

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: P584980

Luminaire Tested: **HC855D010-HM82555840-81WWBB**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584980
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-HM82555840-81WWBB
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5072.1 lumens
Efficiency: N/A
Efficacy: 97.5 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

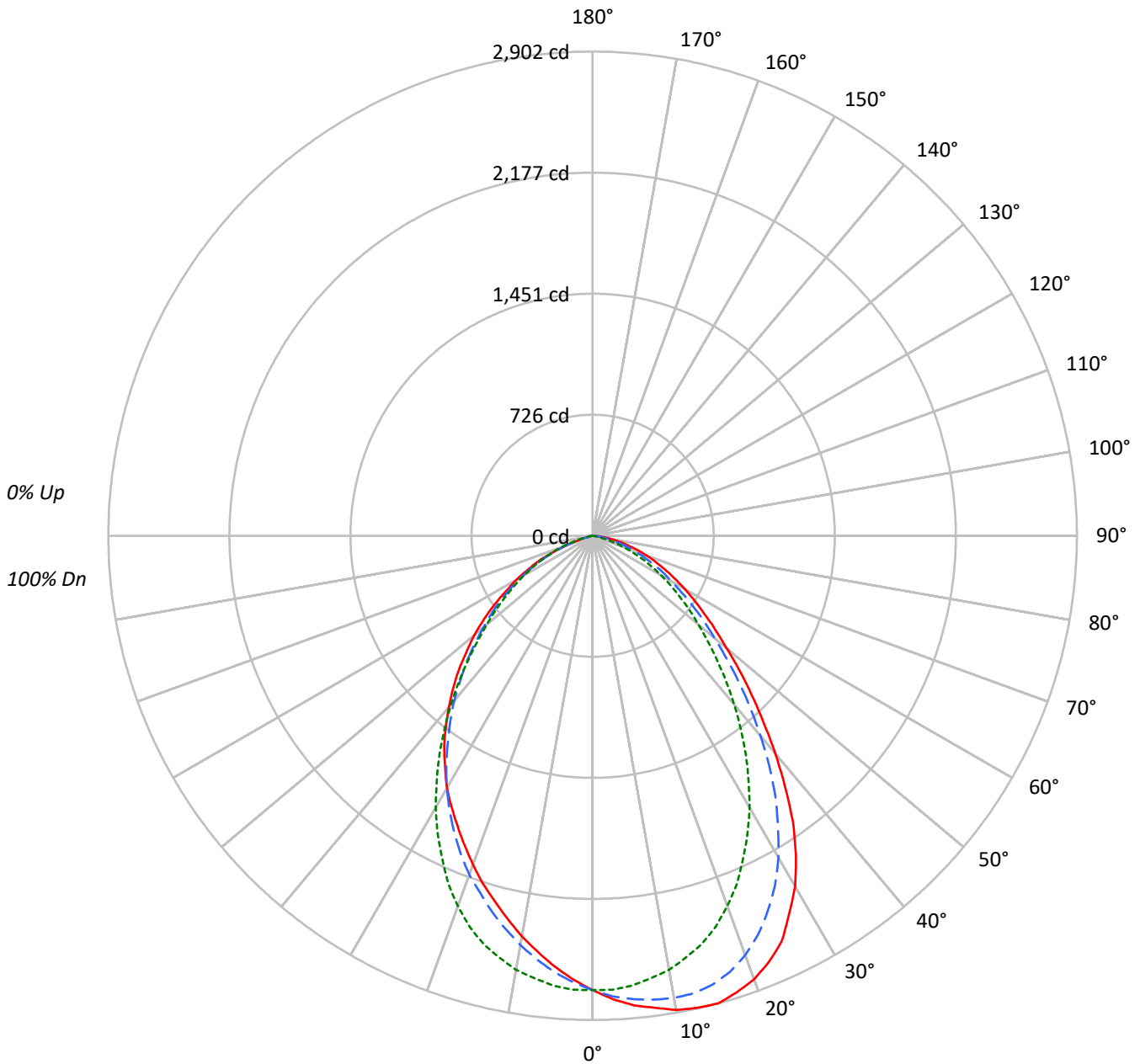
Input Watts (W): 52
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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°	83967	83967	83967
5°	87439	83783	80255
10°	90360	82714	76342
15°	92647	80819	72375
20°	92831	77470	68784
25°	91259	72567	65224
30°	86378	66958	62176
35°	78755	60219	58379
40°	68488	53083	53904
45°	58750	45973	49348
50°	50180	39640	44327
55°	43988	34139	38509
60°	39162	29122	32384
65°	34746	23757	25837
70°	30825	17617	14678
75°	25711	9222	4373
80°	20226	2895	728
85°	14400	1451	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	256.6	5.1
10°-20°	719.1	14.2
20°-30°	1017.9	20.1
30°-40°	1064.9	21.0
40°-50°	888.2	17.5
50°-60°	629.8	12.4
60°-70°	362.8	7.2
70°-80°	116.7	2.3
80°-90°	16.1	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°	1993.6	39.3
0°-40°	3058.5	60.3
0°-60°	4576.5	90.2
0°-90°	5072.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5072.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2723	2723	2723	2723	2723	
5°	2825	2788	2707	2625	2593	271
15°	2902	2784	2532	2332	2267	816
25°	2682	2483	2133	1962	1917	1224
35°	2092	1909	1600	1514	1551	1297
45°	1347	1237	1054	1066	1132	1044
55°	818	733	635	668	716	739
65°	476	399	326	326	354	476
75°	216	159	77	37	37	234
85°	41	20	4	0	0	51
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°	2723.0	2723.0	2723.0	2723.0	2723.0	2723.0	2723.0	2723.0	2723.0	2723.0	2723.0
2.5°	2780.0	2775.9	2771.9	2775.9	2771.9	2775.9	2771.9	2771.9	2767.8	2763.7	2763.7
5°	2824.8	2820.7	2820.7	2820.7	2816.7	2812.6	2812.6	2808.5	2800.4	2796.3	2788.1
7.5°	2853.2	2857.3	2857.3	2857.3	2849.1	2849.1	2841.0	2832.8	2824.8	2816.7	2804.4
