

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: P584794

Luminaire Tested: **HC850D010-HM82555827-81WWW**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P584794  
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: HC850D010-HM82555827-81WWW  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4717.6 lumens  
Efficiency: N/A  
Efficacy: 98.3 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

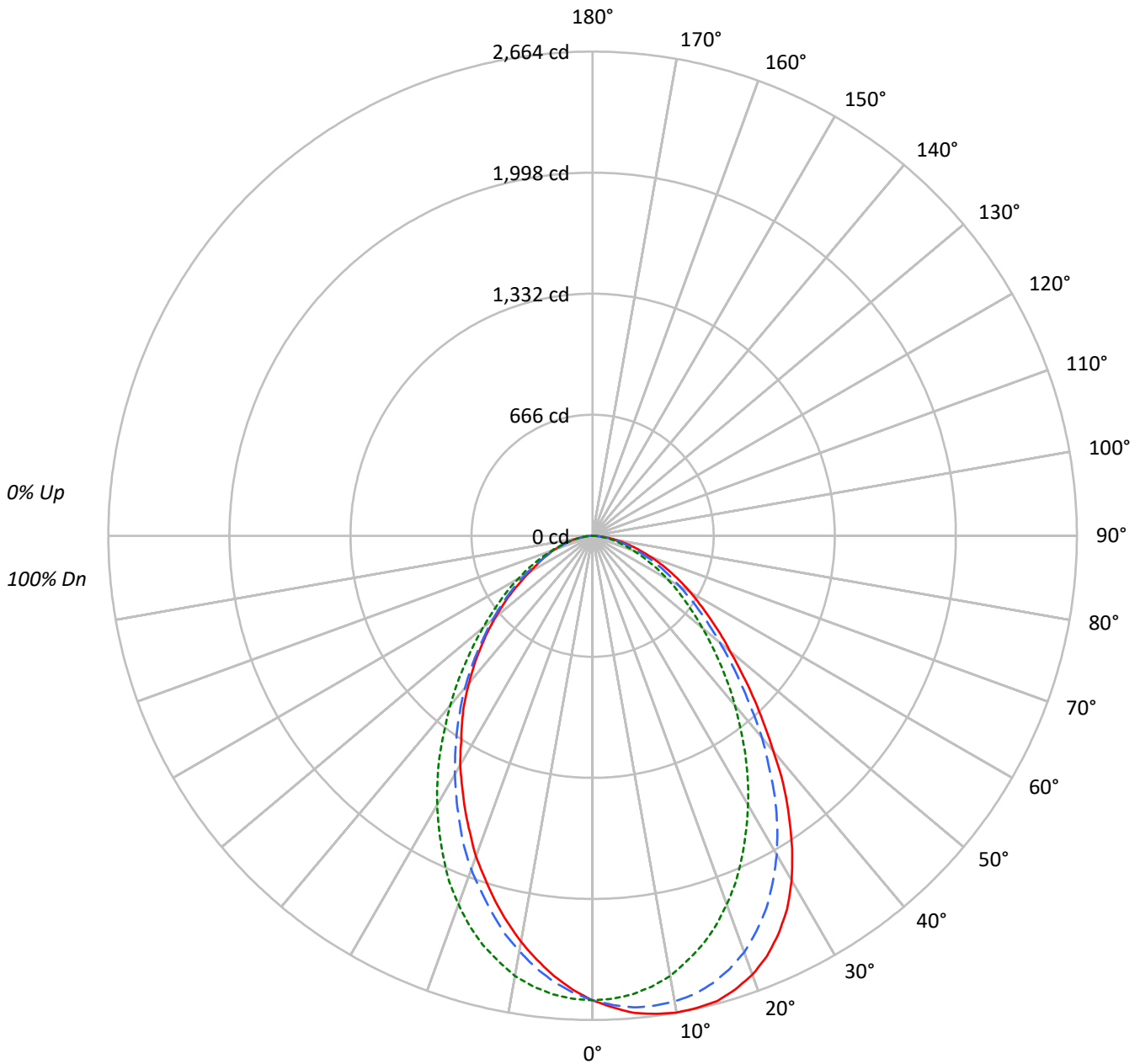
Input Watts (W): 48  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P584794

