

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: P584930

Luminaire Tested: **HC855D010-HM82555827-81WWW**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P584930  
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: HC855D010-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: 4938.2 lumens  
Efficiency: N/A  
Efficacy: 95.0 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

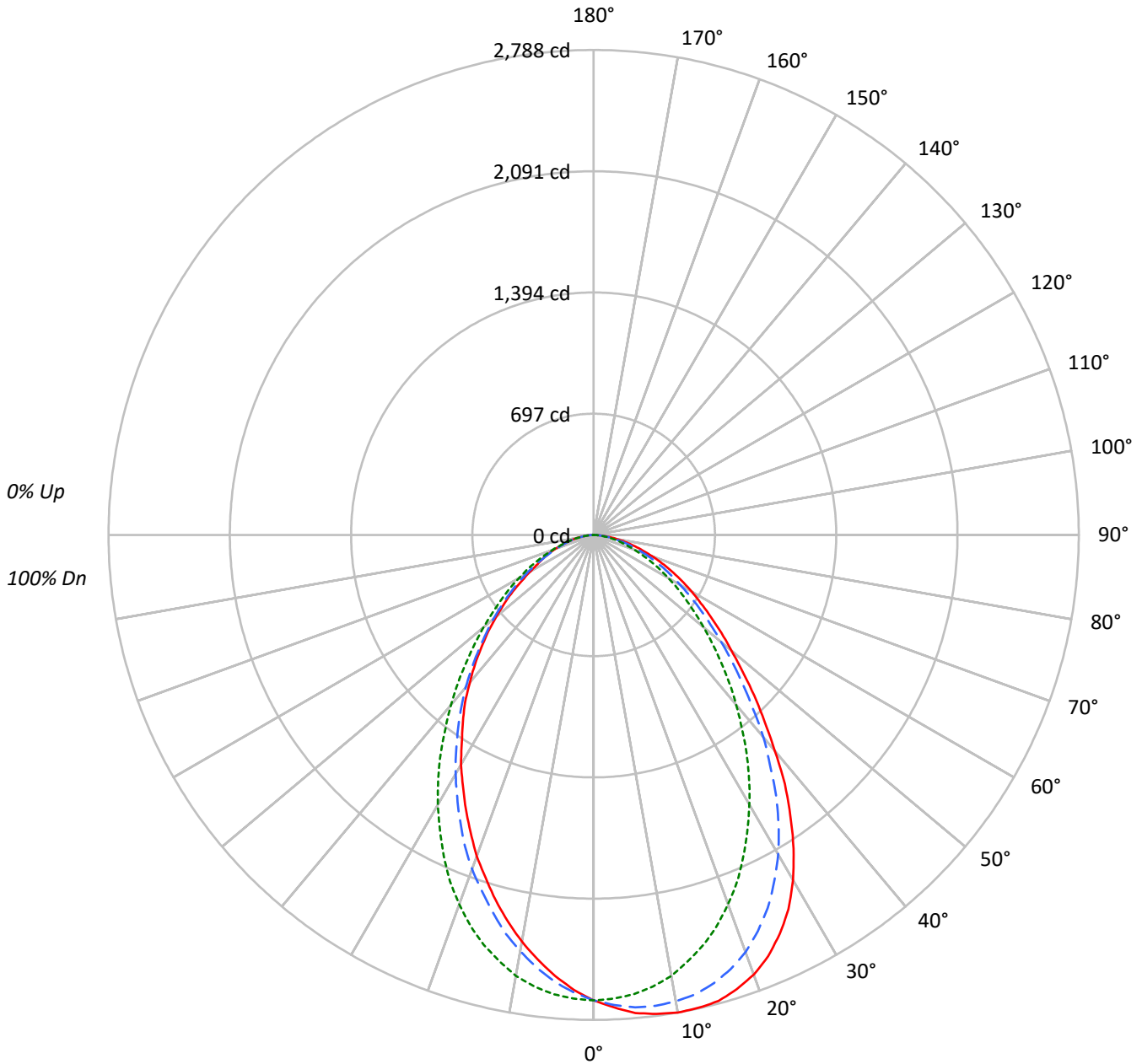
Input Watts (W): 52  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	82509	82509	82509
5°	85409	82041	78778
10°	87307	80600	74347
15°	88551	77888	69429
20°	88280	74104	64456
25°	86098	69297	59168
30°	81571	63732	54297
35°	74212	57678	49336
40°	65179	51296	44573
45°	56840	45127	39737
50°	49465	39539	35006
55°	44111	34741	30450
60°	40081	30454	25970
65°	36030	26494	23575
70°	32079	22585	21278
75°	28118	19027	18169
80°	23849	15467	16106
85°	18009	11569	12843



