

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: P593851

Luminaire Tested: **HC855D010-HM82555950-81RWWC**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P593851  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-14)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 10/21/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC855D010-HM82555950-81RWWC  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5517.0 lumens  
Efficiency: N/A  
Efficacy: 106.1 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 1.08 / 1.17  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

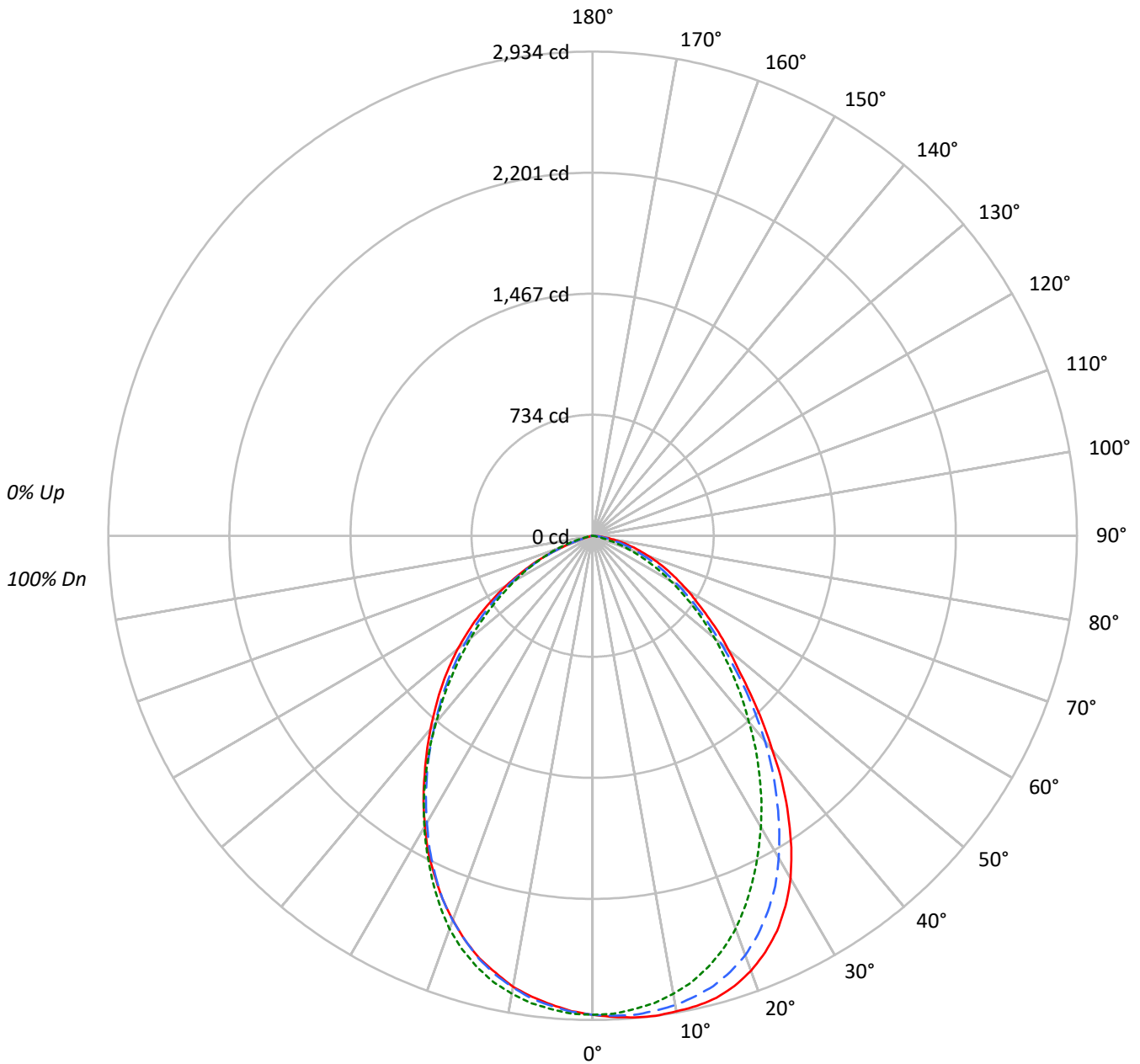
Input Watts (W): 52  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				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			100
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88			88
2	103	96	90	85	100	94	89	84	91	86	82	87	84	81	84	82	79	77			77
3	95	86	79	73	93	84	78	73	82	76	72	79	74	70	76	73	69	67			67
4	88	77	70	64	86	76	69	64	74	68	63	72	66	62	69	65	61	59			59
5	81	70	62	56	80	69	62	56	67	61	56	65	59	55	63	58	54	52			52
6	76	64	56	50	74	63	55	50	61	55	50	60	54	49	58	53	49	47			47
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44	42			42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38			38
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35			35
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32			32

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	89512	89512	89512
5°	90696	89135	88293
10°	91622	88225	86888
15°	92545	86361	84628
20°	92080	83177	81270
25°	89933	78198	77139
30°	85420	72588	72310
35°	77765	66235	66818
40°	68178	59282	61468
45°	58816	52732	56452
50°	51504	46294	51129
55°	45633	39794	45009
60°	41111	33464	37287
65°	37044	26866	28558
70°	32493	19574	15724
75°	27701	10163	4158
80°	21327	2752	693
85°	13728	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	273.9	5.0
10°-20°	769.9	14.0
20°-30°	1092.8	19.8
30°-40°	1150.3	20.9
40°-50°	978.6	17.7
50°-60°	707.2	12.8
60°-70°	402.2	7.3
70°-80°	126.7	2.3
80°-90°	15.4	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°	2136.6	38.7
0°-40°	3286.9	59.6
0°-60°	4972.7	90.1