10°	2885.8	2885.8	2881.7	2877.6	2869.5	2865.4	2861.4	2853.2	2841.0	2824.8	2812.6
12.5°	2898.0	2898.0	2893.9	2885.8	2881.7	2877.6	2873.6	2861.4	2845.1	2824.8	2808.5
15°	2902.1	2893.9	2889.9	2885.8	2877.6	2865.4	2865.4	2849.1	2828.9	2804.4	2784.1
17.5°	2869.5	2873.6	2865.4	2857.3	2845.1	2836.9	2824.8	2812.6	2788.1	2759.6	2739.3
20°	2828.9	2824.8	2820.7	2808.5	2792.2	2788.1	2775.9	2755.6	2735.2	2702.6	2674.2
22.5°	2763.7	2759.6	2751.5	2743.3	2727.0	2718.9	2706.7	2682.2	2653.8	2621.3	2588.7
25°	2682.2	2674.2	2662.0	2645.7	2633.5	2625.3	2609.0	2584.6	2552.0	2515.5	2482.9
27.5°	2552.0	2564.2	2556.1	2531.6	2519.4	2503.2	2499.2	2466.6	2438.1	2401.4	2364.9
30°	2425.9	2425.9	2413.6	2401.4	2381.2	2368.8	2352.6	2328.2	2299.7	2254.9	2226.4
32.5°	2267.1	2263.0	2246.7	2242.7	2226.4	2202.0	2198.0	2165.4	2136.9	2104.3	2067.6
35°	2092.1	2083.9	2067.6	2055.5	2047.4	2035.2	2022.9	1994.4	1965.9	1933.3	1909.0
37.5°	1892.7	1892.7	1888.6	1868.3	1860.1	1852.0	1839.8	1811.2	1795.0	1762.5	1738.0
40°	1701.4	1697.3	1685.1	1681.0	1672.9	1660.6	1652.5	1636.2	1611.9	1587.4	1563.0
42.5°	1514.1	1518.2	1501.9	1506.0	1489.7	1481.5	1477.5	1453.0	1440.9	1416.5	1396.1
45°	1347.2	1343.2	1335.0	1330.9	1322.8	1314.6	1306.5	1294.4	1274.0	1249.6	1237.4
47.5°	1192.6	1180.3	1180.3	1176.3	1172.2	1155.9	1151.8	1139.7	1127.5	1103.1	1086.8
50°	1046.0	1046.0	1046.0	1042.0	1029.7	1025.7	1017.5	1005.3	993.2	976.9	952.5
52.5°	928.0	928.0	928.0	924.0	907.7	903.6	899.5	883.2	866.9	854.7	838.4
55°	818.2	822.2	818.2	810.0	797.8	797.8	785.6	777.4	761.1	748.9	732.6
57.5°	724.5	724.5	716.3	712.3	704.1	700.0	691.9	683.7	663.5	651.3	630.9
60°	635.0	630.9	630.9	622.8	614.6	606.5	602.4	590.2	582.0	561.7	545.4
62.5°	553.5	553.5	545.4	545.4	529.2	529.2	525.1	512.9	500.7	480.3	472.2
65°	476.2	476.2	472.2	468.1	455.9	451.8	447.7	435.5	423.3	411.1	398.8
67.5°	407.0	407.0	398.8	394.8	386.6	382.7	374.5	366.4	354.1	341.9	329.7
70°	341.9	337.9	333.8	329.7	321.6	317.5	309.3	301.2	289.0	280.8	268.6
72.5°	276.8	276.8	272.7	264.5	260.5	256.4	252.3	244.2	232.1	219.8	211.7
