

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: P584947

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

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584947
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-HM82555830-81WWW
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4822.3 lumens
Efficiency: N/A
Efficacy: 92.7 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

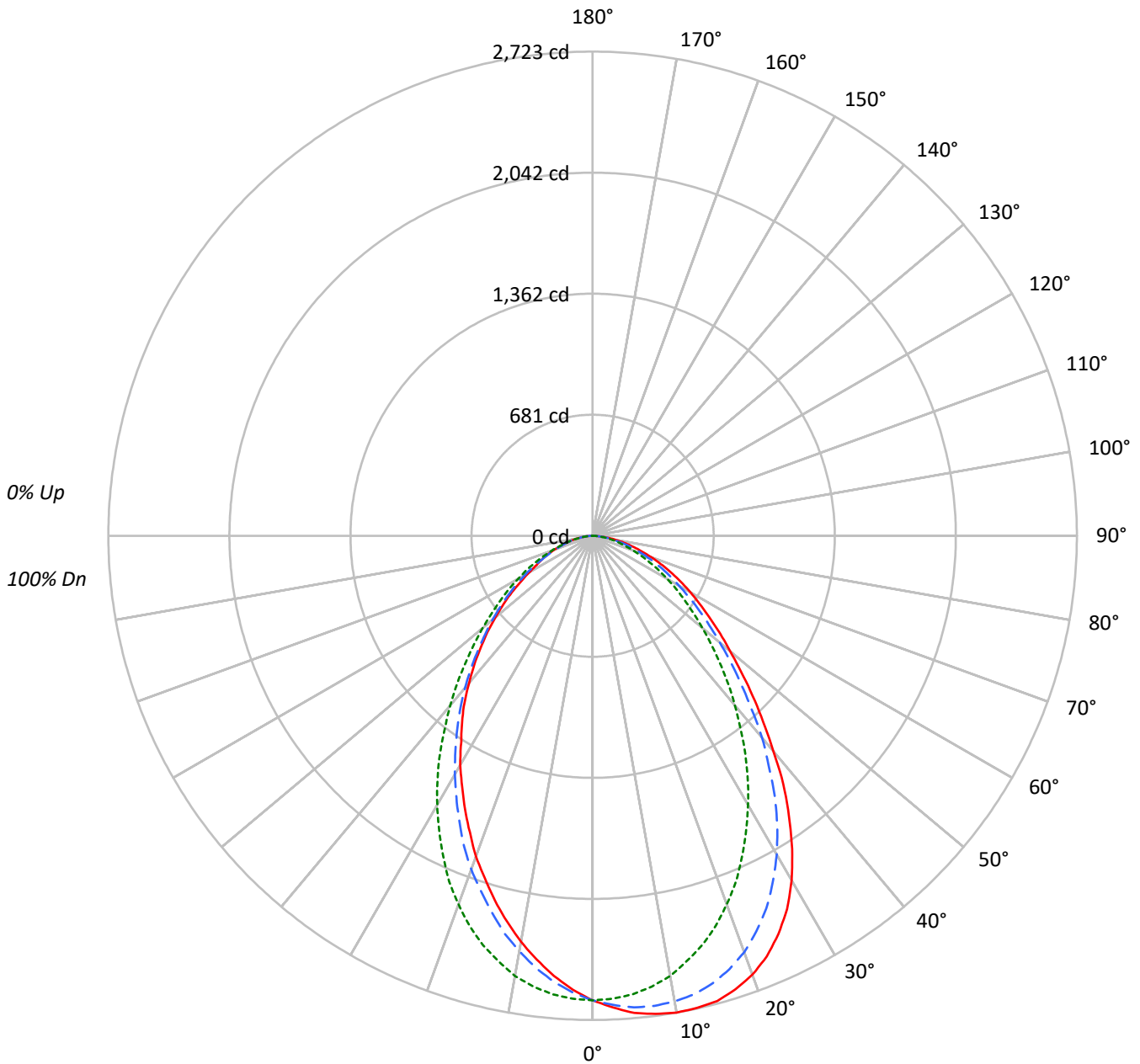
Input Watts (W): 52
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	80572	80572	80572
5°	83403	80112	76927
10°	85256	78706	72603
15°	86470	76056	67797
20°	86206	72364	62940
25°	84074	67671	57780
30°	79656	62233	53018
35°	72469	56323	48177
40°	63654	50092	43527
45°	55506	44063	38808
50°	48304	38609	34185
55°	43079	33929	29735
60°	39137	29739	25366
65°	35184	25866	23020
70°	31330	22053	20773
75°	27450	18586	17752
80°	23281	15112	15734
85°	17584	11286	12560



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	244.7	5.1
10°-20°	674.3	14.0
20°-30°	936.0	19.4
30°-40°	967.8	20.1
40°-50°	810.3	16.8
50°-60°	588.2	12.2
60°-70°	371.2	7.7
70°-80°	183.9	3.8
80°-90°	45.7	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°	1855.1	38.5
0°-40°	2822.9	58.5
0°-60°	4221.4	87.5
0°-90°	4822.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4822.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2613	2613	2613	2613	2613	
5°	2694	2662	2588	2517	2485	258
15°	2709	2606	2382	2191	2124	762
25°	2471	2312	1989	1773	1698	1132
35°	1925	1783	1496	1326	1280	1199
45°	1273	1181	1010	911	890	984
55°	801	730	631	578	553	723
65°	482	422	354	312	316	481
75°	230	192	156	149	149	247
85°	50	39	32	36	36	60
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°	2612.9	2612.9	2612.9	2612.9	2612.9	2612.9	2612.9	2612.9	2612.9	2612.9	2612.9
2.5°	2655.4	2655.4	2659.0	2655.4	2655.4	2655.4	2651.9	2651.9	2648.4	2648.4	2641.2
5°	2694.4	2687.4	2694.4	2687.4	2687.4	2687.4	2683.8	2676.7	2673.2	2666.1	2662.5
7.5°	2712.1	2708.6	2708.6	2705.1	2705.1	2701.6	2697.9	2694.4	2680.2	2676.7	2666.1