0°-90°	5517.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5517.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2903	2903	2903	2903	2903	
5°	2930	2914	2880	2860	2852	280
15°	2899	2825	2705	2655	2651	816
25°	2643	2511	2298	2260	2267	1211
35°	2066	1946	1760	1748	1775	1285
45°	1349	1298	1209	1240	1294	1048
55°	849	787	740	783	837	765
65°	508	438	368	364	391	503
75°	232	178	85	39	35	250
85°	39	23	0	0	0	50
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°	2902.8	2902.8	2902.8	2902.8	2902.8	2902.8	2902.8	2902.8	2902.8	2902.8	2902.8
2.5°	2918.4	2922.3	2914.5	2914.5	2922.3	2914.5	2918.4	2918.4	2914.5	2914.5	2910.5
5°	2930.0	2926.1	2926.1	2926.1	2930.0	2922.3	2918.4	2922.3	2914.5	2914.5	2914.5
7.5°	2933.9	2933.9	2930.0	2926.1	2926.1	2926.1	2922.3	2918.4	2914.5	2906.7	2902.8
10°	2926.1	2926.1	2930.0	2922.3	2922.3	2914.5	2914.5	2906.7	2906.7	2898.9	2887.3
12.5°	2918.4	2914.5	2914.5	2906.7	2906.7	2898.9	2898.9	2887.3	2883.5	2871.9	2860.3
15°	2898.9	2895.1	2887.3	2883.5	2879.6	2875.7	2868.0	2864.1	2852.4	2836.9	2825.3
17.5°	2860.3	2856.3	2852.4	2844.7	2836.9	2833.1	2829.2	2817.6	2802.1	2790.4	2771.1
20°	2806.0	2802.1	2802.1	2790.4	2786.5	2774.9	2771.1	2755.6	2743.9	2720.7	2705.2
22.5°	2732.3	2736.2	2728.4	2720.7	2712.9	2701.3	2693.6	2678.0	2658.7	2635.5	2616.0
25°	2643.2	2647.1	2639.3	2631.6	2619.9	2612.2	2604.4	2581.2	2561.8	2534.7	2511.4
27.5°	2530.8	2530.8	2530.8	2523.1	2503.6	2499.8	2492.0	2468.8	2441.6	2418.4	2395.1
30°	2399.0	2395.1	2395.1	2383.5	2375.8	2360.3	2348.7	2329.2	2309.9	2282.7	2255.6
32.5°	2240.2	2244.0	2232.3	2224.6	2213.0	2213.0	2197.5	2182.0	2158.7	2131.6	2104.4
35°	2065.8	2069.6	2061.8	2057.9	2038.6	2034.7	2030.8	2011.5	1995.9	1976.6	1945.5
37.5°	1887.4	1883.5	1879.7	1879.7	1868.1	1860.3	1852.6	1841.0	1817.7	1802.2	1786.7
40°	1693.7	1693.7	1693.7	1689.8	1685.9	1678.2	1674.3	1666.5	1651.0	1635.5	1623.9
42.5°	1519.3	1519.3	1515.4	1511.5	1503.8	1507.7	1499.9	1492.1	1476.6	1465.0	1457.3
45°	1348.7	1348.7	1348.7	1352.6	1344.9	1333.3	1333.3	1325.4	1317.7	1309.9	1298.3
47.5°	1197.5	1209.2	1201.4	1197.5	1201.4	1185.9	1185.9	1178.2	1170.5	1162.7	1147.2
50°	1073.6	1073.6	1073.6	1065.8	1061.9	1061.9	1050.3	1042.5	1038.6	1030.9	1015.4
52.5°	961.2	953.4	953.4	949.6	945.7	938.0	938.0	930.1	914.6	906.9	895.3
