

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: P584929

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

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P584929  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-17)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 10/21/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC855D010-HM82555827-81WWBB  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4524.2 lumens  
Efficiency: N/A  
Efficacy: 87.0 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 1.07 / 1.16  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

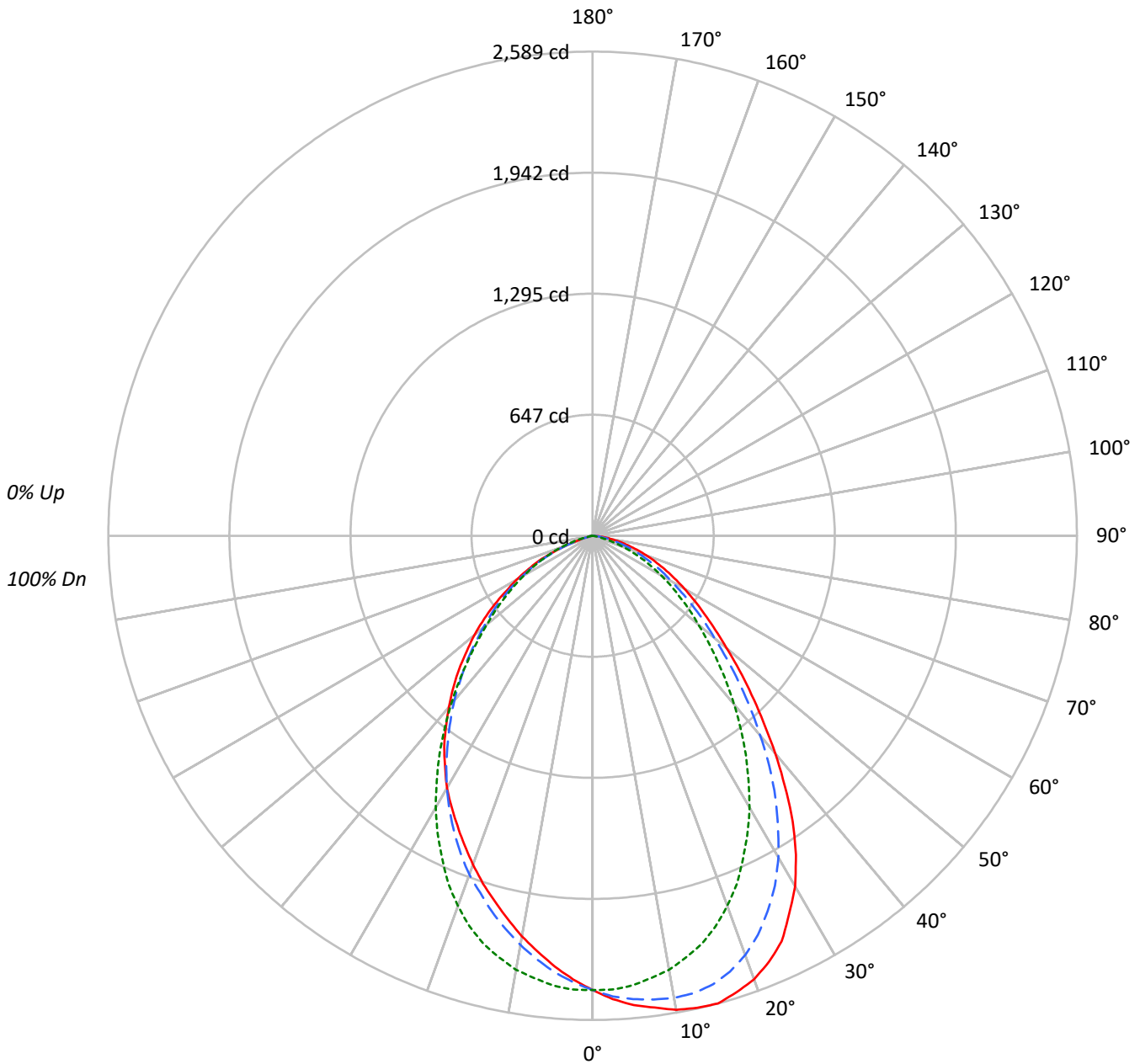
Input Watts (W): 52  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P584929