10°	2722.8	2719.3	2719.3	2715.8	2708.6	2708.6	2701.6	2697.9	2680.2	2673.2	2659.0
12.5°	2719.3	2719.3	2719.3	2715.8	2705.1	2701.6	2694.4	2683.8	2669.6	2655.4	2641.2
15°	2708.6	2708.6	2701.6	2697.9	2687.4	2680.2	2676.7	2659.0	2644.9	2627.0	2605.8
17.5°	2673.2	2673.2	2669.6	2662.5	2651.9	2644.9	2637.7	2620.0	2605.8	2577.5	2556.1
20°	2627.0	2623.5	2620.0	2609.3	2598.7	2595.2	2584.5	2559.8	2542.0	2520.7	2492.4
22.5°	2559.8	2556.1	2552.6	2545.6	2527.8	2520.7	2513.6	2495.9	2464.0	2442.7	2407.3
25°	2471.0	2471.0	2464.0	2453.3	2435.7	2428.5	2418.0	2400.1	2371.8	2339.9	2311.5
27.5°	2368.3	2364.7	2354.1	2347.0	2332.9	2322.2	2304.5	2283.2	2254.8	2230.0	2194.6
30°	2237.1	2237.1	2230.0	2219.4	2201.6	2194.6	2180.4	2155.5	2127.2	2095.3	2070.5
32.5°	2088.2	2088.2	2077.6	2070.5	2059.8	2042.1	2038.6	2010.2	1985.4	1960.5	1932.2
35°	1925.1	1928.6	1921.6	1907.4	1889.6	1889.6	1882.6	1857.7	1829.4	1804.5	1783.3
37.5°	1762.0	1751.4	1747.8	1740.8	1730.1	1715.9	1708.9	1698.2	1673.4	1655.7	1623.8
40°	1581.3	1584.8	1577.6	1570.6	1567.1	1556.4	1552.9	1535.1	1517.4	1496.2	1482.0
42.5°	1418.1	1418.1	1418.1	1411.1	1403.9	1393.3	1389.8	1379.1	1357.9	1343.7	1322.4
45°	1272.8	1262.1	1262.1	1258.6	1255.1	1247.9	1237.3	1230.2	1216.1	1205.4	1180.6
47.5°	1131.0	1134.5	1131.0	1127.5	1116.8	1113.3	1109.6	1095.5	1081.3	1070.7	1052.9
50°	1006.9	1014.0	1006.9	1006.9	999.8	996.2	989.2	978.5	967.8	950.1	932.4
52.5°	904.1	904.1	900.6	896.9	886.4	879.2	875.7	872.2	854.4	840.2	826.0
55°	801.3	804.8	804.8	794.1	790.6	783.5	780.0	769.3	762.3	740.9	730.4
57.5°	712.6	709.1	712.6	705.5	698.4	691.4	687.8	680.7	670.0	655.9	641.7
60°	634.6	627.5	627.5	624.0	616.9	613.3	606.3	595.6	584.9	570.8	560.2
62.5°	556.6	553.1	549.6	546.0	538.9	535.4	531.9	521.2	510.5	499.9	489.3
65°	482.2	482.2	478.6	471.5	468.0	464.5	460.9	453.8	439.6	432.6	421.9
67.5°	414.8	411.3	411.3	404.2	397.1	393.6	393.6	386.4	375.9	365.2	358.0
70°	347.5	351.0	347.5	343.9	336.8	336.8	329.7	326.2	312.0	308.5	297.8
72.5°	287.1	287.1	283.6	283.6	276.6	273.0	273.0	265.9	258.8	251.7	244.6
75°	230.4	230.4	230.4	226.9	223.4	216.2	216.2	212.7	205.7	198.5	191.5