75°	215.8	215.8	215.8	207.6	199.5	195.4	195.4	187.3	179.1	166.9	158.7
77.5°	166.9	162.8	158.7	158.7	150.6	146.5	142.5	138.4	126.2	122.1	113.9
80°	113.9	118.0	113.9	109.9	105.8	101.7	101.7	93.6	89.5	81.5	73.2
82.5°	77.4	73.2	73.2	69.1	69.1	65.2	65.2	57.0	52.9	48.9	44.8
85°	40.7	40.7	36.7	36.7	36.7	32.6	32.6	28.5	28.5	24.4	20.4
87.5°	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2	8.1	8.1	8.1
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°	2723.0	2723.0	2723.0	2723.0	2723.0	2723.0	2723.0	2723.0	2723.0	2723.0	2723.0
2.5°	2759.6	2751.5	2747.4	2747.4	2743.3	2739.3	2735.2	2731.1	2723.0	2723.0	2714.8
5°	2780.0	2771.9	2767.8	2755.6	2747.4	2747.4	2731.1	2727.0	2714.8	2706.7	2698.5
7.5°	2796.3	2780.0	2767.8	2755.6	2747.4	2739.3	2723.0	2706.7	2690.4	2674.2	2666.1
10°	2796.3	2780.0	2759.6	2739.3	2731.1	2723.0	2702.6	2678.3	2657.9	2641.6	2621.3
12.5°	2788.1	2763.7	2739.3	2723.0	2706.7	2694.5	2670.1	2645.7	2621.3	2588.7	2572.4
15°	2763.7	2731.1	2706.7	2678.3	2666.1	2645.7	2625.3	2588.7	2560.2	2531.6	2511.4
17.5°	2714.8	2674.2	2645.7	2617.2	2596.8	2584.6	2552.0	2519.4	2486.9	2454.4	2429.9
20°	2641.6	2605.0	2572.4	2535.7	2519.4	2503.2	2462.5	2429.9	2397.3	2360.8	2336.3
22.5°	2552.0	2515.5	2470.7	2442.1	2417.7	2397.3	2360.8	2324.1	2291.5	2259.0	2226.4
25°	2442.1	2405.5	2364.9	2320.1	2303.8	2283.4	2242.7	2206.1	2169.5	2132.8	2104.3
27.5°	2324.1	2275.3	2242.7	2193.9	2177.6	2157.2	2112.4	2071.7	2039.2	2010.7	1978.1
30°	2181.7	2145.0	2100.2	2055.5	2039.2	2018.9	1982.2	1945.5	1913.1	1880.5	1847.9
32.5°	2027.0	1990.4	1945.5	1913.1	1888.6	1872.3	1835.7	1803.1	1770.5	1738.0	1709.5
35°	1864.2	1823.5	1790.9	1758.4	1738.0	1717.7	1681.0	1652.5	1628.1	1599.7	1571.1
37.5°	1697.3	1668.8	1636.2	1599.7	1579.3	1563.0	1534.5	1501.9	1481.5	1457.1	1436.8
40°	1534.5	1501.9	1473.4	1440.9	1424.6	1412.4	1383.9	1359.5	1339.1	1318.7	1306.5
42.5°	1367.6	1339.1	1310.6	1290.3	1278.1	1265.9	1245.5	1217.0	1204.8	1184.4	1172.2
45°	1212.9	1188.5	1168.1	1139.7	1131.6	1123.4	1099.0	1078.6	1066.4	1054.2	1046.0