CATALOG NUMBER: HC855D010-HM82555827-81WWBB

### Luminous Intensity Polar Plot





TEST NUMBER: P584929

CATALOG NUMBER: HC855D010-HM82555827-81WWBB

**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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88																			
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79	77																			
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	67																			
4	88	78	70	64	86	76	69	64	74	68	63	72	66	62	70	65	61	59																			
5	82	70	63	57	80	69	62	56	67	61	56	65	60	55	64	59	55	53																			
6	76	64	56	51	74	63	56	50	62	55	50	60	54	50	58	53	49	47																			
7	71	59	51	45	69	58	51	45	57	50	45	55	49	45	54	49	44	43																			
8	66	54	46	41	65	53	46	41	52	46	41	51	45	41	50	44	40	39																			
9	62	50	43	37	61	50	42	37	48	42	37	47	41	37	46	41	37	35																			
10	59	47	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32																			

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

	0°	90°	180°
0°	74898	74898	74898
5°	77995	74732	71588
10°	80600	73780	68097
15°	82639	72091	64560
20°	82803	69099	61358
25°	81403	64727	58185
30°	77049	59727	55457
35°	70252	53711	52073
40°	61089	47351	48083
45°	52409	41006	44015
50°	44759	35356	39539
55°	39235	30450	34354
60°	34931	25970	28881
65°	30988	21189	23050
70°	27499	15715	13091
75°	22923	8221	3896
80°	18042	2575	639
85°	12843	1274	0



TEST NUMBER: P584929

CATALOG NUMBER: HC855D010-HM82555827-81WWBB

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	228.9	5.1
10°-20°	641.5	14.2
20°-30°	907.9	20.1
30°-40°	949.9	21.0
40°-50°	792.3	17.5
50°-60°	561.8	12.4
60°-70°	323.6	7.2
70°-80°	104.1	2.3
80°-90°	14.3	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°	1778.3	39.3
0°-40°	2728.1	60.3
0°-60°	4082.2	90.2
0°-90°	4524.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4524.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2429	2429	2429	2429	2429	
5°	2520	2487	2414	2342	2313	242
15°	2589	2483	2258	2080	2022	728
25°	2392	2215	1902	1750	1710	1092
35°	1866	1703	1427	1351	1383	1157
45°	1202	1104	940	951	1009	931
55°	730	654	566	595	639	659
65°	425	356	290	290	316	425
75°	192	142	69	33	33	209
85°	36	18	4	0	0	45
90°	0	0	0	0	0	



