

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: P584786

Luminaire Tested: **HC850D010-HM82555827-81RWWC**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584786
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: HC850D010-HM82555827-81RWWC
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4939.6 lumens
Efficiency: N/A
Efficacy: 102.9 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

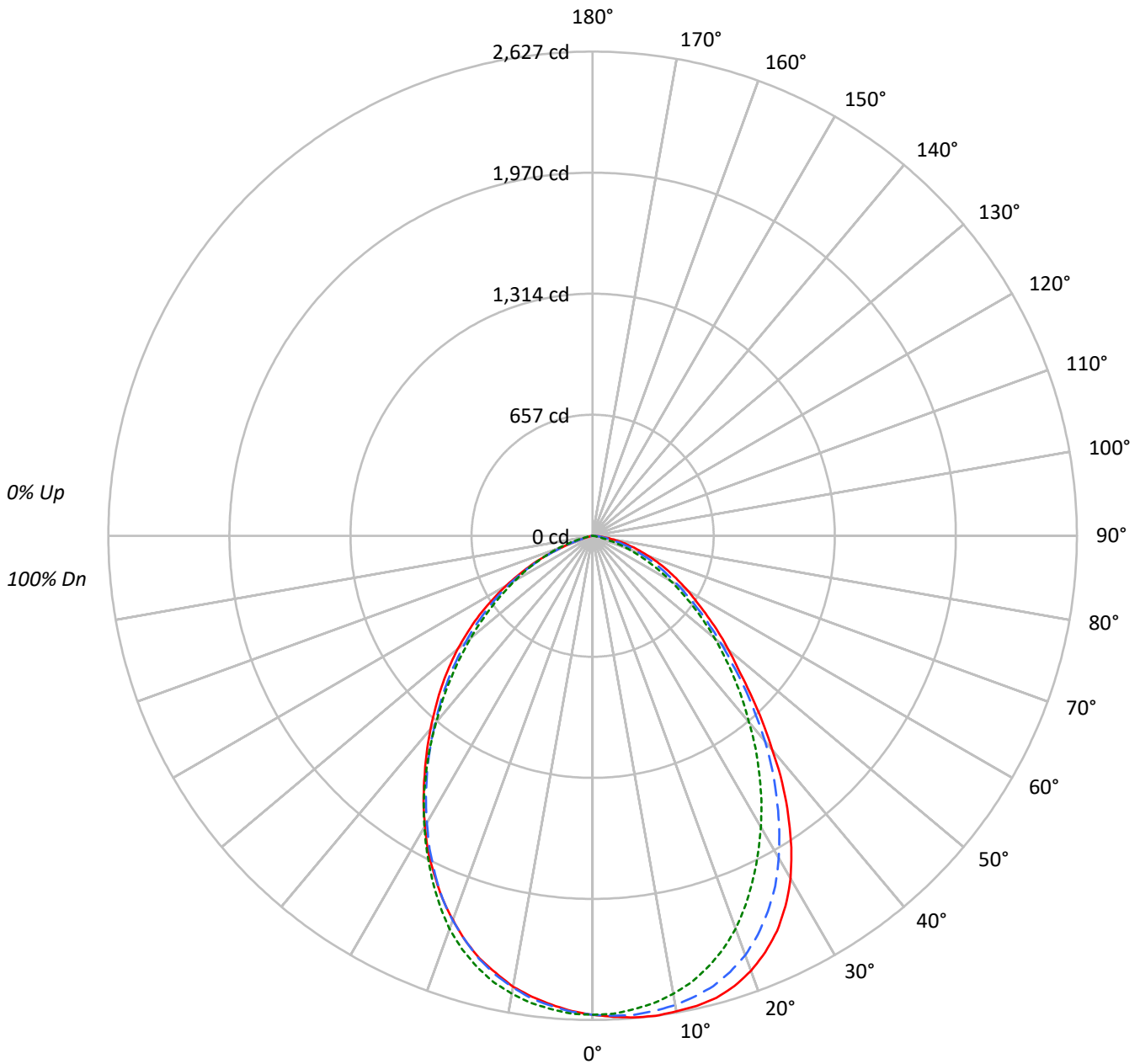
Input Watts (W): 48
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	80144	80144	80144
5°	81199	79806	79054
10°	82031	78991	77795
15°	82859	77323	75769
20°	82442	74471	72765
25°	80518	70011	69069
30°	76480	64989	64744
35°	69623	59301	59828
40°	61041	53079	55031
45°	52662	47211	50539
50°	46111	41448	45780
55°	40859	35628	40300
60°	36806	29961	33390
65°	33163	24057	25574
70°	29103	17518	14083
75°	24805	9091	3717
80°	19090	2468	622
85°	12277	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	245.2	5.0
10°-20°	689.3	14.0
20°-30°	978.4	19.8
30°-40°	1029.9	20.9
40°-50°	876.2	17.7
50°-60°	633.1	12.8
60°-70°	360.1	7.3
70°-80°	113.5	2.3
80°-90°	13.8	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°	1913.0	38.7
0°-40°	2942.9	59.6
0°-60°	4452.2	90.1
0°-90°	4939.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4939.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2599	2599	2599	2599	2599	
5°	2623	2609	2578	2561	2554	250
15°	2596	2530	2422	2377	2373	731
25°	2366	2249	2058	2023	2030	1084
35°	1850	1742	1575	1565	1589	1151
45°	1208	1162	1083	1110	1159	939
55°	760	704	663	701	750	685
65°	454	392	330	326	350	451
75°	208	160	76	35	31	224
85°	35	21	0	0	0	45
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°	2599.0	2599.0	2599.0	2599.0	2599.0	2599.0	2599.0	2599.0	2599.0	2599.0	2599.0
2.5°	2612.8	2616.3	2609.4	2609.4	2616.3	2609.4	2612.8	2612.8	2609.4	2609.4	2605.9
5°	2623.2	2619.8	2619.8	2619.8	2623.2	2616.3	2612.8	2616.3	2609.4	2609.4	2609.4
7.5°	2626.7	2626.7	2623.2	2619.8	2619.8	2619.8	2616.3	2612.8	2609.4	2602.4	2599.0
10°	2619.8	2619.8	2623.2	2616.3	2616.3	2609.4	2609.4	2602.4	2602.4	2595.5	2585.1
12.5°	2612.8	2609.4	2609.4	2602.4	2602.4	2595.5	2595.5	2585.1	2581.6	2571.2	2560.8
15°	2595.5	2592.0	2585.1	2581.6	2578.2	2574.7	2567.8	2564.3	2553.9	2540.0	2529.6
17.5°	2560.8	2557.3	2553.9	2546.9	2540.0	2536.5	2533.1	2522.7	2508.8	2498.4	2481.0
