.5°	112.5	112.5	112.5	112.5	112.5	112.5	116.0	116.0	119.7	119.7	119.7
80°	83.5	83.5	83.5	83.5	83.5	87.0	87.0	87.0	87.0	87.0	90.7
82.5°	58.0	58.0	58.0	58.0	58.0	58.0	58.0	61.7	61.7	61.7	61.7
85°	32.7	36.3	36.3	36.3	36.3	36.3	36.3	36.3	36.3	36.3	36.3
87.5°	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
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: P585270

CATALOG NUMBER: HC880D010-HM86080927-81WWW

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2673.0	2673.0	2673.0	2673.0	2673.0	2673.0	2673.0	2673.0
2.5°	2618.7	2618.7	2618.7	2622.2	2615.0	2615.0	2615.0	2615.0
5°	2556.9	2553.4	2549.7	2553.4	2546.1	2546.1	2542.4	2542.4
7.5°	2480.8	2477.2	2473.6	2473.6	2466.3	2466.3	2462.7	2459.0
10°	2397.4	2390.1	2393.7	2386.4	2382.9	2379.2	2375.6	2371.9
12.5°	2306.7	2299.4	2295.8	2288.6	2281.3	2277.6	2281.3	2274.1
15°	2208.8	2197.9	2194.3	2187.0	2179.8	2176.1	2176.1	2172.5
17.5°	2100.0	2092.8	2089.1	2081.8	2078.3	2071.0	2067.3	2063.7
20°	1998.5	1980.3	1984.0	1976.7	1973.0	1958.5	1958.5	1962.1
22.5°	1886.0	1875.1	1867.8	1860.5	1857.0	1849.7	1849.7	1846.0
25°	1773.5	1762.7	1759.0	1751.8	1748.2	1740.9	1737.2	1737.2
27.5°	1664.7	1650.2	1650.2	1643.0	1635.7	1632.1	1628.5	1624.9
30°	1548.7	1537.9	1534.2	1534.2	1530.6	1530.6	1519.7	1523.3
32.5°	1439.9	1432.6	1428.9	1421.7	1421.7	1418.1	1418.1	1407.2
35°	1331.1	1320.1	1323.8	1316.6	1312.9	1309.3	1312.9	1309.3
37.5°	1225.9	1218.6	1218.6	1211.4	1211.4	1207.8	1204.1	1211.4
40°	1120.8	1117.1	1113.5	1109.8	1113.5	1109.8	1102.6	1106.2
42.5°	1015.5	1015.5	1012.0	1012.0	1008.3	1008.3	1008.3	1008.3
45°	921.2	917.6	917.6	914.0	914.0	914.0	914.0	910.3
47.5°	826.9	823.3	823.3	823.3	819.7	819.7	816.0	819.7
50°	736.2	736.2	732.7	732.7	736.2	732.7	729.0	729.0
52.5°	652.9	652.9	649.2	649.2	645.6	641.9	645.6	645.6
55°	576.7	573.1	569.4	569.4	565.8	562.2	562.2	565.8
57.5°	504.1	500.6	496.9	496.9	489.6	485.9	485.9	485.9
60°	435.2	427.9	427.9	424.4	424.4	420.7	420.7	420.7
62.5°	369.9	366.3	366.3	366.3	366.3	362.6	362.6	362.6
65°	315.6	315.6	315.6	319.1	319.1	322.8	322.8	322.8
67.5°	272.0	275.6	275.6	275.6	279.3	279.3	279.3	275.6
70°	232.1	232.1	232.1	235.8	235.8	235.8	235.8	235.8
72.5°	192.3	192.3	192.3	192.3	192.3	192.3	192.3	192.3
75°	152.3	156.0	156.0	156.0	152.3	156.0	156.0	152.3
77.5°	119.7	119.7	119.7	119.7	119.7	119.7	119.7	119.7
80°	90.7	90.7	90.7	90.7	90.7	90.7	90.7	90.7
82.5°	61.7	61.7	61.7	61.7	61.7	61.7	61.7	61.7
85°	36.3	36.3	36.3	36.3	36.3	36.3	36.3	36.3
87.5°	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
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)