

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: P584946

Luminaire Tested: **HC855D010-HM82555830-81WWBB**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P584946  
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-HM82555830-81WWBB  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4418.0 lumens  
Efficiency: N/A  
Efficacy: 85.0 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

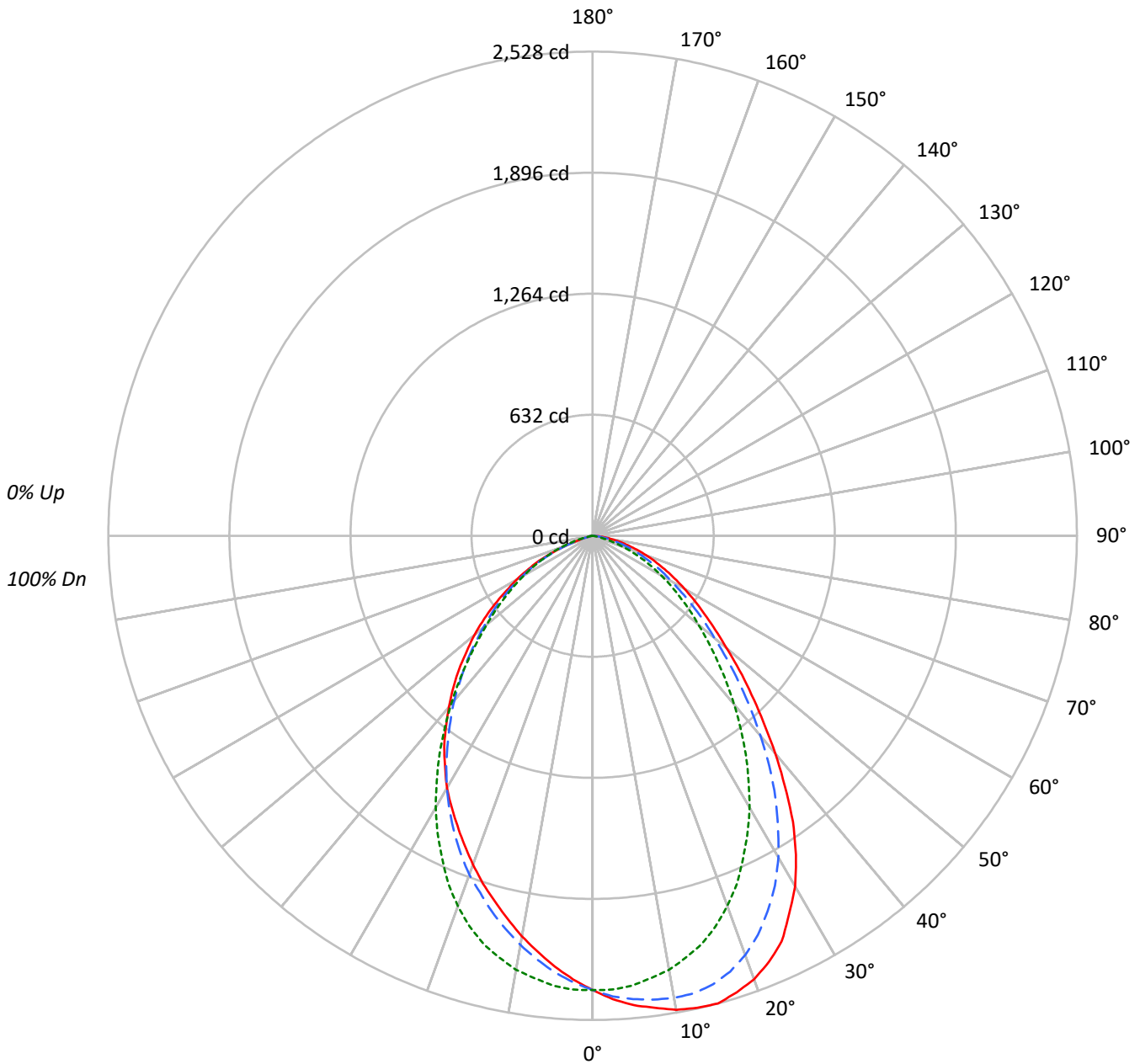
Input Watts (W): 52  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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			
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°	73138	73138	73138
5°	76163	72977	69904
10°	78706	72046	66497
15°	80698	70399	63041
20°	80857	67478	59917
25°	79494	63207	56817
30°	75237	58324	54154
35°	68599	52450	50846
40°	59656	46240	46952
45°	51175	40046	42986
50°	43708	34526	38609
55°	38310	29735	33547
60°	34111	25366	28203
65°	30266	20693	22510
70°	26849	15345	12785
75°	22387	8030	3801
80°	17634	2522	622
85°	12560	1238	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	223.5	5.1
10°-20°	626.4	14.2
20°-30°	886.6	20.1
30°-40°	927.6	21.0
40°-50°	773.7	17.5
50°-60°	548.6	12.4
60°-70°	316.0	7.2
70°-80°	101.7	2.3
80°-90°	14.0	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°	1736.5	39.3
0°-40°	2664.1	60.3
0°-60°	3986.3	90.2
0°-90°	4418.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4418.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2372	2372	2372	2372	2372	
5°	2460	2428	2358	2287	2258	236
15°	2528	2425	2205	2031	1975	711
25°	2336	2163	1858	1709	1670	1066
35°	1822	1663	1393	1319	1351	1130
45°	1174	1078	918	929	986	909
55°	713	638	553	581	624	644
65°	415	348	284	284	308	415
75°	188	138	67	32	32	204
85°	36	18	4	0	0	44
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°	2371.8	2371.8	2371.8	2371.8	2371.8	2371.8	2371.8	2371.8	2371.8	2371.8	2371.8
2.5°	2421.5	2418.0	2414.3	2418.0	2414.3	2418.0	2414.3	2414.3	2410.8	2407.3	2407.3
5°	2460.5	2456.9	2456.9	2456.9	2453.3	2449.8	2449.8	2446.3	2439.2	2435.7	2428.5
7.5°	2485.2	2488.9	2488.9	2488.9	2481.7	2481.7	2474.7	2467.5	2460.5	2453.3	2442.7
10°	2513.6	2513.6	2510.1	2506.6	2499.4	2495.9	2492.4	2485.2	2474.7	2460.5	2449.8
12.5°	2524.3	2524.3	2520.7	2513.6	2510.1	2506.6	2503.0	2492.4	2478.2	2460.5	2446.3
15°	2527.8	2520.7	2517.2	2513.6	2506.6	2495.9	2495.9	2481.7	2464.0	2442.7	2425.0
17.5°	2499.4	2503.0	2495.9	2488.9	2478.2	2471.0	2460.5	2449.8	2428.5	2403.8	2386.0