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	250.6	5.1
10°-20°	690.6	14.0
20°-30°	958.5	19.4
30°-40°	991.0	20.1
40°-50°	829.8	16.8
50°-60°	602.4	12.2
60°-70°	380.2	7.7
70°-80°	188.3	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°	1899.7	38.5
0°-40°	2890.7	58.5
0°-60°	4322.9	87.5
0°-90°	4938.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4938.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2676	2676	2676	2676	2676	
5°	2759	2726	2650	2578	2545	264
15°	2774	2668	2440	2244	2175	781
25°	2530	2367	2037	1815	1739	1160
35°	1971	1826	1532	1358	1311	1228
45°	1303	1209	1035	933	911	1008
55°	820	748	646	592	566	741
65°	494	432	363	320	323	492
75°	236	196	160	152	152	253
85°	51	40	33	36	36	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°	2675.7	2675.7	2675.7	2675.7	2675.7	2675.7	2675.7	2675.7	2675.7	2675.7	2675.7
2.5°	2719.3	2719.3	2722.9	2719.3	2719.3	2719.3	2715.6	2715.6	2712.0	2712.0	2704.7
5°	2759.2	2752.0	2759.2	2752.0	2752.0	2752.0	2748.3	2741.1	2737.4	2730.2	2726.5
7.5°	2777.4	2773.8	2773.8	2770.1	2770.1	2766.5	2762.9	2759.2	2744.7	2741.1	2730.2
10°	2788.3	2784.7	2784.7	2781.0	2773.8	2773.8	2766.5	2762.9	2744.7	2737.4	2722.9
12.5°	2784.7	2784.7	2784.7	2781.0	2770.1	2766.5	2759.2	2748.3	2733.8	2719.3	2704.7
15°	2773.8	2773.8	2766.5	2762.9	2752.0	2744.7	2741.1	2722.9	2708.4	2690.2	2668.5
17.5°	2737.4	2737.4	2733.8	2726.5	2715.6	2708.4	2701.1	2682.9	2668.5	2639.5	2617.7
20°	2690.2	2686.6	2682.9	2672.2	2661.3	2657.6	2646.7	2621.3	2603.1	2581.3	2552.3
22.5°	2621.3	2617.7	2614.0	2606.8	2588.6	2581.3	2574.1	2555.9	2523.2	2501.5	2465.2
25°	2530.5	2530.5	2523.2	2512.3	2494.3	2487.0	2476.1	2457.9	2428.9	2396.2	2367.1
27.5°	2425.2	2421.6	2410.7	2403.4	2388.9	2378.0	2359.8	2338.1	2309.1	2283.6	2247.3
30°	2290.9	2290.9	2283.6	2272.7	2254.6	2247.3	2232.8	2207.3	2178.4	2145.7	2120.3
32.5°	2138.4	2138.4	2127.5	2120.3	2109.4	2091.2	2087.6	2058.5	2033.1	2007.8	1978.7
35°	1971.4	1975.1	1967.8	1953.3	1935.1	1935.1	1927.8	1902.4	1873.3	1848.0	1826.2
37.5°	1804.4	1793.5	1789.9	1782.6	1771.7	1757.2	1749.9	1739.0	1713.6	1695.5	1662.8
40°	1619.2	1622.9	1615.6	1608.3	1604.7	1593.8	1590.2	1572.0	1553.8	1532.2	1517.6
42.5°	1452.2	1452.2	1452.2	1445.0	1437.7	1426.8	1423.2	1412.3	1390.5	1376.0	1354.2
45°	1303.4	1292.5	1292.5	1288.8	1285.2	1277.9	1267.0	1259.8	1245.2	1234.4	1209.0
47.5°	1158.2	1161.8	1158.2	1154.5	1143.6	1140.0	1136.4	1121.8	1107.3	1096.4	1078.2
50°	1031.1	1038.4	1031.1	1031.1	1023.9	1020.2	1013.0	1002.1	991.2	973.0	954.8
52.5°	925.8	925.8	922.1	918.5	907.6	900.3	896.7	893.1	875.0	860.5	845.9
55°	820.5	824.2	824.2	813.3	809.6	802.4	798.7	787.8	780.6	758.8	747.9
57.5°	729.7	726.2	729.7	722.5	715.3	708.0	704.4	697.1	686.2	671.7	657.1
60°	649.9	642.6	642.6	639.0	631.7	628.1	620.8	609.9	599.0	584.5	573.6
62.5°	569.9	566.4	562.8	559.2	551.9	548.3	544.6	533.7	522.8	511.9	501.0
65°	493.8	493.8	490.1	482.9	479.2	475.6	472.0	464.7	450.2	442.9	432.0
67.5°	424.7	421.1	421.1	413.8	406.6	403.1	403.1	395.8	384.9	374.0	366.7
70°	355.8	359.5	355.8	352.2	344.9	344.9	337.7	334.0	319.5	315.9	305.0
72.5°	294.1	294.1	290.4	290.4	283.2	279.5	279.5	272.3	265.0	257.7	250.5
75°	236.0	236.0	236.0	232.4	228.8	221.5	221.5	217.9	210.6	203.3	196.1
77.5°	185.2	181.5	181.5	177.9	174.3	170.6	170.6	167.0	159.7	156.1	148.8
80°	134.3	130.7	130.7	130.7	123.4	127.0	123.4	119.8	116.1	112.5	108.9
82.5°	87.1	90.7	90.7	87.1	83.4	83.4	83.4	79.9	79.9	76.3	72.7
85°	50.9	50.9	50.9	50.9	47.2	47.2	47.2	43.6	43.6	43.6	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