77.5°	180.8	177.3	177.3	173.7	170.2	166.7	166.7	163.1	156.0	152.5	145.3
80°	131.1	127.6	127.6	127.6	120.6	124.1	120.6	117.0	113.4	109.9	106.4
82.5°	85.1	88.6	88.6	85.1	81.6	81.6	81.6	78.1	78.1	74.4	70.9
85°	49.7	49.7	49.7	49.7	46.1	46.1	46.1	42.5	42.5	42.5	39.0
87.5°	21.3	21.3	21.3	21.3	21.3	21.3	17.7	17.7	17.7	17.7	17.7
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°	2612.9	2612.9	2612.9	2612.9	2612.9	2612.9	2612.9	2612.9	2612.9	2612.9	2612.9
2.5°	2641.2	2634.2	2630.7	2627.0	2627.0	2623.5	2620.0	2612.9	2612.9	2605.8	2602.3
5°	2655.4	2644.9	2637.7	2630.7	2627.0	2620.0	2612.9	2602.3	2598.7	2588.1	2577.5
7.5°	2659.0	2641.2	2634.2	2620.0	2612.9	2605.8	2591.6	2581.0	2566.8	2556.1	2542.0
10°	2644.9	2630.7	2612.9	2595.2	2591.6	2581.0	2559.8	2545.6	2527.8	2513.6	2492.4
12.5°	2623.5	2602.3	2584.5	2563.3	2552.6	2542.0	2520.7	2499.4	2474.7	2449.8	2428.5
15°	2588.1	2563.3	2538.4	2513.6	2499.4	2488.9	2464.0	2439.2	2414.3	2382.4	2361.2
17.5°	2534.9	2506.6	2481.7	2449.8	2435.7	2425.0	2393.1	2364.7	2332.9	2300.9	2279.7
20°	2467.5	2432.1	2403.8	2368.3	2357.6	2339.9	2308.0	2276.1	2240.6	2205.2	2180.4
22.5°	2378.9	2343.4	2311.5	2276.1	2258.3	2240.6	2208.8	2169.7	2134.3	2106.0	2081.1
25°	2276.1	2244.1	2205.2	2173.2	2152.0	2130.7	2095.3	2063.4	2031.4	1988.9	1964.2
27.5°	2162.7	2123.7	2095.3	2052.8	2031.4	2017.2	1978.3	1935.8	1907.4	1868.4	1840.0
30°	2035.1	1999.5	1967.7	1925.1	1903.8	1889.6	1854.2	1815.2	1786.8	1747.8	1719.4
32.5°	1900.3	1861.3	1822.3	1794.0	1769.1	1755.0	1715.9	1691.1	1655.7	1623.8	1591.8
35°	1755.0	1715.9	1687.6	1648.5	1634.4	1620.2	1588.3	1556.4	1524.5	1496.2	1471.3
37.5°	1599.0	1570.6	1538.7	1510.4	1499.7	1485.5	1446.5	1418.1	1393.3	1364.9	1343.7
40°	1446.5	1421.6	1400.4	1372.1	1354.4	1343.7	1315.3	1290.5	1262.1	1244.4	1223.1
42.5°	1308.2	1279.8	1258.6	1237.3	1219.6	1208.9	1184.2	1166.4	1145.2	1127.5	1102.6
45°	1162.9	1148.7	1123.8	1106.1	1095.5	1081.3	1063.6	1042.4	1024.6	1010.4	992.7
47.5°	1035.2	1021.0	1003.3	982.0	975.0	964.3	946.6	932.4	918.3	904.1	886.4