20°	2512.3	2508.8	2508.8	2498.4	2494.9	2484.5	2481.0	2467.2	2456.8	2436.0	2422.1
22.5°	2446.4	2449.8	2442.9	2436.0	2428.9	2418.5	2411.6	2397.7	2380.4	2359.6	2342.2
25°	2366.5	2370.0	2363.0	2356.1	2345.7	2338.7	2331.8	2311.0	2293.7	2269.4	2248.6
27.5°	2265.9	2265.9	2265.9	2259.0	2241.6	2238.2	2231.2	2210.3	2186.0	2165.2	2144.4
30°	2147.9	2144.4	2144.4	2134.0	2127.1	2113.2	2102.8	2085.5	2068.1	2043.8	2019.6
32.5°	2005.7	2009.2	1998.6	1991.7	1981.3	1981.3	1967.4	1953.6	1932.8	1908.5	1884.2
35°	1849.5	1853.0	1846.0	1842.6	1825.2	1821.8	1818.3	1801.0	1787.1	1769.6	1741.9
37.5°	1689.9	1686.4	1682.9	1682.9	1672.5	1665.6	1658.7	1648.2	1627.4	1613.6	1599.7
40°	1516.4	1516.4	1516.4	1512.9	1509.4	1502.5	1499.0	1492.1	1478.2	1464.3	1453.9
42.5°	1360.2	1360.2	1356.7	1353.2	1346.3	1349.8	1342.8	1335.9	1322.0	1311.6	1304.7
45°	1207.6	1207.6	1207.6	1211.0	1204.1	1193.7	1193.7	1186.8	1179.8	1172.9	1162.5
47.5°	1072.2	1082.6	1075.7	1072.2	1075.7	1061.8	1061.8	1054.9	1047.9	1041.0	1027.1
50°	961.2	961.2	961.2	954.3	950.7	950.7	940.3	933.4	929.9	923.0	909.1
52.5°	860.5	853.6	853.6	850.1	846.7	839.7	839.7	832.8	818.9	812.0	801.6
55°	760.0	760.0	756.5	753.0	749.6	746.1	742.5	732.1	725.2	714.8	704.4
57.5°	669.7	676.6	673.2	666.2	659.3	659.3	652.3	645.4	635.0	624.6	614.2
60°	596.8	593.4	593.4	589.9	583.0	579.5	576.0	565.6	555.2	544.8	534.3
62.5°	520.4	520.4	520.4	513.5	506.6	503.1	499.6	492.7	478.8	468.4	461.5
65°	454.5	451.1	447.6	444.1	440.7	433.7	430.3	423.3	412.9	402.5	392.1
67.5°	388.7	385.2	385.2	381.7	371.3	367.8	367.8	357.4	347.0	336.6	326.2
70°	322.8	322.8	322.8	315.7	312.2	308.8	305.3	298.4	288.0	277.6	267.2
72.5°	267.2	263.7	263.7	260.2	249.8	246.4	242.9	235.9	225.5	218.6	211.7
75°	208.2	208.2	204.7	201.3	197.8	194.3	190.9	183.9	173.5	163.1	159.6
77.5°	159.6	156.2	156.2	152.7	145.8	142.3	142.3	135.4	125.0	118.0	111.1
80°	107.5	111.1	107.5	104.0	100.7	97.1	93.6	90.2	83.2	76.3	69.4
82.5°	65.9	69.4	65.9	65.9	62.4	59.0	59.0	52.0	48.6	45.1	41.6
85°	34.7	34.7	34.7	34.7	31.2	31.2	31.2	27.7	24.3	20.8	20.8
87.5°	10.4	13.9	10.4	10.4	10.4	10.4	10.4	10.4	6.9	6.9	6.9
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°	2599.0	2599.0	2599.0	2599.0	2599.0	2599.0	2599.0	2599.0	2599.0	2599.0	2599.0
2.5°	2609.4	2605.9	2602.4	2602.4	2602.4	2602.4	2602.4	2599.0	2595.5	2595.5	2595.5
5°	2602.4	2602.4	2602.4	2599.0	2595.5	2595.5	2588.6	2585.1	2581.6	2578.2	2574.7
