

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: P585016

Luminaire Tested: **HC855D010-HM82555930-81WWWB**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P585016
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-18)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 10/21/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC855D010-HM82555930-81WWWB
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4936.6 lumens
Efficiency: N/A
Efficacy: 94.9 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.09 / 1.18
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

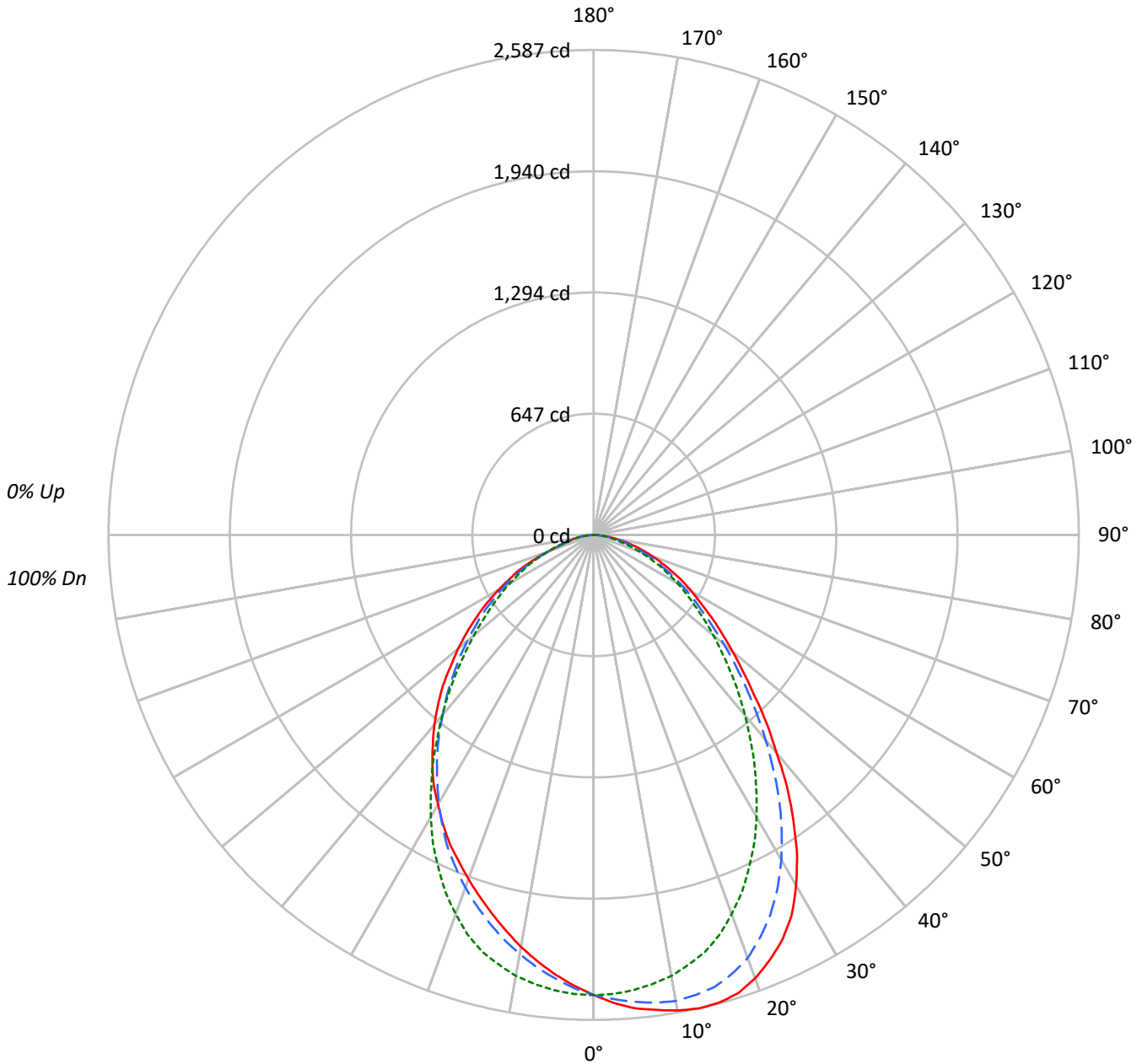
Input Watts (W): 52
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	91	89	87																			
2	102	94	88	83	99	93	87	82	89	85	81	86	82	79	83	80	77	75																			
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65																			
4	87	76	68	62	84	75	67	61	72	66	61	70	64	60	68	63	59	57																			
5	80	69	60	54	78	67	60	54	65	59	54	64	58	53	62	57	52	50																			
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45																			
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42	40																			
8	65	52	45	39	64	52	44	39	51	44	39	49	43	39	48	43	38	37																			
9	61	48	41	36	60	48	41	36	47	40	35	46	40	35	45	39	35	33																			
10	57	45	38	33	56	44	37	33	44	37	32	43	37	32	42	36	32	30																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	75688	75688	75688
5°	78459	75438	72847
10°	80675	74779	69870
15°	82473	73461	66782
20°	82603	70592	64069
25°	81022	66663	61805
30°	76843	61824	59093
35°	69822	56304	56436
40°	61049	50523	53192
45°	52911	45000	49566
50°	46327	39976	45162
55°	41240	35423	40859
60°	37195	31823	35906
65°	33578	27982	31287
70°	30176	23577	23261
75°	26581	18693	17442
80°	22286	15485	16710
85°	17266	13551	14789



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	231.5	4.7
10°-20°	652.2	13.2
20°-30°	932.1	18.9
30°-40°	990.4	20.1
40°-50°	852.7	17.3
50°-60°	637.5	12.9
60°-70°	406.6	8.2
70°-80°	185.1	3.7
80°-90°	48.6	1.0
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°	1815.8	36.8
0°-40°	2806.1	56.8
0°-60°	4296.3	87.0