CATALOG NUMBER: HC850D010-HM82555827-81WWW

### Luminous Intensity Polar Plot





TEST NUMBER: P584794

CATALOG NUMBER: HC850D010-HM82555827-81WWW

**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	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°	78827	78827	78827
5°	81595	78373	75259
10°	83406	76999	71025
15°	84596	74409	66322
20°	84335	70796	61575
25°	82253	66204	56528
30°	77929	60884	51868
35°	70899	55100	47134
40°	62269	49005	42581
45°	54298	43108	37966
50°	47253	37769	33447
55°	42138	33187	29085
60°	38293	29091	24817
65°	34418	25304	22524
70°	30645	21575	20331
75°	26867	18181	17359
80°	22801	14775	15396
85°	17160	11039	12277



TEST NUMBER: P584794

CATALOG NUMBER: HC850D010-HM82555827-81WWW

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	239.4	5.1
10°-20°	659.7	14.0
20°-30°	915.7	19.4
30°-40°	946.8	20.1
40°-50°	792.7	16.8
50°-60°	575.5	12.2
60°-70°	363.2	7.7
70°-80°	179.9	3.8
80°-90°	44.7	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°	1814.8	38.5
0°-40°	2761.6	58.5
0°-60°	4129.8	87.5
0°-90°	4717.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4717.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2556	2556	2556	2556	2556	
5°	2636	2605	2532	2462	2431	252
15°	2650	2549	2331	2144	2078	746
25°	2418	2261	1946	1734	1661	1108
35°	1883	1745	1464	1297	1252	1173
45°	1245	1155	988	891	871	963
55°	784	714	617	565	541	707
65°	472	413	347	305	309	470
75°	226	187	153	146	146	242
85°	48	38	31	35	35	59
90°	0	0	0	0	0	