47.5°	1066.4	1050.1	1025.7	1009.4	997.3	989.1	972.8	956.5	944.3	936.2	928.0
50°	940.2	919.9	903.6	887.3	879.1	866.9	850.6	842.6	834.3	826.3	826.3
52.5°	822.2	801.9	785.6	773.4	765.2	757.1	744.8	740.8	732.6	732.6	728.6
55°	712.3	700.0	683.7	667.6	663.5	659.4	651.3	643.1	639.0	635.0	639.0
57.5°	618.7	606.5	590.2	578.0	573.9	569.8	565.7	557.6	553.5	553.5	553.5
60°	533.3	521.0	508.8	496.6	496.6	488.4	484.4	480.3	476.2	472.2	472.2
62.5°	455.9	443.6	431.4	423.3	419.2	415.1	407.0	402.9	398.8	398.8	394.8
65°	386.6	370.4	366.4	354.1	350.1	346.0	341.9	333.8	329.7	325.6	321.6
67.5°	317.5	309.3	297.1	289.0	284.9	280.8	276.8	268.6	264.5	260.5	252.3
70°	256.4	248.2	240.1	232.1	228.0	223.9	215.8	207.6	203.5	195.4	183.2
72.5°	199.5	191.3	183.2	175.0	171.0	166.9	158.7	150.6	142.5	134.3	126.2
75°	150.6	142.5	130.2	122.1	118.0	118.0	105.8	97.6	89.5	77.4	69.1
77.5°	105.8	93.6	89.5	81.5	77.4	69.1	61.1	52.9	44.8	40.7	32.6
80°	69.1	61.1	52.9	48.9	44.8	40.7	36.7	28.5	20.4	16.3	12.2
82.5°	40.7	36.7	32.6	28.5	24.4	20.4	16.3	16.3	12.2	8.1	4.1
85°	20.4	16.3	12.2	12.2	8.1	8.1	8.1	4.1	4.1	4.1	4.1
87.5°	8.1	4.1	4.1	4.1	4.1	4.1	4.1	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°	2723.0	2723.0	2723.0	2723.0	2723.0	2723.0	2723.0	2723.0	2723.0	2723.0	2723.0
2.5°	2710.8	2706.7	2702.6	2698.5	2698.5	2690.4	2690.4	2686.3	2678.3	2674.2	2674.2
5°	2686.3	2674.2	2666.1	2662.0	2657.9	2645.7	2641.6	2633.5	2625.3	2617.2	2613.1
7.5°	2649.8	2629.4	2621.3	2617.2	2605.0	2592.7	2584.6	2572.4	2560.2	2547.9	2543.9
10°	2605.0	2584.6	2564.2	2556.1	2543.9	2535.7	2519.4	2503.2	2491.0	2478.8	2466.6
12.5°	2547.9	2523.6	2503.2	2495.1	2482.9	2466.6	2442.1	2434.0	2413.6	2405.5	2389.2
15°	2482.9	2454.4	2434.0	2421.8	2409.6	2385.1	2368.8	2352.6	2332.3	2324.1	2307.8
17.5°	2401.4	2368.8	2348.6	2336.3	2328.2	2307.8	2283.4	2263.0	2242.7	2234.5	2222.3
20°	2303.8	2283.4	2254.9	2242.7	2234.5	2210.2	2185.8	2177.6	2161.3	2145.0	2132.8
22.5°	2193.9	2173.5	2145.0	2132.8	2128.7	2108.4	2088.0	2075.8	2063.7	2051.4	2039.2