0°-90°	4936.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4936.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2454	2454	2454	2454	2454	
5°	2535	2500	2437	2374	2353	243
15°	2583	2496	2301	2144	2092	728
25°	2381	2231	1959	1841	1816	1090
35°	1855	1726	1496	1457	1499	1155
45°	1213	1147	1032	1060	1137	943
55°	767	704	659	715	760	690
65°	460	408	384	401	429	459
75°	223	192	157	143	146	237
85°	49	42	38	42	42	59
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°	2454.5	2454.5	2454.5	2454.5	2454.5	2454.5	2454.5	2454.5	2454.5	2454.5	2454.5
2.5°	2499.8	2492.8	2496.4	2492.8	2496.4	2496.4	2489.3	2489.3	2489.3	2489.3	2478.9
5°	2534.7	2531.2	2531.2	2527.7	2524.3	2527.7	2524.3	2520.7	2513.7	2510.3	2499.8
7.5°	2555.5	2555.5	2555.5	2555.5	2552.1	2548.6	2545.1	2538.2	2531.2	2524.3	2517.2
10°	2576.5	2580.0	2576.5	2573.0	2569.5	2562.6	2559.1	2552.1	2541.6	2531.2	2524.3
12.5°	2587.0	2587.0	2583.4	2583.4	2576.5	2573.0	2562.6	2552.1	2541.6	2531.2	2513.7
15°	2583.4	2583.4	2580.0	2576.5	2566.1	2562.6	2555.5	2545.1	2527.7	2513.7	2496.4
17.5°	2562.6	2559.1	2552.1	2552.1	2538.2	2534.7	2527.7	2513.7	2496.4	2475.4	2454.5
20°	2517.2	2517.2	2513.7	2510.3	2496.4	2485.8	2478.9	2461.4	2447.5	2423.1	2402.1
22.5°	2454.5	2461.4	2454.5	2447.5	2430.0	2426.6	2416.1	2395.2	2374.2	2346.3	2322.0
25°	2381.3	2377.8	2374.2	2367.3	2353.4	2346.3	2332.4	2311.5	2290.6	2259.3	2231.4
27.5°	2287.2	2273.2	2273.2	2259.3	2248.7	2238.3	2231.4	2210.4	2182.5	2158.1	2123.3
30°	2158.1	2161.6	2144.2	2140.7	2123.3	2116.3	2102.3	2081.5	2057.0	2029.1	2001.2
32.5°	2018.7	2008.2	2008.2	1994.3	1980.3	1969.9	1966.4	1942.0	1921.0	1893.1	1865.2
35°	1854.8	1854.8	1844.4	1840.9	1826.9	1819.9	1809.5	1795.5	1771.1	1746.7	1725.8
37.5°	1694.5	1687.4	1683.9	1677.0	1666.6	1656.0	1656.0	1631.7	1628.1	1600.2	1572.4
40°	1516.6	1523.6	1516.6	1506.1	1502.6	1495.7	1492.2	1478.2	1467.8	1443.4	1426.0
42.5°	1366.7	1359.8	1359.8	1356.2	1342.3	1342.3	1335.4	1328.3	1310.9	1304.0	1283.0
45°	1213.3	1220.3	1209.9	1213.3	1199.3	1199.3	1199.3	1185.4	1171.4	1161.0	1147.0
47.5°	1080.8	1084.3	1084.3	1073.8	1070.4	1070.4	1063.4	1056.4	1045.9	1031.9	1021.5
50°	965.7	969.2	962.2	958.8	951.8	948.3	948.3	934.3	927.4	913.5	906.4
52.5°	861.2	861.2	857.7	857.7	847.2	847.2	840.2	829.8	822.9	815.8	798.4