TEST NUMBER: P584794

CATALOG NUMBER: HC850D010-HM82555827-81WWW

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2556.3	2556.3	2556.3	2556.3	2556.3	2556.3	2556.3	2556.3	2556.3	2556.3	2556.3
2.5°	2597.9	2597.9	2601.3	2597.9	2597.9	2597.9	2594.4	2594.4	2590.9	2590.9	2584.0
5°	2636.0	2629.1	2636.0	2629.1	2629.1	2629.1	2625.6	2618.7	2615.2	2608.3	2604.8
7.5°	2653.3	2649.9	2649.9	2646.4	2646.4	2642.9	2639.5	2636.0	2622.1	2618.7	2608.3
10°	2663.7	2660.3	2660.3	2656.8	2649.9	2649.9	2642.9	2639.5	2622.1	2615.2	2601.3
12.5°	2660.3	2660.3	2660.3	2656.8	2646.4	2642.9	2636.0	2625.6	2611.7	2597.9	2584.0
15°	2649.9	2649.9	2642.9	2639.5	2629.1	2622.1	2618.7	2601.3	2587.5	2570.0	2549.2
17.5°	2615.2	2615.2	2611.7	2604.8	2594.4	2587.5	2580.5	2563.1	2549.2	2521.5	2500.7
20°	2570.0	2566.7	2563.1	2552.7	2542.3	2538.8	2528.4	2504.1	2486.8	2466.0	2438.3
22.5°	2504.1	2500.7	2497.2	2490.3	2472.9	2466.0	2459.1	2441.7	2410.5	2389.7	2355.1
25°	2417.5	2417.5	2410.5	2400.1	2382.8	2375.9	2365.5	2348.1	2320.3	2289.1	2261.4
27.5°	2316.8	2313.5	2303.0	2296.0	2282.2	2271.8	2254.4	2233.6	2205.9	2181.6	2146.9
30°	2188.6	2188.6	2181.6	2171.2	2153.9	2146.9	2133.1	2108.8	2081.1	2049.8	2025.5
32.5°	2042.8	2042.8	2032.4	2025.5	2015.1	1997.8	1994.3	1966.6	1942.3	1918.0	1890.3
35°	1883.4	1886.8	1879.9	1866.0	1848.7	1848.7	1841.8	1817.4	1789.7	1765.4	1744.6
37.5°	1723.8	1713.4	1709.9	1703.0	1692.6	1678.7	1671.8	1661.4	1637.1	1619.8	1588.6
40°	1546.9	1550.3	1543.4	1536.5	1533.0	1522.6	1519.1	1501.8	1484.5	1463.7	1449.8
42.5°	1387.4	1387.4	1387.4	1380.5	1373.5	1363.1	1359.5	1349.1	1328.3	1314.5	1293.7
45°	1245.1	1234.7	1234.7	1231.3	1227.8	1220.9	1210.5	1203.5	1189.7	1179.3	1155.0
47.5°	1106.5	1109.8	1106.5	1103.0	1092.5	1089.0	1085.7	1071.7	1057.8	1047.4	1030.1
50°	985.0	992.0	985.0	985.0	978.1	974.6	967.7	957.3	946.9	929.5	912.2
52.5°	884.5	884.5	881.0	877.5	867.0	860.2	856.6	853.3	835.8	822.0	808.1
55°	783.8	787.3	787.3	776.9	773.4	766.5	763.0	752.6	745.7	724.9	714.5
57.5°	697.2	693.7	697.2	690.2	683.3	676.4	672.9	666.0	655.6	641.7	627.8
60°	620.9	614.0	614.0	610.5	603.6	600.0	593.2	582.6	572.2	558.4	548.0
62.5°	544.5	541.0	537.6	534.1	527.2	523.7	520.2	509.8	499.4	489.0	478.6
65°	471.7	471.7	468.2	461.3	457.8	454.4	450.9	444.0	430.1	423.2	412.8
67.5°	405.8	402.4	402.4	395.4	388.5	385.0	385.0	378.1	367.7	357.2	350.3
70°	339.9	343.3	339.9	336.4	329.5	329.5	322.5	319.1	305.2	301.7	291.3
72.5°	280.9	280.9	277.5	277.5	270.5	267.1	267.1	260.1	253.2	246.3	239.3
75°	225.5	225.5	225.5	222.0	218.5	211.6	211.6	208.1	201.2	194.2	187.3
77.5°	176.9	173.4	173.4	170.0	166.5	163.0	163.0	159.6	152.6	149.2	142.2
80°	128.4	124.8	124.8	124.8	118.0	121.3	118.0	114.4	110.9	107.5	104.0
82.5°	83.2	86.7	86.7	83.2	79.7	79.7	79.7	76.3	76.3	72.8	69.3
85°	48.5	48.5	48.5	48.5	45.1	45.1	45.1	41.6	41.6	41.6	38.1
87.5°	20.8	20.8	20.8	20.8	20.8	20.8	17.3	17.3	17.3	17.3	17.3
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: P584794