20°	2464.0	2460.5	2456.9	2446.3	2432.1	2428.5	2418.0	2400.1	2382.4	2354.1	2329.2
22.5°	2407.3	2403.8	2396.6	2389.6	2375.4	2368.3	2357.6	2336.4	2311.5	2283.2	2254.8
25°	2336.4	2329.2	2318.7	2304.5	2293.8	2286.7	2272.5	2251.3	2222.9	2191.1	2162.7
27.5°	2222.9	2233.6	2226.4	2205.2	2194.6	2180.4	2176.9	2148.5	2123.7	2091.8	2059.8
30°	2113.0	2113.0	2102.3	2091.8	2074.0	2063.4	2049.2	2027.9	2003.1	1964.2	1939.3
32.5°	1974.7	1971.2	1957.0	1953.5	1939.3	1918.0	1914.5	1886.1	1861.3	1832.9	1801.0
35°	1822.3	1815.2	1801.0	1790.3	1783.3	1772.6	1762.0	1737.3	1712.4	1684.0	1662.7
37.5°	1648.5	1648.5	1645.0	1627.3	1620.2	1613.1	1602.5	1577.6	1563.4	1535.1	1513.9
40°	1482.0	1478.4	1467.8	1464.2	1457.1	1446.5	1439.5	1425.3	1403.9	1382.7	1361.4
42.5°	1318.9	1322.4	1308.2	1311.8	1297.6	1290.5	1287.0	1265.6	1255.1	1233.8	1216.1
45°	1173.5	1170.0	1162.9	1159.3	1152.2	1145.2	1138.0	1127.5	1109.6	1088.4	1077.8
47.5°	1038.7	1028.2	1028.2	1024.6	1021.0	1006.9	1003.3	992.7	982.0	960.8	946.6
50°	911.1	911.1	911.1	907.6	896.9	893.4	886.4	875.7	865.1	850.9	829.7
52.5°	808.3	808.3	808.3	804.8	790.6	787.1	783.5	769.3	755.1	744.6	730.4
55°	712.6	716.2	712.6	705.5	694.9	694.9	684.2	677.2	663.0	652.3	638.2
57.5°	631.1	631.1	624.0	620.5	613.3	609.8	602.8	595.6	577.9	567.2	549.6
60°	553.1	549.6	549.6	542.4	535.4	528.2	524.7	514.0	507.0	489.3	475.1
62.5°	482.2	482.2	475.1	475.1	460.9	460.9	457.3	446.8	436.1	418.4	411.3
65°	414.8	414.8	411.3	407.7	397.1	393.6	390.0	379.4	368.7	358.0	347.5
67.5°	354.5	354.5	347.5	343.9	336.8	333.3	326.2	319.1	308.5	297.8	287.1
70°	297.8	294.3	290.8	287.1	280.1	276.6	269.4	262.4	251.7	244.6	234.0
72.5°	241.1	241.1	237.6	230.4	226.9	223.4	219.9	212.7	202.1	191.5	184.4
75°	187.9	187.9	187.9	180.8	173.7	170.2	170.2	163.1	156.0	145.3	138.3
77.5°	145.3	141.8	138.3	138.3	131.1	127.6	124.1	120.6	109.9	106.4	99.3
80°	99.3	102.8	99.3	95.8	92.2	88.6	88.6	81.6	78.1	70.9	63.9
82.5°	67.4	63.9	63.9	60.2	60.2	56.7	56.7	49.7	46.1	42.5	39.0
85°	35.5	35.5	31.9	31.9	31.9	28.4	28.4	24.8	24.8	21.3	17.7
87.5°	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	7.1	7.1	7.1
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°	2371.8	2371.8	2371.8	2371.8	2371.8	2371.8	2371.8	2371.8	2371.8	2371.8	2371.8
2.5°	2403.8	2396.6	2393.1	2393.1	2389.6	2386.0	2382.4	2378.9	2371.8	2371.8	2364.7
5°	2421.5	2414.3	2410.8	2400.1	2393.1	2393.1	2378.9	2375.4	2364.7	2357.6	2350.6