50°	918.3	900.6	886.4	872.2	865.1	854.4	836.7	829.7	819.0	804.8	794.1
52.5°	811.8	797.7	783.5	765.8	762.3	755.1	744.6	730.4	719.7	712.6	705.5
55°	716.2	702.0	691.4	677.2	673.7	666.5	652.3	645.3	638.2	631.1	624.0
57.5°	631.1	616.9	602.8	595.6	588.6	581.4	577.9	567.2	560.2	556.6	549.6
60°	553.1	538.9	528.2	517.7	514.0	510.5	503.5	496.3	489.3	482.2	478.6
62.5°	478.6	464.5	457.3	450.3	443.1	443.1	436.1	429.0	421.9	418.4	411.3
65°	411.3	404.2	393.6	382.9	379.4	379.4	368.7	365.2	361.7	354.5	347.5
67.5°	347.5	340.3	329.7	326.2	322.7	319.1	315.5	308.5	301.3	297.8	290.8
70°	290.8	283.6	276.6	273.0	269.4	265.9	258.8	255.3	248.2	244.6	241.1
72.5°	234.0	230.4	223.4	219.9	216.2	212.7	209.2	205.7	198.5	195.0	191.5
75°	187.9	184.4	177.3	173.7	170.2	170.2	166.7	159.5	156.0	156.0	152.5
77.5°	141.8	138.3	134.8	131.1	127.6	127.6	124.1	120.6	117.0	117.0	113.4
80°	102.8	99.3	95.8	95.8	95.8	92.2	88.6	88.6	85.1	85.1	81.6
82.5°	67.4	67.4	63.9	63.9	63.9	60.2	60.2	56.7	56.7	56.7	56.7
85°	39.0	39.0	39.0	35.5	35.5	35.5	35.5	35.5	35.5	31.9	35.5
87.5°	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	14.2	14.2	14.2
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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2612.9	2612.9	2612.9	2612.9	2612.9	2612.9	2612.9	2612.9	2612.9	2612.9	2612.9
2.5°	2598.7	2595.2	2588.1	2588.1	2581.0	2581.0	2577.5	2573.9	2570.3	2566.8	2563.3
5°	2573.9	2559.8	2552.6	2549.1	2542.0	2538.4	2527.8	2520.7	2517.2	2510.1	2503.0
7.5°	2527.8	2513.6	2499.4	2495.9	2492.4	2478.2	2467.5	2456.9	2449.8	2442.7	2435.7
10°	2474.7	2460.5	2442.7	2435.7	2428.5	2410.8	2396.6	2386.0	2371.8	2357.6	2354.1
12.5°	2410.8	2389.6	2368.3	2361.2	2350.6	2332.9	2318.7	2300.9	2290.3	2272.5	2269.0
15°	2336.4	2311.5	2293.8	2276.1	2269.0	2251.3	2226.4	2212.3	2191.1	2183.9	2166.2
17.5°	2247.8	2222.9	2198.1	2191.1	2180.4	2155.5	2130.7	2113.0	2091.8	2081.1	2070.5
20°	2155.5	2123.7	2098.8	2091.8	2077.6	2056.3	2031.4	2013.7	1996.0	1974.7	1964.2
22.5°	2049.2	2013.7	1992.5	1974.7	1971.2	1946.3	1918.0	1903.8	1889.6	1871.9	1857.7