CATALOG NUMBER: HC850D010-HM82555827-81WWW

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2556.3	2556.3	2556.3	2556.3	2556.3	2556.3	2556.3	2556.3	2556.3	2556.3	2556.3
2.5°	2584.0	2577.1	2573.6	2570.0	2570.0	2566.7	2563.1	2556.3	2556.3	2549.2	2545.7
5°	2597.9	2587.5	2580.5	2573.6	2570.0	2563.1	2556.3	2545.7	2542.3	2531.9	2521.5
7.5°	2601.3	2584.0	2577.1	2563.1	2556.3	2549.2	2535.3	2524.9	2511.1	2500.7	2486.8
10°	2587.5	2573.6	2556.3	2538.8	2535.3	2524.9	2504.1	2490.3	2472.9	2459.1	2438.3
12.5°	2566.7	2545.7	2528.4	2507.6	2497.2	2486.8	2466.0	2445.2	2420.9	2396.7	2375.9
15°	2531.9	2507.6	2483.3	2459.1	2445.2	2434.8	2410.5	2386.3	2362.0	2330.8	2309.9
17.5°	2479.9	2452.1	2427.9	2396.7	2382.8	2372.4	2341.2	2313.5	2282.2	2251.0	2230.2
20°	2414.0	2379.3	2351.6	2316.8	2306.4	2289.1	2257.9	2226.7	2192.0	2157.4	2133.1
22.5°	2327.2	2292.6	2261.4	2226.7	2209.4	2192.0	2160.8	2122.7	2088.0	2060.2	2035.9
25°	2226.7	2195.5	2157.4	2126.1	2105.3	2084.4	2049.8	2018.6	1987.4	1945.8	1921.5
27.5°	2115.7	2077.5	2049.8	2008.2	1987.4	1973.5	1935.4	1893.8	1866.0	1827.8	1800.1
30°	1990.8	1956.2	1925.0	1883.4	1862.6	1848.7	1813.9	1775.8	1748.0	1709.9	1682.2
32.5°	1859.1	1821.0	1782.7	1755.0	1730.7	1716.8	1678.7	1654.4	1619.8	1588.6	1557.3
35°	1716.8	1678.7	1651.0	1612.8	1599.0	1585.0	1553.8	1522.6	1491.4	1463.7	1439.4
37.5°	1564.2	1536.5	1505.3	1477.5	1467.1	1453.3	1415.1	1387.4	1363.1	1335.3	1314.5
40°	1415.1	1390.9	1370.0	1342.2	1324.9	1314.5	1286.7	1262.5	1234.7	1217.4	1196.6
42.5°	1279.8	1252.1	1231.3	1210.5	1193.1	1182.7	1158.5	1141.1	1120.3	1103.0	1078.6
45°	1137.7	1123.8	1099.4	1082.1	1071.7	1057.8	1040.5	1019.7	1002.4	988.5	971.1
47.5°	1012.8	998.9	981.6	960.7	953.8	943.4	926.1	912.2	898.3	884.5	867.0
50°	898.3	881.0	867.0	853.3	846.2	835.8	818.5	811.6	801.2	787.3	776.9
52.5°	794.2	780.4	766.5	749.2	745.7	738.8	728.4	714.5	704.1	697.2	690.2
55°	700.6	686.8	676.4	662.5	659.0	652.1	638.2	631.3	624.4	617.3	610.5
57.5°	617.3	603.6	589.6	582.6	575.7	568.8	565.3	554.9	548.0	544.5	537.6
60°	541.0	527.2	516.8	506.4	502.9	499.4	492.5	485.6	478.6	471.7	468.2
62.5°	468.2	454.4	447.4	440.5	433.6	433.6	426.6	419.7	412.8	409.3	402.4
65°	402.4	395.4	385.0	374.5	371.2	371.2	360.8	357.2	353.7	346.8	339.9
67.5°	339.9	332.9	322.5	319.1	315.6	312.1	308.7	301.7	294.8	291.3	284.4
70°	284.4	277.5	270.5	267.1	263.6	260.1	253.2	249.7	242.8	239.3	235.9
72.5°	228.9	225.5	218.5	215.1	211.6	208.1	204.7	201.2	194.2	190.8	187.3
75°	183.8	180.4	173.4	170.0	166.5	166.5	163.0	156.1	152.6	152.6	149.2
77.5°	138.8	135.3	131.7	128.4	124.8	124.8	121.3	118.0	114.4	114.4	110.9
80°	100.5	97.1	93.6	93.6	93.6	90.1	86.7	86.7	83.2	83.2	79.7
82.5°	65.9	65.9	62.4	62.4	62.4	58.9	58.9	55.5	55.5	55.5	55.5
85°	38.1	38.1	38.1	34.7	34.7	34.7	34.7	34.7	34.7	31.2	34.7
87.5°	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	13.9	13.9	13.9
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: P584794