55°	767.1	767.1	763.6	760.0	760.0	749.6	746.1	735.7	728.6	714.7	704.3
57.5°	676.4	679.9	676.4	672.8	669.4	665.9	658.9	648.5	641.6	631.0	624.1
60°	603.1	603.1	599.7	596.2	589.2	585.8	582.2	575.2	564.8	557.9	547.3
62.5°	533.4	530.0	526.5	522.9	516.0	516.0	509.0	502.1	491.5	484.6	477.6
65°	460.2	460.2	456.7	456.7	453.2	446.3	442.8	439.3	425.3	421.9	408.0
67.5°	394.0	397.4	390.5	390.5	383.5	383.5	380.1	369.5	366.1	359.1	352.2
70°	334.7	334.7	334.7	331.2	324.3	320.8	317.3	310.3	306.8	299.8	292.9
72.5°	275.4	275.4	271.9	271.9	268.5	265.0	261.5	254.6	254.6	247.5	240.6
75°	223.1	223.1	219.6	216.1	212.7	212.7	209.2	205.7	198.8	195.3	191.7
77.5°	170.9	170.9	170.9	167.4	163.8	163.8	163.8	156.9	149.9	149.9	146.4
80°	125.5	125.5	122.0	122.0	118.5	118.5	118.5	115.1	111.6	108.1	104.5
82.5°	83.7	83.7	83.7	83.7	80.2	80.2	80.2	76.6	73.2	73.2	73.2
85°	48.8	48.8	48.8	48.8	45.4	45.4	45.4	45.4	45.4	41.8	41.8
87.5°	20.9	17.5	20.9	17.5	20.9	17.5	20.9	17.5	17.5	17.5	17.5
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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2454.5	2454.5	2454.5	2454.5	2454.5	2454.5	2454.5	2454.5	2454.5	2454.5	2454.5
2.5°	2482.4	2478.9	2475.4	2471.9	2471.9	2468.5	2461.4	2457.9	2454.5	2451.0	2451.0
5°	2496.4	2492.8	2485.8	2478.9	2475.4	2468.5	2461.4	2454.5	2447.5	2437.1	2433.5
7.5°	2506.8	2496.4	2489.3	2475.4	2471.9	2465.0	2454.5	2444.0	2430.0	2416.1	2405.6
10°	2506.8	2492.8	2482.4	2465.0	2457.9	2451.0	2437.1	2419.6	2402.1	2388.2	2370.8
12.5°	2499.8	2482.4	2465.0	2447.5	2437.1	2426.6	2405.6	2388.2	2367.3	2346.3	2332.4
15°	2475.4	2454.5	2433.5	2412.7	2402.1	2388.2	2367.3	2342.9	2322.0	2301.1	2276.6
17.5°	2430.0	2409.2	2384.8	2360.3	2346.3	2335.9	2304.5	2287.2	2255.7	2234.9	2213.9
20°	2370.8	2346.3	2315.1	2290.6	2273.2	2262.7	2238.3	2207.0	2182.5	2151.2	2130.2
22.5°	2294.1	2262.7	2231.4	2207.0	2189.5	2175.6	2144.2	2112.8	2091.9	2064.0	2039.6
25°	2203.5	2172.1	2140.7	2105.8	2088.4	2074.4	2046.5	2018.7	1990.8	1959.3	1938.5
27.5°	2095.4	2060.5	2032.6	2001.2	1983.8	1962.9	1931.5	1903.6	1875.7	1854.8	1826.9
30°	1976.8	1938.5	1910.6	1879.2	1861.7	1844.4	1813.0	1785.1	1760.7	1736.3	1722.4
32.5°	1833.8	1805.9	1778.2	1746.7	1732.8	1722.4	1691.0	1663.1	1635.2	1614.2	1603.8