55°	848.8	848.8	844.9	841.0	837.2	833.3	829.4	817.7	810.0	798.4	786.8
57.5°	748.0	755.7	751.8	744.1	736.4	736.4	728.6	720.9	709.3	697.6	686.0
60°	666.6	662.8	662.8	658.9	651.2	647.2	643.3	631.7	620.1	608.5	596.9
62.5°	581.3	581.3	581.3	573.6	565.8	562.0	558.1	550.4	534.8	523.2	515.4
65°	507.7	503.8	500.0	496.1	492.2	484.5	480.5	472.8	461.2	449.6	438.0
67.5°	434.1	430.2	430.2	426.4	414.7	410.8	410.8	399.2	387.6	376.0	364.3
70°	360.4	360.4	360.4	352.7	348.8	344.9	341.1	333.3	321.7	310.0	298.4
72.5°	298.4	294.5	294.5	290.7	279.1	275.2	271.3	263.6	251.9	244.1	236.4
75°	232.5	232.5	228.7	224.8	220.9	217.1	213.2	205.5	193.7	182.1	178.3
77.5°	178.3	174.4	174.4	170.5	162.8	158.9	158.9	151.2	139.5	131.7	124.0
80°	120.1	124.0	120.1	116.3	112.4	108.5	104.7	100.8	93.1	85.3	77.5
82.5°	73.6	77.5	73.6	73.6	69.7	65.9	65.9	58.1	54.3	50.4	46.5
85°	38.8	38.8	38.8	38.8	34.9	34.9	34.9	31.1	27.1	23.2	23.2
87.5°	11.6	15.5	11.6	11.6	11.6	11.6	11.6	11.6	7.7	7.7	7.7
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°	2902.8	2902.8	2902.8	2902.8	2902.8	2902.8	2902.8	2902.8	2902.8	2902.8	2902.8
2.5°	2914.5	2910.5	2906.7	2906.7	2906.7	2906.7	2906.7	2902.8	2898.9	2898.9	2898.9
5°	2906.7	2906.7	2906.7	2902.8	2898.9	2898.9	2891.2	2887.3	2883.5	2879.6	2875.7
7.5°	2898.9	2891.2	2887.3	2883.5	2879.6	2879.6	2871.9	2864.1	2864.1	2856.3	2848.5
10°	2875.7	2871.9	2864.1	2856.3	2852.4	2848.5	2840.8	2829.2	2825.3	2817.6	2809.9
12.5°	2848.5	2840.8	2833.1	2817.6	2813.7	2809.9	2794.3	2782.7	2774.9	2771.1	2751.7
15°	2813.7	2798.1	2786.5	2767.2	2763.3	2755.6	2743.9	2732.3	2716.8	2705.2	2697.5
17.5°	2751.7	2736.2	2716.8	2697.5	2689.7	2689.7	2670.3	2654.8	2635.5	2627.6	2612.2
20°	2678.0	2658.7	2643.2	2619.9	2608.3	2596.7	2585.1	2561.8	2546.3	2534.7	2515.2
22.5°	2592.8	2565.6	2546.3	2523.1	2503.6	2492.0	2472.7	2453.2	2433.9	2422.3	2406.8
25°	2484.3	2461.0	2430.0	2406.8	2395.1	2379.6	2356.4	2337.0	2317.6	2298.3	2290.4
27.5°	2364.2	2333.1	2306.0	2278.8	2267.2	2255.6	2228.4	2205.2	2189.8	2170.3	2162.6
30°	2232.3	2201.4	2170.3	2147.1	2135.5	2116.0	2100.6	2073.5	2054.0	2038.6	2019.2
32.5°	2081.2	2057.9	2030.8	1995.9	1988.2	1972.7	1949.4	1937.8	1914.6	1903.0	1887.4