CATALOG NUMBER: HC850D010-HM82555827-81WWW

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2556.3	2556.3	2556.3	2556.3	2556.3	2556.3	2556.3	2556.3	2556.3	2556.3	2556.3
2.5°	2542.3	2538.8	2531.9	2531.9	2524.9	2524.9	2521.5	2518.0	2514.5	2511.1	2507.6
5°	2518.0	2504.1	2497.2	2493.7	2486.8	2483.3	2472.9	2466.0	2462.5	2455.6	2448.7
7.5°	2472.9	2459.1	2445.2	2441.7	2438.3	2424.4	2414.0	2403.6	2396.7	2389.7	2382.8
10°	2420.9	2407.1	2389.7	2382.8	2375.9	2358.5	2344.7	2334.3	2320.3	2306.4	2303.0
12.5°	2358.5	2337.6	2316.8	2309.9	2299.5	2282.2	2268.3	2251.0	2240.6	2223.2	2219.8
15°	2285.6	2261.4	2244.0	2226.7	2219.8	2202.4	2178.2	2164.3	2143.5	2136.5	2119.2
17.5°	2199.0	2174.7	2150.4	2143.5	2133.1	2108.8	2084.4	2067.1	2046.3	2035.9	2025.5
20°	2108.8	2077.5	2053.2	2046.3	2032.4	2011.6	1987.4	1970.0	1952.7	1931.9	1921.5
22.5°	2004.7	1970.0	1949.2	1931.9	1928.4	1904.2	1876.4	1862.6	1848.7	1831.4	1817.4
25°	1890.3	1859.1	1834.7	1821.0	1813.9	1793.1	1772.3	1755.0	1734.2	1723.8	1706.4
27.5°	1772.3	1751.5	1720.3	1706.4	1696.0	1678.7	1654.4	1644.0	1623.2	1609.4	1599.0
30°	1657.9	1626.7	1609.4	1591.9	1581.5	1564.2	1543.4	1533.0	1515.7	1501.8	1491.4
32.5°	1533.0	1512.2	1487.9	1481.0	1467.1	1449.8	1435.9	1418.6	1404.7	1390.9	1387.4
35°	1418.6	1390.9	1366.6	1359.5	1349.1	1331.8	1324.9	1314.5	1297.1	1293.7	1279.8
37.5°	1293.7	1279.8	1252.1	1241.7	1238.2	1224.3	1210.5	1203.5	1193.1	1182.7	1179.3
40°	1175.8	1158.5	1144.6	1134.2	1127.3	1116.9	1103.0	1099.4	1092.5	1078.6	1075.2
42.5°	1064.8	1047.4	1033.6	1030.1	1019.7	1009.3	1002.4	992.0	988.5	985.0	978.1
45°	957.3	946.9	933.0	929.5	926.1	912.2	905.3	898.3	891.4	887.9	881.0
47.5°	860.2	849.7	839.3	835.8	828.9	825.4	815.0	811.6	801.2	797.7	794.2
50°	766.5	759.6	752.6	749.2	742.2	738.8	731.8	724.9	718.0	714.5	711.0
52.5°	683.3	676.4	669.4	666.0	662.5	655.6	648.6	641.7	638.2	634.8	631.3
55°	603.6	596.5	593.2	589.6	586.1	582.6	572.2	568.8	565.3	561.8	554.9
57.5°	530.6	523.7	516.8	516.8	513.3	509.8	502.9	496.0	496.0	489.0	482.1
60°	464.8	457.8	450.9	447.4	444.0	437.0	433.6	430.1	426.6	423.2	416.2
62.5°	395.4	392.0	385.0	385.0	378.1	374.5	371.2	367.7	364.1	357.2	353.7
65°	336.4	332.9	326.0	322.5	322.5	319.1	312.1	308.7	305.2	305.2	301.7
67.5°	280.9	277.5	270.5	267.1	267.1	263.6	260.1	260.1	256.7	253.2	256.7
70°	232.4	225.5	225.5	222.0	222.0	218.5	215.1	215.1	215.1	218.5	218.5
72.5°	183.8	180.4	176.9	176.9	176.9	176.9	173.4	173.4	176.9	180.4	180.4
75°	145.7	142.2	142.2	142.2	138.8	138.8	142.2	142.2	145.7	145.7	145.7
77.5°	107.5	107.5	107.5	107.5	107.5	107.5	110.9	110.9	114.4	114.4	114.4
80°	79.7	79.7	79.7	79.7	79.7	83.2	83.2	83.2	83.2	83.2	86.7
82.5°	55.5	55.5	55.5	55.5	55.5	55.5	55.5	58.9	58.9	58.9	58.9
85°	31.2	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7
87.5°	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9
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: P584794