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**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2675.7	2675.7	2675.7	2675.7	2675.7	2675.7	2675.7	2675.7	2675.7	2675.7	2675.7
2.5°	2704.7	2697.5	2693.8	2690.2	2690.2	2686.6	2682.9	2675.7	2675.7	2668.5	2664.9
5°	2719.3	2708.4	2701.1	2693.8	2690.2	2682.9	2675.7	2664.9	2661.3	2650.4	2639.5
7.5°	2722.9	2704.7	2697.5	2682.9	2675.7	2668.5	2654.0	2643.1	2628.6	2617.7	2603.1
10°	2708.4	2693.8	2675.7	2657.6	2654.0	2643.1	2621.3	2606.8	2588.6	2574.1	2552.3
12.5°	2686.6	2664.9	2646.7	2624.9	2614.0	2603.1	2581.3	2559.5	2534.1	2508.8	2487.0
15°	2650.4	2624.9	2599.5	2574.1	2559.5	2548.6	2523.2	2497.9	2472.5	2439.8	2418.0
17.5°	2595.9	2566.8	2541.4	2508.8	2494.3	2483.4	2450.7	2421.6	2388.9	2356.2	2334.5
20°	2526.8	2490.6	2461.6	2425.2	2414.3	2396.2	2363.5	2330.9	2294.5	2258.2	2232.8
22.5°	2436.1	2399.8	2367.1	2330.9	2312.7	2294.5	2261.8	2221.9	2185.7	2156.6	2131.2
25°	2330.9	2298.2	2258.2	2225.5	2203.7	2182.0	2145.7	2113.0	2080.3	2036.7	2011.4
27.5°	2214.6	2174.8	2145.7	2102.1	2080.3	2065.8	2025.8	1982.3	1953.3	1913.3	1884.2
30°	2083.9	2047.6	2015.0	1971.4	1949.6	1935.1	1898.8	1858.9	1829.8	1789.9	1760.8
32.5°	1946.0	1906.0	1866.1	1837.1	1811.7	1797.1	1757.2	1731.7	1695.5	1662.8	1630.1
35°	1797.1	1757.2	1728.1	1688.3	1673.7	1659.2	1626.5	1593.8	1561.1	1532.2	1506.7
37.5°	1637.4	1608.3	1575.6	1546.6	1535.8	1521.3	1481.3	1452.2	1426.8	1397.7	1376.0
40°	1481.3	1455.9	1434.1	1405.0	1386.8	1376.0	1347.0	1321.5	1292.5	1274.3	1252.5
42.5°	1339.7	1310.6	1288.8	1267.0	1248.9	1238.0	1212.7	1194.5	1172.7	1154.5	1129.1
45°	1190.9	1176.3	1150.9	1132.7	1121.8	1107.3	1089.1	1067.3	1049.3	1034.8	1016.6
47.5°	1060.1	1045.7	1027.5	1005.7	998.4	987.5	969.4	954.8	940.3	925.8	907.6
50°	940.3	922.1	907.6	893.1	885.9	875.0	856.8	849.6	838.7	824.2	813.3
52.5°	831.4	816.9	802.4	784.2	780.6	773.3	762.4	747.9	737.0	729.7	722.5
55°	733.3	718.9	708.0	693.5	689.8	682.6	668.0	660.8	653.5	646.2	639.0
57.5°	646.2	631.7	617.2	609.9	602.6	595.4	591.7	580.8	573.6	569.9	562.8
60°	566.4	551.9	541.0	530.1	526.5	522.8	515.6	508.3	501.0	493.8	490.1
62.5°	490.1	475.6	468.3	461.1	453.8	453.8	446.5	439.3	432.0	428.4	421.1
65°	421.1	413.8	403.1	392.2	388.5	388.5	377.6	374.0	370.4	363.1	355.8
67.5°	355.8	348.6	337.7	334.0	330.4	326.8	323.1	315.9	308.6	305.0	297.7
70°	297.7	290.4	283.2	279.5	275.9	272.3	265.0	261.4	254.1	250.5	246.8
72.5°	239.7	236.0	228.8	225.1	221.5	217.9	214.2	210.6	203.3	199.7	196.1
75°	192.4	188.8	181.5	177.9	174.3	174.3	170.6	163.4	159.7	159.7	156.1
77.5°	145.2	141.6	137.9	134.3	130.7	130.7	127.0	123.4	119.8	119.8	116.1
80°	105.2	101.6	98.0	98.0	98.0	94.3	90.7	90.7	87.1	87.1	83.4
82.5°	69.0	69.0	65.4	65.4	65.4	61.8	61.8	58.1	58.1	58.1	58.1
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