25°	2079.9	2055.5	2031.1	2022.9	2014.8	1998.5	1982.2	1974.1	1961.8	1953.7	1945.5
27.5°	1957.8	1933.3	1913.1	1900.7	1892.7	1880.5	1872.3	1864.2	1856.0	1847.9	1843.8
30°	1827.5	1803.1	1786.8	1778.7	1770.5	1766.4	1754.2	1750.3	1746.2	1738.0	1742.1
32.5°	1697.3	1676.9	1660.6	1648.4	1648.4	1640.3	1636.2	1636.2	1632.1	1632.1	1632.1
35°	1554.9	1542.6	1530.4	1526.3	1522.3	1518.2	1514.1	1518.2	1514.1	1518.2	1522.3
37.5°	1424.6	1412.4	1404.3	1400.2	1396.1	1400.2	1396.1	1396.1	1400.2	1408.3	1412.4
40°	1290.3	1282.2	1274.0	1278.1	1274.0	1274.0	1274.0	1286.2	1290.3	1294.4	1298.5
42.5°	1164.1	1155.9	1151.8	1151.8	1155.9	1151.8	1160.0	1164.1	1172.2	1184.4	1192.6
45°	1042.0	1037.9	1037.9	1042.0	1037.9	1046.0	1046.0	1054.2	1066.4	1074.5	1082.7
47.5°	928.0	928.0	928.0	932.1	932.1	936.2	944.3	948.4	956.5	964.7	972.8
50°	822.2	826.3	830.4	830.4	830.4	838.4	846.7	850.6	854.7	858.8	871.0
52.5°	728.6	732.6	732.6	736.7	740.8	744.8	748.9	757.1	761.1	769.3	773.4
55°	639.0	639.0	647.2	651.3	651.3	651.3	659.4	659.4	667.6	671.6	679.8
57.5°	553.5	557.6	557.6	561.7	561.7	565.7	569.8	573.9	578.0	582.0	586.1
60°	472.2	472.2	472.2	476.2	480.3	484.4	480.3	488.4	488.4	496.6	500.7
62.5°	394.8	398.8	398.8	398.8	398.8	398.8	398.8	402.9	407.0	411.1	415.1
65°	321.6	321.6	321.6	317.5	321.6	317.5	321.6	325.6	325.6	329.7	333.8
67.5°	248.2	248.2	240.1	240.1	244.2	244.2	244.2	244.2	240.1	248.2	248.2
70°	179.1	175.0	171.0	166.9	166.9	162.8	162.8	158.7	158.7	158.7	158.7
72.5°	118.0	109.9	101.7	97.6	93.6	93.6	85.4	81.5	85.4	85.4	85.4
75°	61.1	52.9	48.9	44.8	40.7	40.7	36.7	36.7	36.7	36.7	36.7
77.5°	24.4	20.4	16.3	16.3	12.2	12.2	12.2	12.2	12.2	12.2	12.2
80°	8.1	8.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
82.5°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
85°	4.1	0.0	0.0	4.1	0.0	4.1	4.1	4.1	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: P584980

CATALOG NUMBER: HC855D010-HM82555840-81WWBB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2723.0	2723.0	2723.0	2723.0	2723.0	2723.0	2723.0	2723.0
2.5°	2670.1	2670.1	2666.1	2670.1	2662.0	2666.1	2662.0	2662.0