35°	1697.9	1666.6	1642.1	1614.2	1596.8	1586.3	1558.4	1534.0	1520.1	1495.7	1481.8
37.5°	1555.0	1530.5	1502.6	1474.7	1464.3	1453.9	1432.9	1408.5	1387.6	1370.2	1363.2
40°	1405.0	1384.1	1359.8	1342.3	1331.9	1321.4	1304.0	1286.5	1272.6	1255.1	1248.2
42.5°	1262.1	1248.2	1227.2	1206.3	1195.9	1192.4	1171.4	1157.5	1150.6	1143.5	1136.6
45°	1133.1	1112.2	1098.3	1084.3	1073.8	1066.9	1056.4	1045.9	1039.0	1031.9	1025.0
47.5°	1007.6	990.1	976.2	965.7	955.3	951.8	944.9	934.3	927.4	927.4	927.4
50°	892.6	878.6	864.7	857.7	854.2	847.2	840.2	836.8	833.3	833.3	833.3
52.5°	791.5	777.5	767.1	760.0	760.0	753.1	746.1	742.6	742.6	742.6	742.6
55°	697.3	686.8	679.9	672.8	665.9	662.4	662.4	662.4	658.9	658.9	662.4
57.5°	613.7	606.6	596.2	589.2	585.8	585.8	582.2	578.7	582.2	585.8	589.2
60°	536.9	530.0	526.5	516.0	516.0	516.0	512.5	512.5	512.5	516.0	519.4
62.5°	467.2	463.6	456.7	453.2	449.7	449.7	446.3	446.3	446.3	446.3	449.7
65°	404.5	397.4	390.5	390.5	390.5	387.0	387.0	380.1	383.5	383.5	380.1
67.5°	345.2	338.2	334.7	331.2	327.7	327.7	324.3	320.8	317.3	317.3	317.3
70°	289.4	282.5	282.5	275.4	275.4	271.9	268.5	268.5	265.0	261.5	258.0
72.5°	233.6	230.1	226.7	223.1	223.1	223.1	219.6	216.1	212.7	209.2	202.2
75°	184.8	184.8	177.8	174.3	174.3	170.9	167.4	163.8	160.3	156.9	153.4
77.5°	143.0	139.5	132.4	129.0	129.0	129.0	125.5	122.0	118.5	115.1	111.6
80°	104.5	101.1	97.6	94.1	94.1	94.1	90.6	90.6	87.2	87.2	87.2
82.5°	69.7	69.7	66.2	66.2	66.2	66.2	62.7	62.7	62.7	62.7	62.7
85°	41.8	41.8	38.3	38.3	38.3	38.3	38.3	38.3	38.3	38.3	38.3
87.5°	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
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°	2454.5	2454.5	2454.5	2454.5	2454.5	2454.5	2454.5	2454.5	2454.5	2454.5	2454.5
2.5°	2444.0	2444.0	2437.1	2433.5	2430.0	2433.5	2426.6	2423.1	2419.6	2419.6	2416.1
5°	2423.1	2419.6	2405.6	2402.1	2398.7	2395.2	2388.2	2381.3	2374.2	2370.8	2367.3
7.5°	2395.2	2384.8	2370.8	2367.3	2363.8	2353.4	2342.9	2335.9	2325.5	2322.0	2315.1
10°	2356.9	2342.9	2332.4	2322.0	2315.1	2304.5	2294.1	2283.6	2269.7	2266.2	2255.7
12.5°	2311.5	2294.1	2273.2	2269.7	2259.3	2245.3	2231.4	2220.9	2210.4	2203.5	2193.0
15°	2255.7	2238.3	2217.4	2207.0	2196.4	2186.0	2168.6	2154.6	2144.2	2133.7	2123.3