35°	1918.4	1903.0	1875.8	1848.7	1837.0	1829.3	1809.9	1786.7	1771.1	1759.5	1751.8
37.5°	1763.4	1744.1	1716.9	1697.5	1689.8	1678.2	1654.9	1643.3	1627.8	1620.1	1604.5
40°	1596.7	1577.4	1558.1	1546.3	1534.7	1527.0	1511.5	1499.9	1484.3	1472.7	1468.9
42.5°	1433.9	1422.3	1406.9	1391.4	1387.5	1375.8	1368.1	1356.5	1344.9	1341.0	1329.3
45°	1286.7	1275.1	1259.5	1244.1	1240.2	1232.5	1228.6	1217.0	1209.2	1209.2	1209.2
47.5°	1139.4	1127.8	1112.3	1104.6	1108.5	1092.9	1092.9	1089.0	1081.3	1081.3	1085.2
50°	1007.7	992.2	988.2	980.5	972.8	965.0	968.9	957.3	957.3	965.0	961.2
52.5°	883.7	868.1	864.2	856.5	852.6	852.6	848.8	848.8	844.9	848.8	848.8
55°	771.3	759.6	751.8	744.1	740.2	740.2	740.2	736.4	732.5	740.2	744.1
57.5°	670.5	666.6	658.9	647.2	643.3	639.4	635.6	635.6	635.6	635.6	639.4
60°	581.3	573.6	565.8	554.2	554.2	550.4	546.5	542.6	542.6	542.6	542.6
62.5°	503.8	492.2	480.5	472.8	468.9	465.0	461.2	453.4	453.4	453.4	453.4
65°	426.4	414.7	406.9	399.2	391.4	391.4	383.7	379.8	372.1	368.2	360.4
67.5°	352.7	344.9	337.2	325.6	321.7	317.8	310.0	306.1	294.5	290.7	286.8
70°	286.8	275.2	267.5	259.7	255.8	248.0	240.3	232.5	224.8	217.1	209.3
72.5°	224.8	213.2	205.5	197.6	189.9	189.9	178.3	170.5	158.9	151.2	139.5
75°	166.7	155.1	147.3	135.6	131.7	127.9	116.3	108.5	96.9	85.3	77.5
77.5°	112.4	104.7	96.9	85.3	77.5	77.5	65.9	58.1	50.4	38.8	34.9
80°	69.7	62.0	54.3	46.5	46.5	38.8	34.9	27.1	19.3	15.5	11.6
82.5°	38.8	34.9	31.1	23.2	23.2	19.3	15.5	11.6	7.7	3.9	3.9
85°	19.3	15.5	11.6	11.6	7.7	7.7	7.7	3.9	3.9	0.0	0.0
87.5°	7.7	3.9	3.9	3.9	3.9	3.9	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



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**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2902.8	2902.8	2902.8	2902.8	2902.8	2902.8	2902.8	2902.8	2902.8	2902.8	2902.8
2.5°	2895.1	2895.1	2891.2	2891.2	2891.2	2887.3	2891.2	2887.3	2887.3	2887.3	2891.2
5°	2879.6	2871.9	2871.9	2868.0	2868.0	2864.1	2868.0	2864.1	2860.3	2856.3	2860.3
7.5°	2848.5	2840.8	2836.9	2833.1	2833.1	2833.1	2829.2	2825.3	2829.2	2817.6	2825.3
10°	2806.0	2802.1	2794.3	2790.4	2786.5	2790.4	2786.5	2778.8	2778.8	2778.8	2774.9
12.5°	2751.7	2743.9	2740.0	2736.2	2728.4	2728.4	2732.3	2724.5	2724.5	2716.8	2716.8