7.5°	2435.7	2421.5	2410.8	2400.1	2393.1	2386.0	2371.8	2357.6	2343.4	2329.2	2322.2
10°	2435.7	2421.5	2403.8	2386.0	2378.9	2371.8	2354.1	2332.9	2315.1	2300.9	2283.2
12.5°	2428.5	2407.3	2386.0	2371.8	2357.6	2347.0	2325.7	2304.5	2283.2	2254.8	2240.6
15°	2407.3	2378.9	2357.6	2332.9	2322.2	2304.5	2286.7	2254.8	2230.0	2205.2	2187.4
17.5°	2364.7	2329.2	2304.5	2279.7	2262.0	2251.3	2222.9	2194.6	2166.2	2137.8	2116.5
20°	2300.9	2269.0	2240.6	2208.8	2194.6	2180.4	2144.9	2116.5	2088.2	2056.3	2035.1
22.5°	2222.9	2191.1	2152.0	2127.2	2106.0	2088.2	2056.3	2024.4	1996.0	1967.7	1939.3
25°	2127.2	2095.3	2059.8	2020.9	2006.7	1988.9	1953.5	1921.6	1889.6	1857.7	1832.9
27.5°	2024.4	1981.9	1953.5	1910.9	1896.8	1879.1	1840.0	1804.5	1776.2	1751.4	1723.1
30°	1900.3	1868.4	1829.4	1790.3	1776.2	1758.5	1726.6	1694.7	1666.3	1638.0	1609.6
32.5°	1765.6	1733.6	1694.7	1666.3	1645.0	1630.8	1599.0	1570.6	1542.2	1513.9	1489.0
35°	1623.8	1588.3	1559.9	1531.6	1513.9	1496.2	1464.2	1439.5	1418.1	1393.3	1368.5
37.5°	1478.4	1453.6	1425.3	1393.3	1375.6	1361.4	1336.5	1308.2	1290.5	1269.3	1251.5
40°	1336.5	1308.2	1283.5	1255.1	1240.9	1230.2	1205.4	1184.2	1166.4	1148.7	1138.0
42.5°	1191.2	1166.4	1141.6	1123.8	1113.3	1102.6	1084.9	1060.1	1049.4	1031.7	1021.0
45°	1056.6	1035.2	1017.5	992.7	985.7	978.5	957.3	939.5	928.9	918.3	911.1
47.5°	928.9	914.7	893.4	879.2	868.6	861.5	847.4	833.2	822.5	815.5	808.3
50°	819.0	801.3	787.1	772.9	765.8	755.1	740.9	733.9	726.8	719.7	719.7
52.5°	716.2	698.4	684.2	673.7	666.5	659.5	648.8	645.3	638.2	638.2	634.6
55°	620.5	609.8	595.6	581.4	577.9	574.4	567.2	560.2	556.6	553.1	556.6
57.5°	538.9	528.2	514.0	503.5	499.9	496.3	492.8	485.7	482.2	482.2	482.2
60°	464.5	453.8	443.1	432.6	432.6	425.4	421.9	418.4	414.8	411.3	411.3
62.5°	397.1	386.4	375.9	368.7	365.2	361.7	354.5	351.0	347.5	347.5	343.9
65°	336.8	322.7	319.1	308.5	305.0	301.3	297.8	290.8	287.1	283.6	280.1
67.5°	276.6	269.4	258.8	251.7	248.2	244.6	241.1	234.0	230.4	226.9	219.9
70°	223.4	216.2	209.2	202.1	198.5	195.0	187.9	180.8	177.3	170.2	159.5
72.5°	173.7	166.7	159.5	152.5	149.0	145.3	138.3	131.1	124.1	117.0	109.9
75°	131.1	124.1	113.4	106.4	102.8	102.8	92.2	85.1	78.1	67.4	60.2
77.5°	92.2	81.6	78.1	70.9	67.4	60.2	53.2	46.1	39.0	35.5	28.4
80°	60.2	53.2	46.1	42.5	39.0	35.5	31.9	24.8	17.7	14.2	10.7
82.5°	35.5	31.9	28.4	24.8	21.3	17.7	14.2	14.2	10.7	7.1	3.5
85°	17.7	14.2	10.7	10.7	7.1	7.1	7.1	3.5	3.5	3.5	3.5