TEST NUMBER: P584929

CATALOG NUMBER: HC855D010-HM82555827-81WWBB

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2428.9	2428.9	2428.9	2428.9	2428.9	2428.9	2428.9	2428.9	2428.9	2428.9	2428.9
2.5°	2479.7	2476.1	2472.5	2476.1	2472.5	2476.1	2472.5	2472.5	2468.8	2465.2	2465.2
5°	2519.7	2516.0	2516.0	2516.0	2512.4	2508.8	2508.8	2505.1	2497.9	2494.3	2487.0
7.5°	2545.0	2548.6	2548.6	2548.6	2541.4	2541.4	2534.2	2526.9	2519.7	2512.4	2501.5
10°	2574.1	2574.1	2570.4	2566.8	2559.5	2555.9	2552.3	2545.0	2534.2	2519.7	2508.8
12.5°	2585.0	2585.0	2581.3	2574.1	2570.4	2566.8	2563.2	2552.3	2537.8	2519.7	2505.1
15°	2588.6	2581.3	2577.7	2574.1	2566.8	2555.9	2555.9	2541.4	2523.3	2501.5	2483.4
17.5°	2559.5	2563.2	2555.9	2548.6	2537.8	2530.6	2519.7	2508.8	2487.0	2461.6	2443.4
20°	2523.3	2519.7	2516.0	2505.1	2490.6	2487.0	2476.1	2457.9	2439.8	2410.7	2385.3
22.5°	2465.2	2461.6	2454.3	2447.0	2432.5	2425.2	2414.3	2392.5	2367.2	2338.1	2309.1
25°	2392.5	2385.3	2374.5	2359.9	2349.0	2341.8	2327.2	2305.4	2276.4	2243.7	2214.6
27.5°	2276.4	2287.3	2280.0	2258.2	2247.3	2232.8	2229.1	2200.2	2174.8	2142.1	2109.4
30°	2163.9	2163.9	2153.0	2142.1	2123.9	2113.0	2098.5	2076.7	2051.2	2011.4	1986.0
32.5°	2022.3	2018.7	2004.1	2000.5	1986.0	1964.2	1960.5	1931.5	1906.0	1877.1	1844.4
35°	1866.2	1858.9	1844.4	1833.5	1826.2	1815.3	1804.4	1779.0	1753.5	1724.5	1702.8
37.5°	1688.3	1688.3	1684.6	1666.5	1659.2	1651.9	1641.0	1615.6	1601.1	1572.0	1550.3
40°	1517.6	1514.0	1503.1	1499.5	1492.2	1481.3	1474.0	1459.5	1437.7	1415.9	1394.1
42.5°	1350.6	1354.2	1339.7	1343.3	1328.8	1321.5	1317.9	1296.1	1285.2	1263.4	1245.2
45°	1201.8	1198.1	1190.9	1187.2	1180.0	1172.7	1165.4	1154.5	1136.4	1114.6	1103.7
47.5°	1063.8	1052.9	1052.9	1049.3	1045.7	1031.1	1027.5	1016.6	1005.7	983.9	969.4
50°	933.0	933.0	933.0	929.4	918.5	914.9	907.6	896.8	885.9	871.4	849.6
52.5°	827.8	827.8	827.8	824.2	809.6	806.0	802.4	787.8	773.3	762.4	747.9
55°	729.8	733.4	729.8	722.5	711.6	711.6	700.7	693.5	678.9	668.0	653.5
57.5°	646.2	646.2	639.0	635.3	628.1	624.4	617.2	609.9	591.7	580.8	562.8
60°	566.4	562.8	562.8	555.5	548.3	541.0	537.4	526.5	519.2	501.0	486.5
62.5°	493.8	493.8	486.5	486.5	472.0	472.0	468.3	457.4	446.5	428.4	421.1
65°	424.7	424.7	421.1	417.5	406.7	403.1	399.4	388.5	377.6	366.7	355.8
67.5°	363.1	363.1	355.8	352.2	344.9	341.3	334.0	326.8	315.9	305.0	294.1
70°	305.0	301.3	297.7	294.1	286.8	283.2	275.9	268.6	257.7	250.5	239.7
72.5°	246.8	246.8	243.3	236.0	232.4	228.8	225.1	217.9	207.0	196.1	188.8
75°	192.4	192.4	192.4	185.2	177.9	174.3	174.3	167.0	159.7	148.8	141.6
77.5°	148.8	145.2	141.6	141.6	134.3	130.7	127.0	123.4	112.5	108.9	101.6
80°	101.6	105.2	101.6	98.0	94.3	90.7	90.7	83.4	79.9	72.7	65.4
82.5°	69.0	65.4	65.4	61.8	61.8	58.1	58.1	50.9	47.2	43.6	40.0
85°	36.3	36.3	32.7	32.7	32.7	29.1	29.1	25.4	25.4	21.8	18.2
87.5°	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	7.3	7.3	7.3
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: P584929