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**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2675.7	2675.7	2675.7	2675.7	2675.7	2675.7	2675.7	2675.7	2675.7	2675.7	2675.7
2.5°	2661.3	2657.6	2650.4	2650.4	2643.1	2643.1	2639.5	2635.8	2632.2	2628.6	2624.9
5°	2635.8	2621.3	2614.0	2610.4	2603.1	2599.5	2588.6	2581.3	2577.7	2570.4	2563.2
7.5°	2588.6	2574.1	2559.5	2555.9	2552.3	2537.7	2526.8	2515.9	2508.8	2501.5	2494.3
10°	2534.1	2519.6	2501.5	2494.3	2487.0	2468.8	2454.3	2443.4	2428.9	2414.3	2410.7
12.5°	2468.8	2447.0	2425.2	2418.0	2407.1	2388.9	2374.4	2356.2	2345.4	2327.2	2323.6
15°	2392.5	2367.1	2349.0	2330.9	2323.6	2305.4	2280.0	2265.5	2243.7	2236.4	2218.2
17.5°	2301.8	2276.4	2250.9	2243.7	2232.8	2207.3	2182.0	2163.9	2142.1	2131.2	2120.3
20°	2207.3	2174.8	2149.3	2142.1	2127.5	2105.7	2080.3	2062.1	2044.0	2022.3	2011.4
22.5°	2098.5	2062.1	2040.3	2022.3	2018.7	1993.2	1964.2	1949.6	1935.1	1916.9	1902.4
25°	1978.7	1946.0	1920.6	1906.0	1898.8	1877.0	1855.3	1837.1	1815.3	1804.4	1786.2
27.5°	1855.3	1833.5	1800.8	1786.2	1775.3	1757.2	1731.7	1720.8	1699.2	1684.6	1673.7
30°	1735.4	1702.7	1684.6	1666.5	1655.6	1637.4	1615.6	1604.7	1586.5	1572.0	1561.1
32.5°	1604.7	1582.9	1557.5	1550.2	1535.8	1517.6	1503.1	1484.9	1470.4	1455.9	1452.2
35°	1484.9	1455.9	1430.4	1423.2	1412.3	1394.1	1386.8	1376.0	1357.9	1354.2	1339.7
37.5°	1354.2	1339.7	1310.6	1299.7	1296.1	1281.6	1267.0	1259.8	1248.9	1238.0	1234.4
40°	1230.7	1212.7	1198.1	1187.2	1180.0	1169.1	1154.5	1150.9	1143.6	1129.1	1125.5
42.5°	1114.6	1096.4	1081.9	1078.2	1067.3	1056.4	1049.3	1038.4	1034.8	1031.1	1023.9
45°	1002.1	991.2	976.6	973.0	969.4	954.8	947.6	940.3	933.0	929.4	922.1
47.5°	900.3	889.5	878.6	875.0	867.7	864.1	853.2	849.6	838.7	835.0	831.4
50°	802.4	795.1	787.8	784.2	776.9	773.3	766.0	758.8	751.5	747.9	744.2
52.5°	715.3	708.0	700.7	697.1	693.5	686.2	678.9	671.7	668.0	664.4	660.8
55°	631.7	624.4	620.8	617.2	613.5	609.9	599.0	595.4	591.7	588.1	580.8
57.5°	555.5	548.3	541.0	541.0	537.4	533.7	526.5	519.2	519.2	511.9	504.7
60°	486.5	479.2	472.0	468.3	464.7	457.4	453.8	450.2	446.5	442.9	435.6
62.5°	413.8	410.2	403.1	403.1	395.8	392.2	388.5	384.9	381.3	374.0	370.4
65°	352.2	348.6	341.3	337.7	337.7	334.0	326.8	323.1	319.5	319.5	315.9
67.5°	294.1	290.4	283.2	279.5	279.5	275.9	272.3	272.3	268.6	265.0	268.6
70°	243.2	236.0	236.0	232.4	232.4	228.8	225.1	225.1	225.1	228.8	228.8
72.5°	192.4	188.8	185.2	185.2	185.2	185.2	181.5	181.5	185.2	188.8	188.8
75°	152.5	148.8	148.8	148.8	145.2	145.2	148.8	148.8	152.5	152.5	152.5
77.5°	112.5	112.5	112.5	112.5	112.5	112.5	116.1	116.1	119.8	119.8	119.8
80°	83.4	83.4	83.4	83.4	83.4	87.1	87.1	87.1	87.1	87.1	90.7
82.5°	58.1	58.1	58.1	58.1	58.1	58.1	58.1	61.8	61.8	61.8	61.8
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: P584930