7.5°	2595.5	2588.6	2585.1	2581.6	2578.2	2578.2	2571.2	2564.3	2564.3	2557.3	2550.4
10°	2574.7	2571.2	2564.3	2557.3	2553.9	2550.4	2543.5	2533.1	2529.6	2522.7	2515.7
12.5°	2550.4	2543.5	2536.5	2522.7	2519.2	2515.7	2501.9	2491.4	2484.5	2481.0	2463.7
15°	2519.2	2505.3	2494.9	2477.6	2474.1	2467.2	2456.8	2446.4	2432.5	2422.1	2415.0
17.5°	2463.7	2449.8	2432.5	2415.0	2408.1	2408.1	2390.8	2376.9	2359.6	2352.6	2338.7
20°	2397.7	2380.4	2366.5	2345.7	2335.3	2324.9	2314.5	2293.7	2279.8	2269.4	2252.0
22.5°	2321.4	2297.1	2279.8	2259.0	2241.6	2231.2	2213.9	2196.4	2179.1	2168.7	2154.8
25°	2224.3	2203.4	2175.6	2154.8	2144.4	2130.5	2109.7	2092.4	2075.1	2057.7	2050.8
27.5°	2116.7	2088.9	2064.6	2040.4	2030.0	2019.6	1995.2	1974.4	1960.5	1943.2	1936.2
30°	1998.6	1970.9	1943.2	1922.3	1911.9	1894.6	1880.7	1856.4	1839.1	1825.2	1807.9
32.5°	1863.4	1842.6	1818.3	1787.1	1780.0	1766.2	1745.4	1735.0	1714.1	1703.7	1689.9
35°	1717.6	1703.7	1679.5	1655.2	1644.8	1637.8	1620.5	1599.7	1585.7	1575.3	1568.4
37.5°	1578.9	1561.4	1537.2	1519.8	1512.9	1502.5	1481.7	1471.3	1457.4	1450.5	1436.6
40°	1429.6	1412.3	1395.0	1384.6	1374.2	1367.1	1353.2	1342.8	1329.0	1318.6	1315.1
42.5°	1283.9	1273.5	1259.6	1245.7	1242.3	1231.9	1224.9	1214.5	1204.1	1200.6	1190.2
45°	1152.0	1141.6	1127.7	1113.8	1110.4	1103.4	1100.0	1089.6	1082.6	1082.6	1082.6
47.5°	1020.2	1009.8	995.9	989.0	992.4	978.6	978.6	975.1	968.2	968.2	971.6
50°	902.2	888.3	884.8	877.9	870.9	864.0	867.5	857.1	857.1	864.0	860.5
52.5°	791.2	777.3	773.8	766.9	763.4	763.4	760.0	760.0	756.5	760.0	760.0
55°	690.5	680.1	673.2	666.2	662.7	662.7	662.7	659.3	655.8	662.7	666.2
57.5°	600.3	596.8	589.9	579.5	576.0	572.6	569.1	569.1	569.1	569.1	572.6
60°	520.4	513.5	506.6	496.2	496.2	492.7	489.2	485.8	485.8	485.8	485.8
62.5°	451.1	440.7	430.3	423.3	419.9	416.4	412.9	406.0	406.0	406.0	406.0
65°	381.7	371.3	364.4	357.4	350.5	350.5	343.6	340.1	333.2	329.7	322.8
67.5°	315.7	308.8	301.8	291.4	288.0	284.5	277.6	274.1	263.7	260.2	256.8
70°	256.8	246.4	239.4	232.5	229.0	222.1	215.1	208.2	201.3	194.3	187.4
72.5°	201.3	190.9	183.9	177.0	170.0	170.0	159.6	152.7	142.3	135.4	125.0
75°	149.2	138.8	131.9	121.5	118.0	114.6	104.0	97.1	86.7	76.3	69.4
77.5°	100.7	93.6	86.7	76.3	69.4	69.4	59.0	52.0	45.1	34.7	31.2
80°	62.4	55.5	48.6	41.6	41.6	34.7	31.2	24.3	17.3	13.9	10.4
82.5°	34.7	31.2	27.7	20.8	20.8	17.3	13.9	10.4	6.9	3.5	3.5
85°	17.3	13.9	10.4	10.4	6.9	6.9	6.9	3.5	3.5	0.0	0.0