87.5°	7.1	3.5	3.5	3.5	3.5	3.5	3.5	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°	2371.8	2371.8	2371.8	2371.8	2371.8	2371.8	2371.8	2371.8	2371.8	2371.8	2371.8
2.5°	2361.2	2357.6	2354.1	2350.6	2350.6	2343.4	2343.4	2339.9	2332.9	2329.2	2329.2
5°	2339.9	2329.2	2322.2	2318.7	2315.1	2304.5	2300.9	2293.8	2286.7	2279.7	2276.1
7.5°	2308.0	2290.3	2283.2	2279.7	2269.0	2258.3	2251.3	2240.6	2230.0	2219.4	2215.8
10°	2269.0	2251.3	2233.6	2226.4	2215.8	2208.8	2194.6	2180.4	2169.7	2159.1	2148.5
12.5°	2219.4	2198.1	2180.4	2173.2	2162.7	2148.5	2127.2	2120.1	2102.3	2095.3	2081.1
15°	2162.7	2137.8	2120.1	2109.5	2098.8	2077.6	2063.4	2049.2	2031.4	2024.4	2010.2
17.5°	2091.8	2063.4	2045.6	2035.1	2027.9	2010.2	1988.9	1971.2	1953.5	1946.3	1935.8
20°	2006.7	1988.9	1964.2	1953.5	1946.3	1925.1	1903.8	1896.8	1882.6	1868.4	1857.7
22.5°	1910.9	1893.2	1868.4	1857.7	1854.2	1836.5	1818.7	1808.2	1797.5	1786.8	1776.2
25°	1811.7	1790.3	1769.1	1762.0	1755.0	1740.8	1726.6	1719.4	1708.9	1701.7	1694.7
27.5°	1705.3	1684.0	1666.3	1655.7	1648.5	1638.0	1630.8	1623.8	1616.7	1609.6	1606.0
30°	1591.8	1570.6	1556.4	1549.3	1542.2	1538.7	1528.1	1524.5	1520.9	1513.9	1517.4
32.5°	1478.4	1460.7	1446.5	1435.8	1435.8	1428.8	1425.3	1425.3	1421.6	1421.6	1421.6
35°	1354.4	1343.7	1333.0	1329.5	1326.0	1322.4	1318.9	1322.4	1318.9	1322.4	1326.0
37.5°	1240.9	1230.2	1223.1	1219.6	1216.1	1219.6	1216.1	1216.1	1219.6	1226.7	1230.2
40°	1123.8	1116.8	1109.6	1113.3	1109.6	1109.6	1109.6	1120.3	1123.8	1127.5	1131.0
42.5°	1014.0	1006.9	1003.3	1003.3	1006.9	1003.3	1010.4	1014.0	1021.0	1031.7	1038.7
45°	907.6	904.1	904.1	907.6	904.1	911.1	911.1	918.3	928.9	936.0	943.1
47.5°	808.3	808.3	808.3	811.8	811.8	815.5	822.5	826.0	833.2	840.2	847.4
50°	716.2	719.7	723.2	723.2	723.2	730.4	737.4	740.9	744.6	748.1	758.8
52.5°	634.6	638.2	638.2	641.7	645.3	648.8	652.3	659.5	663.0	670.0	673.7
55°	556.6	556.6	563.7	567.2	567.2	567.2	574.4	574.4	581.4	584.9	592.1
57.5°	482.2	485.7	485.7	489.3	489.3	492.8	496.3	499.9	503.5	507.0	510.5
60°	411.3	411.3	411.3	414.8	418.4	421.9	418.4	425.4	425.4	432.6	436.1
62.5°	343.9	347.5	347.5	347.5	347.5	347.5	347.5	351.0	354.5	358.0	361.7
65°	280.1	280.1	280.1	276.6	280.1	276.6	280.1	283.6	283.6	287.1	290.8
67.5°	216.2	216.2	209.2	209.2	212.7	212.7	212.7	212.7	209.2	216.2	216.2
70°	156.0	152.5	149.0	145.3	145.3	141.8	141.8	138.3	138.3	138.3	138.3
72.5°	102.8	95.8	88.6	85.1	81.6	81.6	74.4	70.9	74.4	74.4	74.4