CATALOG NUMBER: HC855D010-HM82555827-81WWBB

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2428.9	2428.9	2428.9	2428.9	2428.9	2428.9	2428.9	2428.9	2428.9	2428.9	2428.9
2.5°	2461.6	2454.3	2450.7	2450.7	2447.0	2443.4	2439.8	2436.1	2428.9	2428.9	2421.6
5°	2479.7	2472.5	2468.8	2457.9	2450.7	2450.7	2436.1	2432.5	2421.6	2414.3	2407.1
7.5°	2494.3	2479.7	2468.8	2457.9	2450.7	2443.4	2428.9	2414.3	2399.8	2385.3	2378.0
10°	2494.3	2479.7	2461.6	2443.4	2436.1	2428.9	2410.7	2388.9	2370.8	2356.3	2338.1
12.5°	2487.0	2465.2	2443.4	2428.9	2414.3	2403.4	2381.6	2359.9	2338.1	2309.1	2294.5
15°	2465.2	2436.1	2414.3	2388.9	2378.0	2359.9	2341.8	2309.1	2283.6	2258.2	2240.0
17.5°	2421.6	2385.3	2359.9	2334.5	2316.3	2305.4	2276.4	2247.3	2218.2	2189.3	2167.5
20°	2356.3	2323.6	2294.5	2261.8	2247.3	2232.8	2196.6	2167.5	2138.4	2105.7	2083.9
22.5°	2276.4	2243.7	2203.8	2178.4	2156.6	2138.4	2105.7	2073.0	2044.1	2015.0	1986.0
25°	2178.4	2145.7	2109.4	2069.4	2054.9	2036.8	2000.5	1967.8	1935.1	1902.4	1877.1
27.5°	2073.0	2029.6	2000.5	1956.9	1942.4	1924.2	1884.2	1848.0	1818.9	1793.5	1764.4
30°	1946.0	1913.3	1873.4	1833.5	1818.9	1800.8	1768.1	1735.4	1706.4	1677.4	1648.3
32.5°	1808.0	1775.3	1735.4	1706.4	1684.6	1670.1	1637.4	1608.3	1579.3	1550.3	1524.9
35°	1662.8	1626.5	1597.4	1568.4	1550.3	1532.2	1499.5	1474.0	1452.2	1426.8	1401.4
37.5°	1514.0	1488.6	1459.5	1426.8	1408.6	1394.1	1368.8	1339.7	1321.5	1299.7	1281.6
40°	1368.8	1339.7	1314.3	1285.2	1270.7	1259.8	1234.4	1212.7	1194.5	1176.3	1165.4
42.5°	1219.9	1194.5	1169.1	1150.9	1140.0	1129.1	1110.9	1085.5	1074.6	1056.6	1045.7
45°	1081.9	1060.2	1042.0	1016.6	1009.3	1002.1	980.3	962.1	951.2	940.3	933.0
47.5°	951.2	936.7	914.9	900.4	889.5	882.3	867.7	853.2	842.3	835.0	827.8
50°	838.7	820.5	806.0	791.5	784.2	773.3	758.8	751.5	744.2	737.0	737.0
52.5°	733.4	715.3	700.7	689.8	682.6	675.3	664.4	660.8	653.5	653.5	649.9
55°	635.3	624.4	609.9	595.4	591.7	588.1	580.8	573.6	570.1	566.4	570.1
57.5°	551.9	541.0	526.5	515.6	511.9	508.3	504.7	497.4	493.8	493.8	493.8
60°	475.6	464.7	453.8	442.9	442.9	435.6	432.0	428.4	424.7	421.1	421.1
62.5°	406.7	395.8	384.9	377.6	374.0	370.4	363.1	359.5	355.8	355.8	352.2
65°	344.9	330.4	326.8	315.9	312.2	308.6	305.0	297.7	294.1	290.4	286.8
67.5°	283.2	275.9	265.0	257.7	254.1	250.5	246.8	239.7	236.0	232.4	225.1
70°	228.8	221.5	214.2	207.0	203.3	199.7	192.4	185.2	181.5	174.3	163.4
72.5°	177.9	170.6	163.4	156.1	152.5	148.8	141.6	134.3	127.0	119.8	112.5
75°	134.3	127.0	116.1	108.9	105.2	105.2	94.3	87.1	79.9	69.0	61.8
77.5°	94.3	83.4	79.9	72.7	69.0	61.8	54.5	47.2	40.0	36.3	29.1
80°	61.8	54.5	47.2	43.6	40.0	36.3	32.7	25.4	18.2	14.5	10.9
82.5°	36.3	32.7	29.1	25.4	21.8	18.2	14.5	14.5	10.9	7.3	3.6
85°	18.2	14.5	10.9	10.9	7.3	7.3	7.3	3.6	3.6	3.6	3.6
87.5°	7.3	3.6	3.6	3.6	3.6	3.6	3.6	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: P584929