87.5°	6.9	3.5	3.5	3.5	3.5	3.5	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°	2599.0	2599.0	2599.0	2599.0	2599.0	2599.0	2599.0	2599.0	2599.0	2599.0	2599.0
2.5°	2592.0	2592.0	2588.6	2588.6	2588.6	2585.1	2588.6	2585.1	2585.1	2585.1	2588.6
5°	2578.2	2571.2	2571.2	2567.8	2567.8	2564.3	2567.8	2564.3	2560.8	2557.3	2560.8
7.5°	2550.4	2543.5	2540.0	2536.5	2536.5	2536.5	2533.1	2529.6	2533.1	2522.7	2529.6
10°	2512.3	2508.8	2501.9	2498.4	2494.9	2498.4	2494.9	2488.0	2488.0	2488.0	2484.5
12.5°	2463.7	2456.8	2453.3	2449.8	2442.9	2442.9	2446.4	2439.4	2439.4	2432.5	2432.5
15°	2404.6	2397.7	2390.8	2390.8	2383.8	2383.8	2380.4	2380.4	2376.9	2373.4	2373.4
17.5°	2331.8	2321.4	2314.5	2317.9	2314.5	2311.0	2311.0	2304.1	2300.6	2304.1	2304.1
20°	2245.1	2238.2	2231.2	2234.7	2227.8	2224.3	2227.8	2217.4	2220.7	2220.7	2220.7
22.5°	2147.9	2144.4	2134.0	2134.0	2127.1	2123.6	2127.1	2127.1	2130.5	2127.1	2127.1
25°	2040.4	2033.4	2026.5	2026.5	2023.0	2019.6	2023.0	2026.5	2023.0	2026.5	2026.5
27.5°	1925.8	1915.4	1915.4	1908.5	1908.5	1911.9	1908.5	1911.9	1915.4	1915.4	1922.3
30°	1801.0	1797.5	1793.9	1790.4	1790.4	1793.9	1793.9	1793.9	1797.5	1804.4	1804.4
32.5°	1682.9	1676.0	1669.1	1669.1	1676.0	1672.5	1676.0	1676.0	1682.9	1682.9	1689.9
35°	1554.5	1554.5	1547.6	1551.0	1551.0	1551.0	1551.0	1558.0	1564.9	1568.4	1575.3
37.5°	1436.6	1426.2	1429.6	1429.6	1433.1	1429.6	1440.0	1440.0	1447.0	1447.0	1453.9
40°	1308.2	1308.2	1311.6	1308.2	1311.6	1311.6	1318.6	1325.5	1329.0	1335.9	1339.4
42.5°	1186.8	1193.7	1186.8	1190.2	1193.7	1197.2	1200.6	1204.1	1218.0	1224.9	1235.3
45°	1075.7	1079.1	1082.6	1086.1	1082.6	1089.6	1093.0	1100.0	1110.4	1113.8	1117.3
47.5°	968.2	971.6	975.1	978.6	978.6	985.5	989.0	995.9	1002.8	1006.3	1009.8
50°	864.0	870.9	874.4	874.4	877.9	884.8	891.8	891.8	898.7	909.1	912.6
52.5°	770.4	770.4	777.3	780.8	784.2	784.2	794.6	798.1	801.6	808.5	815.5
55°	666.2	676.6	680.1	680.1	687.0	694.0	697.4	700.9	700.9	714.8	714.8
57.5°	576.0	579.5	586.4	586.4	586.4	596.8	596.8	603.8	607.3	610.7	617.7
60°	485.8	492.7	492.7	496.2	492.7	499.6	503.1	510.0	513.5	517.0	520.4
62.5°	402.5	402.5	406.0	406.0	406.0	406.0	412.9	412.9	419.9	423.3	426.8
65°	322.8	322.8	322.8	322.8	322.8	322.8	322.8	322.8	326.2	326.2	333.2
67.5°	249.8	246.4	239.4	242.9	239.4	239.4	235.9	235.9	239.4	239.4	246.4
70°	180.5	177.0	170.0	170.0	166.6	163.1	159.6	156.2	152.7	152.7	152.7