75°	53.2	46.1	42.5	39.0	35.5	35.5	31.9	31.9	31.9	31.9	31.9
77.5°	21.3	17.7	14.2	14.2	10.7	10.7	10.7	10.7	10.7	10.7	10.7
80°	7.1	7.1	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
82.5°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
85°	3.5	0.0	0.0	3.5	0.0	3.5	3.5	3.5	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: P584946

CATALOG NUMBER: HC855D010-HM82555830-81WWBB

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2371.8	2371.8	2371.8	2371.8	2371.8	2371.8	2371.8	2371.8
2.5°	2325.7	2325.7	2322.2	2325.7	2318.7	2322.2	2318.7	2318.7
5°	2272.5	2265.5	2265.5	2265.5	2262.0	2262.0	2258.3	2258.3
7.5°	2208.8	2205.2	2201.6	2198.1	2194.6	2191.1	2191.1	2191.1
10°	2144.9	2137.8	2137.8	2134.3	2127.2	2123.7	2123.7	2123.7
12.5°	2070.5	2066.9	2063.4	2063.4	2049.2	2052.8	2049.2	2049.2
15°	1999.5	1996.0	1996.0	1985.4	1978.3	1978.3	1978.3	1974.7
17.5°	1925.1	1921.6	1918.0	1910.9	1903.8	1903.8	1900.3	1903.8
20°	1847.1	1843.6	1836.5	1836.5	1832.9	1829.4	1822.3	1825.9
22.5°	1769.1	1762.0	1758.5	1758.5	1755.0	1755.0	1747.8	1747.8
25°	1687.6	1684.0	1680.5	1684.0	1676.9	1676.9	1669.9	1669.9
27.5°	1602.5	1599.0	1599.0	1599.0	1595.4	1599.0	1595.4	1595.4
30°	1517.4	1517.4	1513.9	1513.9	1517.4	1513.9	1517.4	1520.9
32.5°	1425.3	1425.3	1428.8	1428.8	1432.3	1432.3	1432.3	1432.3
35°	1329.5	1336.5	1336.5	1340.2	1343.7	1347.2	1347.2	1350.7
37.5°	1240.9	1244.4	1247.9	1251.5	1258.6	1258.6	1258.6	1258.6
40°	1145.2	1148.7	1155.8	1152.2	1166.4	1170.0	1166.4	1166.4
42.5°	1045.9	1052.9	1056.6	1063.6	1067.1	1074.3	1077.8	1077.8
45°	953.7	957.3	964.3	971.5	975.0	985.7	985.7	985.7
47.5°	858.0	865.1	868.6	875.7	879.2	889.9	893.4	889.9
50°	765.8	772.9	780.0	780.0	790.6	794.1	801.3	804.8
52.5°	677.2	680.7	687.8	691.4	698.4	705.5	709.1	712.6
55°	592.1	595.6	602.8	602.8	613.3	616.9	624.0	624.0
57.5°	514.0	517.7	524.7	521.2	528.2	535.4	535.4	531.9
60°	439.6	439.6	439.6	446.8	450.3	453.8	457.3	457.3
62.5°	361.7	368.7	372.2	372.2	375.9	379.4	379.4	375.9
65°	290.8	297.8	301.3	301.3	305.0	305.0	305.0	308.5
67.5°	219.9	219.9	219.9	223.4	219.9	219.9	219.9	219.9
70°	138.3	138.3	138.3	138.3	134.8	138.3	138.3	141.8
72.5°	74.4	74.4	74.4	74.4	74.4	74.4	74.4	74.4
75°	31.9	31.9	31.9	35.5	31.9	31.9	31.9	31.9
77.5°	14.2	10.7	14.2	14.2	10.7	10.7	10.7	10.7
80°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
82.5°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
85°	0.0	3.5	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)