CATALOG NUMBER: HC850D010-HM82555827-81WWW

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2556.3	2556.3	2556.3	2556.3	2556.3	2556.3	2556.3	2556.3
2.5°	2504.1	2504.1	2504.1	2507.6	2500.7	2500.7	2500.7	2500.7
5°	2445.2	2441.7	2438.3	2441.7	2434.8	2434.8	2431.3	2431.3
7.5°	2372.4	2368.9	2365.5	2365.5	2358.5	2358.5	2355.1	2351.6
10°	2292.6	2285.6	2289.1	2282.2	2278.7	2275.2	2271.8	2268.3
12.5°	2205.9	2199.0	2195.5	2188.6	2181.6	2178.2	2181.6	2174.7
15°	2112.3	2101.9	2098.4	2091.5	2084.4	2081.1	2081.1	2077.5
17.5°	2008.2	2001.2	1997.8	1990.8	1987.4	1980.4	1977.0	1973.5
20°	1911.1	1893.8	1897.2	1890.3	1886.8	1873.0	1873.0	1876.4
22.5°	1803.5	1793.1	1786.2	1779.3	1775.8	1768.9	1768.9	1765.4
25°	1696.0	1685.6	1682.2	1675.2	1671.8	1664.8	1661.4	1661.4
27.5°	1591.9	1578.2	1578.2	1571.1	1564.2	1560.7	1557.3	1553.8
30°	1481.0	1470.6	1467.1	1467.1	1463.7	1463.7	1453.3	1456.7
32.5°	1377.0	1370.0	1366.6	1359.5	1359.5	1356.2	1356.2	1345.8
35°	1272.9	1262.5	1265.9	1259.0	1255.5	1252.1	1255.5	1252.1
37.5°	1172.3	1165.4	1165.4	1158.5	1158.5	1155.0	1151.5	1158.5
40°	1071.7	1068.2	1064.8	1061.3	1064.8	1061.3	1054.4	1057.8
42.5°	971.1	971.1	967.7	967.7	964.2	964.2	964.2	964.2
45°	881.0	877.5	877.5	874.1	874.1	874.1	874.1	870.6
47.5°	790.8	787.3	787.3	787.3	783.8	783.8	780.4	783.8
50°	704.1	704.1	700.6	700.6	704.1	700.6	697.2	697.2
52.5°	624.4	624.4	620.9	620.9	617.3	614.0	617.3	617.3
55°	551.4	548.0	544.5	544.5	541.0	537.6	537.6	541.0
57.5°	482.1	478.6	475.2	475.2	468.2	464.8	464.8	464.8
60°	416.2	409.3	409.3	405.8	405.8	402.4	402.4	402.4
62.5°	353.7	350.3	350.3	350.3	350.3	346.8	346.8	346.8
65°	301.7	301.7	301.7	305.2	305.2	308.7	308.7	308.7
67.5°	260.1	263.6	263.6	263.6	267.1	267.1	267.1	263.6
70°	222.0	222.0	222.0	225.5	225.5	225.5	225.5	225.5
72.5°	183.8	183.8	183.8	183.8	183.8	183.8	183.8	183.8
75°	145.7	149.2	149.2	149.2	145.7	149.2	149.2	145.7
77.5°	114.4	114.4	114.4	114.4	114.4	114.4	114.4	114.4
80°	86.7	86.7	86.7	86.7	86.7	86.7	86.7	86.7
82.5°	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9
85°	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7
87.5°	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9
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)