CATALOG NUMBER: HC855D010-HM82555827-81WWBB

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2428.9	2428.9	2428.9	2428.9	2428.9	2428.9	2428.9	2428.9	2428.9	2428.9	2428.9
2.5°	2418.0	2414.3	2410.7	2407.1	2407.1	2399.8	2399.8	2396.2	2388.9	2385.3	2385.3
5°	2396.2	2385.3	2378.0	2374.5	2370.8	2359.9	2356.3	2349.0	2341.8	2334.5	2330.9
7.5°	2363.6	2345.4	2338.1	2334.5	2323.6	2312.7	2305.4	2294.5	2283.6	2272.7	2269.1
10°	2323.6	2305.4	2287.3	2280.0	2269.1	2261.8	2247.3	2232.8	2221.9	2211.0	2200.2
12.5°	2272.7	2250.9	2232.8	2225.5	2214.6	2200.2	2178.4	2171.1	2153.0	2145.7	2131.2
15°	2214.6	2189.3	2171.1	2160.2	2149.3	2127.5	2113.0	2098.5	2080.3	2073.0	2058.5
17.5°	2142.1	2113.0	2094.8	2083.9	2076.7	2058.5	2036.8	2018.7	2000.5	1993.2	1982.3
20°	2054.9	2036.8	2011.4	2000.5	1993.2	1971.4	1949.6	1942.4	1927.8	1913.3	1902.4
22.5°	1956.9	1938.7	1913.3	1902.4	1898.8	1880.7	1862.5	1851.6	1840.7	1829.8	1818.9
25°	1855.3	1833.5	1811.7	1804.4	1797.1	1782.6	1768.1	1760.8	1749.9	1742.6	1735.4
27.5°	1746.3	1724.5	1706.4	1695.5	1688.3	1677.4	1670.1	1662.8	1655.6	1648.3	1644.7
30°	1630.1	1608.3	1593.8	1586.5	1579.3	1575.6	1564.7	1561.1	1557.5	1550.3	1554.0
32.5°	1514.0	1495.8	1481.3	1470.4	1470.4	1463.1	1459.5	1459.5	1455.9	1455.9	1455.9
35°	1386.9	1376.0	1365.1	1361.5	1357.9	1354.2	1350.6	1354.2	1350.6	1354.2	1357.9
37.5°	1270.7	1259.8	1252.5	1248.9	1245.2	1248.9	1245.2	1245.2	1248.9	1256.1	1259.8
40°	1150.9	1143.6	1136.4	1140.0	1136.4	1136.4	1136.4	1147.3	1150.9	1154.5	1158.2
42.5°	1038.4	1031.1	1027.5	1027.5	1031.1	1027.5	1034.8	1038.4	1045.7	1056.6	1063.8
45°	929.4	925.8	925.8	929.4	925.8	933.0	933.0	940.3	951.2	958.5	965.7
47.5°	827.8	827.8	827.8	831.4	831.4	835.0	842.3	845.9	853.2	860.5	867.7
50°	733.4	737.0	740.6	740.6	740.6	747.9	755.1	758.8	762.4	766.0	776.9
52.5°	649.9	653.5	653.5	657.1	660.8	664.4	668.0	675.3	678.9	686.2	689.8
55°	570.1	570.1	577.2	580.8	580.8	580.8	588.1	588.1	595.4	599.0	606.3
57.5°	493.8	497.4	497.4	501.0	501.0	504.7	508.3	511.9	515.6	519.2	522.8
60°	421.1	421.1	421.1	424.7	428.4	432.0	428.4	435.6	435.6	442.9	446.5
62.5°	352.2	355.8	355.8	355.8	355.8	355.8	355.8	359.5	363.1	366.7	370.4
65°	286.8	286.8	286.8	283.2	286.8	283.2	286.8	290.4	290.4	294.1	297.7
67.5°	221.5	221.5	214.2	214.2	217.9	217.9	217.9	217.9	214.2	221.5	221.5
70°	159.7	156.1	152.5	148.8	148.8	145.2	145.2	141.6	141.6	141.6	141.6
72.5°	105.2	98.0	90.7	87.1	83.4	83.4	76.3	72.7	76.3	76.3	76.3
75°	54.5	47.2	43.6	40.0	36.3	36.3	32.7	32.7	32.7	32.7	32.7
77.5°	21.8	18.2	14.5	14.5	10.9	10.9	10.9	10.9	10.9	10.9	10.9
80°	7.3	7.3	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
82.5°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
85°	3.6	0.0	0.0	3.6	0.0	3.6	3.6	3.6	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: P584929