15°	2685.8	2678.0	2670.3	2670.3	2662.5	2662.5	2658.7	2658.7	2654.8	2650.9	2650.9
17.5°	2604.4	2592.8	2585.1	2588.9	2585.1	2581.2	2581.2	2573.4	2569.5	2573.4	2573.4
20°	2507.5	2499.8	2492.0	2495.9	2488.2	2484.3	2488.2	2476.6	2480.4	2480.4	2480.4
22.5°	2399.0	2395.1	2383.5	2383.5	2375.8	2371.9	2375.8	2375.8	2379.6	2375.8	2375.8
25°	2278.8	2271.1	2263.4	2263.4	2259.5	2255.6	2259.5	2263.4	2259.5	2263.4	2263.4
27.5°	2151.0	2139.4	2139.4	2131.6	2131.6	2135.5	2131.6	2135.5	2139.4	2139.4	2147.1
30°	2011.5	2007.5	2003.7	1999.8	1999.8	2003.7	2003.7	2003.7	2007.5	2015.4	2015.4
32.5°	1879.7	1871.9	1864.2	1864.2	1871.9	1868.1	1871.9	1871.9	1879.7	1879.7	1887.4
35°	1736.3	1736.3	1728.6	1732.5	1732.5	1732.5	1732.5	1740.2	1747.9	1751.8	1759.5
37.5°	1604.5	1592.9	1596.7	1596.7	1600.6	1596.7	1608.3	1608.3	1616.2	1616.2	1623.9
40°	1461.1	1461.1	1465.0	1461.1	1465.0	1465.0	1472.7	1480.5	1484.3	1492.1	1495.9
42.5°	1325.4	1333.3	1325.4	1329.3	1333.3	1337.1	1341.0	1344.9	1360.3	1368.1	1379.7
45°	1201.4	1205.3	1209.2	1213.0	1209.2	1217.0	1220.9	1228.6	1240.2	1244.1	1247.9
47.5°	1081.3	1085.2	1089.0	1092.9	1092.9	1100.6	1104.6	1112.3	1120.1	1123.9	1127.8
50°	965.0	972.8	976.6	976.6	980.5	988.2	996.1	996.1	1003.8	1015.4	1019.3
52.5°	860.4	860.4	868.1	872.0	875.8	875.8	887.6	891.4	895.3	903.0	910.8
55°	744.1	755.7	759.6	759.6	767.4	775.2	779.0	782.9	782.9	798.4	798.4
57.5°	643.3	647.2	655.0	655.0	655.0	666.6	666.6	674.4	678.2	682.1	689.8
60°	542.6	550.4	550.4	554.2	550.4	558.1	562.0	569.7	573.6	577.4	581.3
62.5°	449.6	449.6	453.4	453.4	453.4	453.4	461.2	461.2	468.9	472.8	476.7
65°	360.4	360.4	360.4	360.4	360.4	360.4	360.4	360.4	364.3	364.3	372.1
67.5°	279.1	275.2	267.5	271.3	267.5	267.5	263.6	263.6	267.5	267.5	275.2
70°	201.6	197.6	189.9	189.9	186.0	182.1	178.3	174.4	170.5	170.5	170.5
72.5°	131.7	124.0	112.4	108.5	108.5	100.8	93.1	89.2	89.2	89.2	89.2
75°	65.9	58.1	50.4	46.5	46.5	38.8	42.7	38.8	38.8	38.8	38.8
77.5°	27.1	19.3	15.5	15.5	15.5	11.6	11.6	11.6	11.6	11.6	11.6
80°	7.7	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
82.5°	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	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	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: P593851