25°	1932.2	1900.3	1875.4	1861.3	1854.2	1832.9	1811.7	1794.0	1772.6	1762.0	1744.3
27.5°	1811.7	1790.3	1758.5	1744.3	1733.6	1715.9	1691.1	1680.5	1659.2	1645.0	1634.4
30°	1694.7	1662.7	1645.0	1627.3	1616.7	1599.0	1577.6	1567.1	1549.3	1535.1	1524.5
32.5°	1567.1	1545.8	1520.9	1513.9	1499.7	1482.0	1467.8	1450.0	1435.8	1421.6	1418.1
35°	1450.0	1421.6	1396.9	1389.8	1379.1	1361.4	1354.4	1343.7	1326.0	1322.4	1308.2
37.5°	1322.4	1308.2	1279.8	1269.3	1265.6	1251.5	1237.3	1230.2	1219.6	1208.9	1205.4
40°	1201.9	1184.2	1170.0	1159.3	1152.2	1141.6	1127.5	1123.8	1116.8	1102.6	1099.1
42.5°	1088.4	1070.7	1056.6	1052.9	1042.4	1031.7	1024.6	1014.0	1010.4	1006.9	999.8
45°	978.5	967.8	953.7	950.1	946.6	932.4	925.3	918.3	911.1	907.6	900.6
47.5°	879.2	868.6	858.0	854.4	847.4	843.8	833.2	829.7	819.0	815.5	811.8
50°	783.5	776.4	769.3	765.8	758.8	755.1	748.1	740.9	733.9	730.4	726.8
52.5°	698.4	691.4	684.2	680.7	677.2	670.0	663.0	655.9	652.3	648.8	645.3
55°	616.9	609.8	606.3	602.8	599.1	595.6	584.9	581.4	577.9	574.4	567.2
57.5°	542.4	535.4	528.2	528.2	524.7	521.2	514.0	507.0	507.0	499.9	492.8
60°	475.1	468.0	460.9	457.3	453.8	446.8	443.1	439.6	436.1	432.6	425.4
62.5°	404.2	400.6	393.6	393.6	386.4	382.9	379.4	375.9	372.2	365.2	361.7
65°	343.9	340.3	333.3	329.7	329.7	326.2	319.1	315.5	312.0	312.0	308.5
67.5°	287.1	283.6	276.6	273.0	273.0	269.4	265.9	265.9	262.4	258.8	262.4
70°	237.6	230.4	230.4	226.9	226.9	223.4	219.9	219.9	219.9	223.4	223.4
72.5°	187.9	184.4	180.8	180.8	180.8	180.8	177.3	177.3	180.8	184.4	184.4
75°	149.0	145.3	145.3	145.3	141.8	141.8	145.3	145.3	149.0	149.0	149.0
77.5°	109.9	109.9	109.9	109.9	109.9	109.9	113.4	113.4	117.0	117.0	117.0
80°	81.6	81.6	81.6	81.6	81.6	85.1	85.1	85.1	85.1	85.1	88.6
82.5°	56.7	56.7	56.7	56.7	56.7	56.7	56.7	60.2	60.2	60.2	60.2
85°	31.9	35.5	35.5	35.5	35.5	35.5	35.5	35.5	35.5	35.5	35.5
87.5°	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2
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: P584947

CATALOG NUMBER: HC855D010-HM82555830-81WWW

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2612.9	2612.9	2612.9	2612.9	2612.9	2612.9	2612.9	2612.9