72.5°	118.0	111.1	100.7	97.1	97.1	90.2	83.2	79.8	79.8	79.8	79.8
75°	59.0	52.0	45.1	41.6	41.6	34.7	38.2	34.7	34.7	34.7	34.7
77.5°	24.3	17.3	13.9	13.9	13.9	10.4	10.4	10.4	10.4	10.4	10.4
80°	6.9	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
82.5°	3.5	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: P584786

CATALOG NUMBER: HC850D010-HM82555827-81RWWC

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2599.0	2599.0	2599.0	2599.0	2599.0	2599.0	2599.0	2599.0
2.5°	2585.1	2585.1	2578.2	2581.6	2581.6	2581.6	2581.6	2581.6
5°	2553.9	2557.3	2553.9	2557.3	2557.3	2553.9	2553.9	2553.9
7.5°	2522.7	2526.1	2522.7	2526.1	2526.1	2526.1	2522.7	2522.7
10°	2484.5	2484.5	2484.5	2484.5	2484.5	2481.0	2484.5	2484.5
12.5°	2432.5	2432.5	2432.5	2436.0	2436.0	2432.5	2432.5	2428.9
15°	2376.9	2370.0	2373.4	2376.9	2373.4	2373.4	2373.4	2373.4
17.5°	2300.6	2304.1	2300.6	2300.6	2300.6	2300.6	2304.1	2300.6
20°	2220.7	2220.7	2224.3	2220.7	2220.7	2220.7	2220.7	2217.4
22.5°	2130.5	2127.1	2127.1	2130.5	2130.5	2127.1	2130.5	2130.5
25°	2030.0	2033.4	2030.0	2030.0	2033.4	2033.4	2033.4	2030.0
27.5°	1922.3	1925.8	1929.3	1925.8	1925.8	1925.8	1929.3	1932.8
30°	1811.4	1818.3	1811.4	1811.4	1818.3	1814.8	1818.3	1818.3
32.5°	1693.3	1703.7	1696.8	1703.7	1703.7	1707.2	1703.7	1707.2
35°	1575.3	1585.7	1585.7	1585.7	1589.3	1592.8	1592.8	1589.3
37.5°	1464.3	1467.8	1467.8	1474.7	1478.2	1481.7	1481.7	1478.2
40°	1349.8	1356.7	1360.2	1360.2	1360.2	1367.1	1374.2	1367.1
42.5°	1238.8	1242.3	1245.7	1245.7	1252.7	1256.1	1259.6	1259.6
45°	1131.2	1138.1	1141.6	1145.0	1148.5	1155.4	1152.0	1158.9
47.5°	1020.2	1030.6	1034.1	1037.5	1044.5	1047.9	1051.4	1054.9
50°	919.5	926.4	926.4	933.4	943.9	943.9	950.7	954.3
52.5°	818.9	822.4	825.9	829.3	836.3	843.2	843.2	850.1
55°	721.7	725.2	725.2	728.6	732.1	746.1	749.6	749.6
57.5°	621.1	621.1	628.1	631.5	635.0	641.9	641.9	641.9
60°	523.9	527.5	527.5	531.0	534.3	541.4	544.8	541.4
62.5°	426.8	430.3	430.3	433.7	440.7	444.1	440.7	440.7
65°	336.6	340.1	340.1	343.6	350.5	350.5	347.0	350.5
67.5°	246.4	246.4	246.4	246.4	246.4	246.4	246.4	246.4
70°	156.2	152.7	149.2	152.7	152.7	152.7	149.2	156.2
72.5°	76.3	79.8	79.8	79.8	79.8	79.8	79.8	76.3
75°	34.7	34.7	31.2	31.2	31.2	34.7	34.7	31.2
77.5°	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4
80°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
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)