CATALOG NUMBER: HC855D010-HM82555827-81WWBB

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2428.9	2428.9	2428.9	2428.9	2428.9	2428.9	2428.9	2428.9
2.5°	2381.6	2381.6	2378.0	2381.6	2374.5	2378.0	2374.5	2374.5
5°	2327.2	2320.0	2320.0	2320.0	2316.3	2316.3	2312.7	2312.7
7.5°	2261.8	2258.2	2254.6	2250.9	2247.3	2243.7	2243.7	2243.7
10°	2196.6	2189.3	2189.3	2185.7	2178.4	2174.8	2174.8	2174.8
12.5°	2120.3	2116.6	2113.0	2113.0	2098.5	2102.1	2098.5	2098.5
15°	2047.6	2044.1	2044.1	2033.2	2025.9	2025.9	2025.9	2022.3
17.5°	1971.4	1967.8	1964.2	1956.9	1949.6	1949.6	1946.0	1949.6
20°	1891.5	1887.9	1880.7	1880.7	1877.1	1873.4	1866.2	1869.8
22.5°	1811.7	1804.4	1800.8	1800.8	1797.1	1797.1	1789.9	1789.9
25°	1728.1	1724.5	1720.8	1724.5	1717.3	1717.3	1710.1	1710.1
27.5°	1641.0	1637.4	1637.4	1637.4	1633.8	1637.4	1633.8	1633.8
30°	1554.0	1554.0	1550.3	1550.3	1554.0	1550.3	1554.0	1557.5
32.5°	1459.5	1459.5	1463.1	1463.1	1466.8	1466.8	1466.8	1466.8
35°	1361.5	1368.8	1368.8	1372.4	1376.0	1379.7	1379.7	1383.3
37.5°	1270.7	1274.3	1277.9	1281.6	1288.8	1288.8	1288.8	1288.8
40°	1172.7	1176.3	1183.6	1180.0	1194.5	1198.1	1194.5	1194.5
42.5°	1071.0	1078.2	1081.9	1089.1	1092.8	1100.0	1103.7	1103.7
45°	976.6	980.3	987.5	994.8	998.4	1009.3	1009.3	1009.3
47.5°	878.6	885.9	889.5	896.8	900.4	911.2	914.9	911.2
50°	784.2	791.5	798.7	798.7	809.6	813.3	820.5	824.2
52.5°	693.5	697.1	704.4	708.0	715.3	722.5	726.2	729.8
55°	606.3	609.9	617.2	617.2	628.1	631.7	639.0	639.0
57.5°	526.5	530.1	537.4	533.7	541.0	548.3	548.3	544.6
60°	450.2	450.2	450.2	457.4	461.1	464.7	468.3	468.3
62.5°	370.4	377.6	381.3	381.3	384.9	388.5	388.5	384.9
65°	297.7	305.0	308.6	308.6	312.2	312.2	312.2	315.9
67.5°	225.1	225.1	225.1	228.8	225.1	225.1	225.1	225.1
70°	141.6	141.6	141.6	141.6	137.9	141.6	141.6	145.2
72.5°	76.3	76.3	76.3	76.3	76.3	76.3	76.3	76.3
75°	32.7	32.7	32.7	36.3	32.7	32.7	32.7	32.7
77.5°	14.5	10.9	14.5	14.5	10.9	10.9	10.9	10.9
80°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
82.5°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
85°	0.0	3.6	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)