5°	2609.0	2600.9	2600.9	2600.9	2596.8	2596.8	2592.7	2592.7
7.5°	2535.7	2531.6	2527.7	2523.6	2519.4	2515.5	2515.5	2515.5
10°	2462.5	2454.4	2454.4	2450.3	2442.1	2438.1	2438.1	2438.1
12.5°	2377.1	2372.9	2368.8	2368.8	2352.6	2356.7	2352.6	2352.6
15°	2295.6	2291.5	2291.5	2279.3	2271.2	2271.2	2271.2	2267.1
17.5°	2210.2	2206.1	2202.0	2193.9	2185.8	2185.8	2181.7	2185.8
20°	2120.6	2116.5	2108.4	2108.4	2104.3	2100.2	2092.1	2096.1
22.5°	2031.1	2022.9	2018.9	2018.9	2014.8	2014.8	2006.6	2006.6
25°	1937.4	1933.3	1929.3	1933.3	1925.2	1925.2	1917.0	1917.0
27.5°	1839.8	1835.7	1835.7	1835.7	1831.6	1835.7	1831.6	1831.6
30°	1742.1	1742.1	1738.0	1738.0	1742.1	1738.0	1742.1	1746.2
32.5°	1636.2	1636.2	1640.3	1640.3	1644.4	1644.4	1644.4	1644.4
35°	1526.3	1534.5	1534.5	1538.6	1542.6	1546.7	1546.7	1550.8
37.5°	1424.6	1428.7	1432.8	1436.8	1445.0	1445.0	1445.0	1445.0
40°	1314.6	1318.7	1326.9	1322.8	1339.1	1343.2	1339.1	1339.1
42.5°	1200.7	1208.9	1212.9	1221.1	1225.1	1233.3	1237.4	1237.4
45°	1094.9	1099.0	1107.1	1115.3	1119.3	1131.6	1131.6	1131.6
47.5°	984.9	993.2	997.3	1005.3	1009.4	1021.6	1025.7	1021.6
50°	879.1	887.3	895.4	895.4	907.7	911.7	919.9	924.0
52.5°	777.4	781.5	789.6	793.7	801.9	810.0	814.1	818.2
55°	679.8	683.7	691.9	691.9	704.1	708.2	716.3	716.3
57.5°	590.2	594.2	602.4	598.3	606.5	614.6	614.6	610.5
60°	504.7	504.7	504.7	512.9	517.0	521.0	525.1	525.1
62.5°	415.1	423.3	427.4	427.4	431.4	435.5	435.5	431.4
65°	333.8	341.9	346.0	346.0	350.1	350.1	350.1	354.1
67.5°	252.3	252.3	252.3	256.4	252.3	252.3	252.3	252.3
70°	158.7	158.7	158.7	158.7	154.7	158.7	158.7	162.8
72.5°	85.4	85.4	85.4	85.4	85.4	85.4	85.4	85.4
75°	36.7	36.7	36.7	40.7	36.7	36.7	36.7	36.7
77.5°	16.3	12.2	16.3	16.3	12.2	12.2	12.2	12.2
80°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
82.5°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
85°	0.0	4.1	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



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— 0°-180° - - 45°-225° - - - - 90°-270°













(END OF REPORT)