CATALOG NUMBER: HC855D010-HM82555950-81RWWC

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2902.8	2902.8	2902.8	2902.8	2902.8	2902.8	2902.8	2902.8
2.5°	2887.3	2887.3	2879.6	2883.5	2883.5	2883.5	2883.5	2883.5
5°	2852.4	2856.3	2852.4	2856.3	2856.3	2852.4	2852.4	2852.4
7.5°	2817.6	2821.5	2817.6	2821.5	2821.5	2821.5	2817.6	2817.6
10°	2774.9	2774.9	2774.9	2774.9	2774.9	2771.1	2774.9	2774.9
12.5°	2716.8	2716.8	2716.8	2720.7	2720.7	2716.8	2716.8	2712.9
15°	2654.8	2647.1	2650.9	2654.8	2650.9	2650.9	2650.9	2650.9
17.5°	2569.5	2573.4	2569.5	2569.5	2569.5	2569.5	2573.4	2569.5
20°	2480.4	2480.4	2484.3	2480.4	2480.4	2480.4	2480.4	2476.6
22.5°	2379.6	2375.8	2375.8	2379.6	2379.6	2375.8	2379.6	2379.6
25°	2267.2	2271.1	2267.2	2267.2	2271.1	2271.1	2271.1	2267.2
27.5°	2147.1	2151.0	2154.8	2151.0	2151.0	2151.0	2154.8	2158.7
30°	2023.1	2030.8	2023.1	2023.1	2030.8	2027.0	2030.8	2030.8
32.5°	1891.3	1903.0	1895.1	1903.0	1903.0	1906.8	1903.0	1906.8
35°	1759.5	1771.1	1771.1	1771.1	1775.0	1778.9	1778.9	1775.0
37.5°	1635.5	1639.4	1639.4	1647.1	1651.0	1654.9	1654.9	1651.0
40°	1507.7	1515.4	1519.3	1519.3	1519.3	1527.0	1534.7	1527.0
42.5°	1383.5	1387.5	1391.4	1391.4	1399.1	1403.0	1406.9	1406.9
45°	1263.4	1271.2	1275.1	1279.0	1282.9	1290.6	1286.7	1294.5
47.5°	1139.4	1151.0	1154.9	1158.8	1166.6	1170.5	1174.3	1178.2
50°	1027.0	1034.8	1034.8	1042.5	1054.2	1054.2	1061.9	1065.8
52.5°	914.6	918.5	922.4	926.2	934.1	941.8	941.8	949.6
55°	806.1	810.0	810.0	813.8	817.7	833.3	837.2	837.2
57.5°	693.7	693.7	701.4	705.3	709.3	717.0	717.0	717.0
60°	585.2	589.0	589.0	592.9	596.9	604.6	608.5	604.6
62.5°	476.7	480.5	480.5	484.5	492.2	496.1	492.2	492.2
65°	376.0	379.8	379.8	383.7	391.4	391.4	387.6	391.4
67.5°	275.2	275.2	275.2	275.2	275.2	275.2	275.2	275.2
70°	174.4	170.5	166.7	170.5	170.5	170.5	166.7	174.4
72.5°	85.3	89.2	89.2	89.2	89.2	89.2	89.2	85.3
75°	38.8	38.8	34.9	34.9	34.9	38.8	38.8	34.9
77.5°	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6
80°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	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



Report Generated By 670245859 / DESKTOP-HRDQ47P





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















(END OF REPORT)