17.5°	2189.5	2168.6	2151.2	2140.7	2133.7	2116.3	2102.3	2084.9	2074.4	2064.0	2053.6
20°	2109.4	2091.9	2067.5	2057.0	2053.6	2039.6	2022.2	2015.1	2001.2	1990.8	1983.8
22.5°	2018.7	2001.2	1980.3	1973.3	1959.3	1952.4	1935.0	1928.1	1921.0	1910.6	1907.1
25°	1917.5	1900.2	1882.7	1879.2	1868.8	1861.7	1851.3	1840.9	1840.9	1830.4	1830.4
27.5°	1813.0	1795.5	1781.6	1774.6	1771.1	1764.2	1753.7	1750.3	1746.7	1743.2	1743.2
30°	1701.4	1680.5	1673.5	1670.0	1666.6	1659.6	1656.0	1649.1	1652.6	1656.0	1652.6
32.5°	1582.9	1575.9	1561.9	1555.0	1558.4	1555.0	1548.0	1555.0	1551.5	1558.4	1561.9
35°	1467.8	1460.8	1453.9	1453.9	1446.8	1446.8	1446.8	1450.4	1457.4	1460.8	1467.8
37.5°	1356.2	1345.8	1342.3	1338.8	1342.3	1342.3	1342.3	1349.2	1356.2	1363.2	1373.7
40°	1237.7	1230.7	1230.7	1230.7	1230.7	1241.1	1237.7	1244.7	1251.7	1262.1	1272.6
42.5°	1126.2	1126.2	1129.6	1129.6	1129.6	1129.6	1136.6	1147.0	1157.5	1168.0	1178.4
45°	1021.5	1021.5	1021.5	1028.5	1028.5	1031.9	1045.9	1052.9	1059.8	1070.4	1080.8
47.5°	923.9	923.9	927.4	930.9	934.3	941.4	948.3	958.8	969.2	976.2	986.7
50°	833.3	836.8	843.7	850.8	850.8	854.2	864.7	871.6	878.6	889.1	892.6
52.5°	746.1	753.1	760.0	763.6	767.1	774.0	777.5	787.9	791.5	801.9	805.4
55°	665.9	669.4	679.9	683.4	683.4	690.3	697.3	704.3	714.7	714.7	721.7
57.5°	592.7	596.2	603.1	606.6	603.1	613.7	617.1	624.1	627.6	634.5	638.0
60°	519.4	526.5	530.0	530.0	533.4	536.9	543.9	543.9	550.8	557.9	557.9
62.5°	449.7	453.2	456.7	460.2	463.6	460.2	470.7	470.7	477.6	481.1	488.1
65°	383.5	387.0	387.0	390.5	390.5	394.0	394.0	397.4	400.9	408.0	411.4
67.5°	317.3	317.3	317.3	320.8	317.3	320.8	320.8	324.3	324.3	331.2	334.7
70°	258.0	254.6	251.0	251.0	251.0	251.0	247.5	251.0	251.0	254.6	254.6
72.5°	198.8	195.3	191.7	188.2	188.2	184.8	181.3	184.8	184.8	188.2	188.2
75°	149.9	143.0	143.0	143.0	139.5	139.5	139.5	143.0	143.0	143.0	146.4
77.5°	111.6	111.6	108.1	108.1	108.1	111.6	111.6	115.1	115.1	115.1	115.1
80°	83.7	87.2	87.2	87.2	87.2	90.6	90.6	90.6	90.6	94.1	94.1
82.5°	62.7	62.7	62.7	62.7	66.2	66.2	66.2	66.2	66.2	66.2	66.2
85°	38.3	41.8	41.8	38.3	41.8	41.8	41.8	41.8	41.8	41.8	41.8
87.5°	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
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: P585016