2.5°	2559.8	2559.8	2559.8	2563.3	2556.1	2556.1	2556.1	2556.1
5°	2499.4	2495.9	2492.4	2495.9	2488.9	2488.9	2485.2	2485.2
7.5°	2425.0	2421.5	2418.0	2418.0	2410.8	2410.8	2407.3	2403.8
10°	2343.4	2336.4	2339.9	2332.9	2329.2	2325.7	2322.2	2318.7
12.5°	2254.8	2247.8	2244.1	2237.1	2230.0	2226.4	2230.0	2222.9
15°	2159.1	2148.5	2144.9	2137.8	2130.7	2127.2	2127.2	2123.7
17.5°	2052.8	2045.6	2042.1	2035.1	2031.4	2024.4	2020.9	2017.2
20°	1953.5	1935.8	1939.3	1932.2	1928.6	1914.5	1914.5	1918.0
22.5°	1843.6	1832.9	1825.9	1818.7	1815.2	1808.2	1808.2	1804.5
25°	1733.6	1723.1	1719.4	1712.4	1708.9	1701.7	1698.2	1698.2
27.5°	1627.3	1613.1	1613.1	1606.0	1599.0	1595.4	1591.8	1588.3
30°	1513.9	1503.2	1499.7	1499.7	1496.2	1496.2	1485.5	1489.0
32.5°	1407.5	1400.4	1396.9	1389.8	1389.8	1386.2	1386.2	1375.6
35°	1301.2	1290.5	1294.0	1287.0	1283.5	1279.8	1283.5	1279.8
37.5°	1198.4	1191.2	1191.2	1184.2	1184.2	1180.6	1177.0	1184.2
40°	1095.5	1092.0	1088.4	1084.9	1088.4	1084.9	1077.8	1081.3
42.5°	992.7	992.7	989.2	989.2	985.7	985.7	985.7	985.7
45°	900.6	896.9	896.9	893.4	893.4	893.4	893.4	889.9
47.5°	808.3	804.8	804.8	804.8	801.3	801.3	797.7	801.3
50°	719.7	719.7	716.2	716.2	719.7	716.2	712.6	712.6
52.5°	638.2	638.2	634.6	634.6	631.1	627.5	631.1	631.1
55°	563.7	560.2	556.6	556.6	553.1	549.6	549.6	553.1
57.5°	492.8	489.3	485.7	485.7	478.6	475.1	475.1	475.1
60°	425.4	418.4	418.4	414.8	414.8	411.3	411.3	411.3
62.5°	361.7	358.0	358.0	358.0	358.0	354.5	354.5	354.5
65°	308.5	308.5	308.5	312.0	312.0	315.5	315.5	315.5
67.5°	265.9	269.4	269.4	269.4	273.0	273.0	273.0	269.4
70°	226.9	226.9	226.9	230.4	230.4	230.4	230.4	230.4
72.5°	187.9	187.9	187.9	187.9	187.9	187.9	187.9	187.9
75°	149.0	152.5	152.5	152.5	149.0	152.5	152.5	149.0
77.5°	117.0	117.0	117.0	117.0	117.0	117.0	117.0	117.0
80°	88.6	88.6	88.6	88.6	88.6	88.6	88.6	88.6
82.5°	60.2	60.2	60.2	60.2	60.2	60.2	60.2	60.2
85°	35.5	35.5	35.5	35.5	35.5	35.5	35.5	35.5
87.5°	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2
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)