CATALOG NUMBER: HC855D010-HM82555827-81WWW

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2675.7	2675.7	2675.7	2675.7	2675.7	2675.7	2675.7	2675.7
2.5°	2621.3	2621.3	2621.3	2624.9	2617.7	2617.7	2617.7	2617.7
5°	2559.5	2555.9	2552.3	2555.9	2548.6	2548.6	2545.0	2545.0
7.5°	2483.4	2479.7	2476.1	2476.1	2468.8	2468.8	2465.2	2461.6
10°	2399.8	2392.5	2396.2	2388.9	2385.3	2381.6	2378.0	2374.4
12.5°	2309.1	2301.8	2298.2	2290.9	2283.6	2280.0	2283.6	2276.4
15°	2211.0	2200.1	2196.4	2189.2	2182.0	2178.4	2178.4	2174.8
17.5°	2102.1	2094.8	2091.2	2083.9	2080.3	2073.0	2069.4	2065.8
20°	2000.5	1982.3	1986.0	1978.7	1975.1	1960.5	1960.5	1964.2
22.5°	1887.9	1877.0	1869.7	1862.5	1858.9	1851.6	1851.6	1848.0
25°	1775.3	1764.4	1760.8	1753.5	1749.9	1742.6	1739.0	1739.0
27.5°	1666.5	1651.9	1651.9	1644.7	1637.4	1633.8	1630.1	1626.5
30°	1550.2	1539.4	1535.8	1535.8	1532.2	1532.2	1521.3	1524.9
32.5°	1441.3	1434.1	1430.4	1423.2	1423.2	1419.5	1419.5	1408.6
35°	1332.4	1321.5	1325.2	1317.9	1314.3	1310.6	1314.3	1310.6
37.5°	1227.1	1219.8	1219.8	1212.7	1212.7	1209.0	1205.4	1212.7
40°	1121.8	1118.2	1114.6	1110.9	1114.6	1110.9	1103.7	1107.3
42.5°	1016.6	1016.6	1013.0	1013.0	1009.3	1009.3	1009.3	1009.3
45°	922.1	918.5	918.5	914.9	914.9	914.9	914.9	911.2
47.5°	827.8	824.2	824.2	824.2	820.5	820.5	816.9	820.5
50°	737.0	737.0	733.3	733.3	737.0	733.3	729.7	729.7
52.5°	653.5	653.5	649.9	649.9	646.2	642.6	646.2	646.2
55°	577.2	573.6	569.9	569.9	566.4	562.8	562.8	566.4
57.5°	504.7	501.0	497.4	497.4	490.1	486.5	486.5	486.5
60°	435.6	428.4	428.4	424.7	424.7	421.1	421.1	421.1
62.5°	370.4	366.7	366.7	366.7	366.7	363.1	363.1	363.1
65°	315.9	315.9	315.9	319.5	319.5	323.1	323.1	323.1
67.5°	272.3	275.9	275.9	275.9	279.5	279.5	279.5	275.9
70°	232.4	232.4	232.4	236.0	236.0	236.0	236.0	236.0
72.5°	192.4	192.4	192.4	192.4	192.4	192.4	192.4	192.4
75°	152.5	156.1	156.1	156.1	152.5	156.1	156.1	152.5
77.5°	119.8	119.8	119.8	119.8	119.8	119.8	119.8	119.8
80°	90.7	90.7	90.7	90.7	90.7	90.7	90.7	90.7
82.5°	61.8	61.8	61.8	61.8	61.8	61.8	61.8	61.8
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



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















(END OF REPORT)