CATALOG NUMBER: HC855D010-HM82555930-81WWWB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2454.5	2454.5	2454.5	2454.5	2454.5	2454.5	2454.5	2454.5
2.5°	2412.7	2412.7	2412.7	2412.7	2409.2	2409.2	2409.2	2405.6
5°	2360.3	2360.3	2360.3	2353.4	2356.9	2356.9	2349.9	2353.4
7.5°	2308.0	2304.5	2301.1	2301.1	2297.6	2294.1	2290.6	2294.1
10°	2248.7	2238.3	2238.3	2234.9	2234.9	2227.9	2227.9	2231.4
12.5°	2182.5	2175.6	2175.6	2172.1	2168.6	2165.2	2161.6	2161.6
15°	2116.3	2109.4	2105.8	2102.3	2098.8	2091.9	2095.4	2091.9
17.5°	2050.1	2039.6	2039.6	2036.1	2032.6	2025.7	2025.7	2022.2
20°	1973.3	1969.9	1962.9	1966.4	1962.9	1956.0	1952.4	1952.4
22.5°	1896.6	1896.6	1893.1	1893.1	1889.6	1886.2	1882.7	1882.7
25°	1823.4	1819.9	1823.4	1823.4	1813.0	1813.0	1813.0	1816.5
27.5°	1739.7	1743.2	1739.7	1739.7	1739.7	1739.7	1743.2	1739.7
30°	1656.0	1656.0	1656.0	1659.6	1666.6	1663.1	1663.1	1659.6
32.5°	1565.4	1569.0	1569.0	1572.4	1575.9	1582.9	1582.9	1586.3
35°	1474.7	1481.8	1485.3	1481.8	1492.2	1492.2	1499.2	1499.2
37.5°	1380.6	1384.1	1391.0	1394.6	1401.6	1405.0	1408.5	1408.5
40°	1279.6	1293.5	1296.9	1300.5	1310.9	1310.9	1314.4	1321.4
42.5°	1185.4	1199.3	1202.8	1206.3	1213.3	1223.8	1220.3	1227.2
45°	1094.8	1105.2	1108.7	1112.2	1122.7	1126.2	1126.2	1136.6
47.5°	997.1	1004.1	1007.6	1014.6	1021.5	1028.5	1035.5	1031.9
50°	899.5	909.9	917.0	920.4	930.9	934.3	937.8	941.4
52.5°	812.3	819.3	822.9	826.3	836.8	840.2	843.7	850.8
55°	728.6	732.1	739.2	735.7	746.1	749.6	753.1	760.0
57.5°	645.0	648.5	652.0	652.0	658.9	665.9	669.4	672.8
60°	564.8	571.8	575.2	575.2	575.2	582.2	582.2	582.2
62.5°	491.5	491.5	495.1	495.1	502.1	502.1	502.1	502.1
65°	414.9	418.4	421.9	421.9	428.8	425.3	432.4	428.8
67.5°	334.7	334.7	341.6	341.6	338.2	341.6	341.6	341.6
70°	254.6	254.6	258.0	258.0	258.0	258.0	258.0	258.0
72.5°	188.2	188.2	188.2	191.7	188.2	188.2	191.7	188.2
75°	146.4	146.4	146.4	146.4	146.4	146.4	146.4	146.4
77.5°	115.1	115.1	118.5	118.5	118.5	118.5	118.5	118.5
80°	94.1	94.1	94.1	94.1	97.6	94.1	94.1	94.1
82.5°	69.7	66.2	69.7	66.2	69.7	69.7	69.7	69.7
85°	41.8	41.8	41.8	41.8	41.8	41.8	41.8	41.8
87.5°	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
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)