

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: P593837

Luminaire Tested: **HC855D010-HM82555850-81WWW**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P593837
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-HM82555850-81WWW
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5536.2 lumens
Efficiency: N/A
Efficacy: 106.5 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

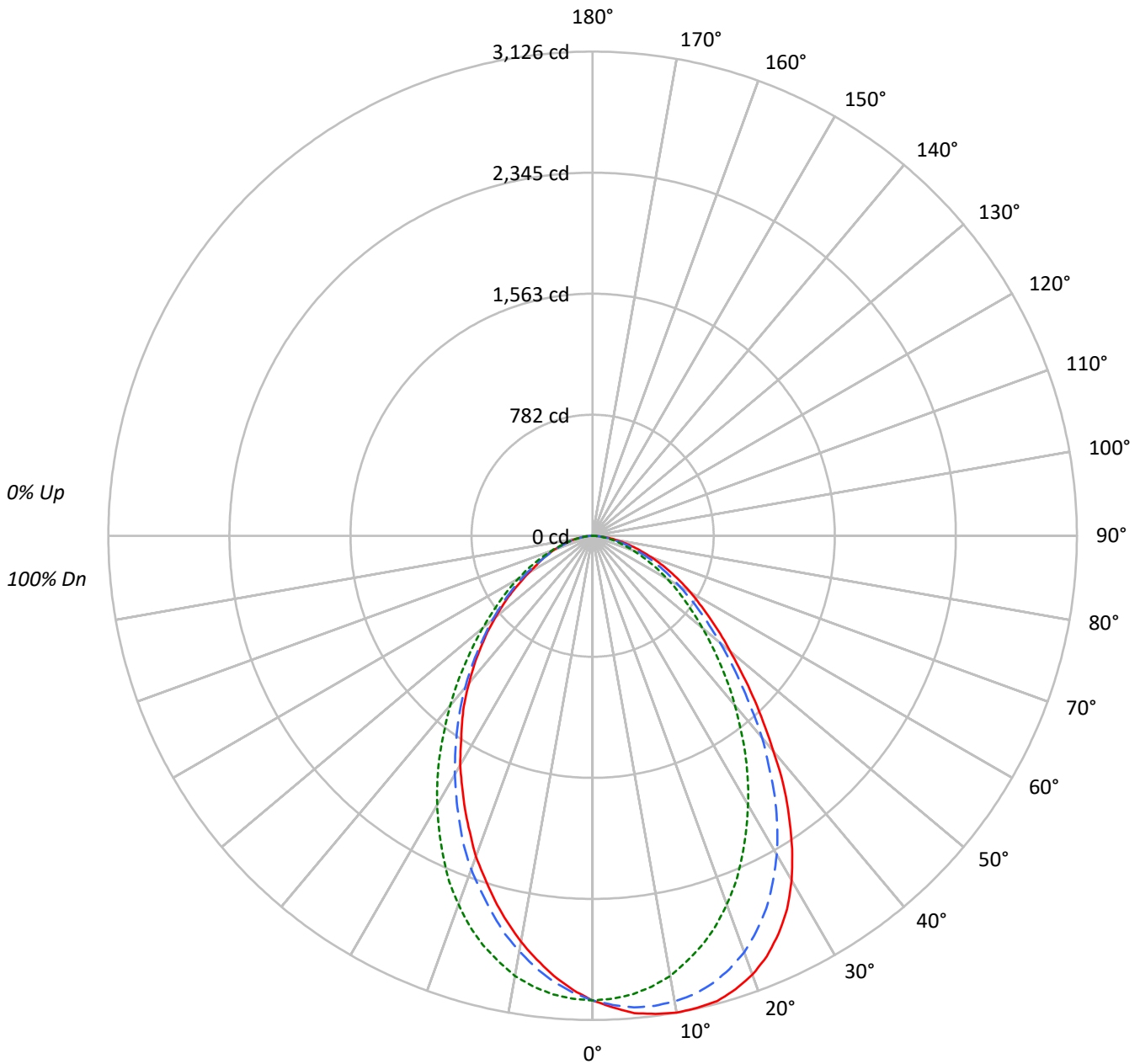
Input Watts (W): 52
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P593837

CATALOG NUMBER: HC855D010-HM82555850-81WWW

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°	92500	92500	92500
5°	95753	91974	88318
10°	97881	90360	83353
15°	99274	87319	77834
20°	98971	83075	72259
25°	96523	77691	66333
30°	91449	71448	60870
35°	83201	64661	55311
40°	73073	57511	49971
45°	63722	50587	44551
50°	55452	44322	39247
55°	49455	38950	34139
60°	44929	34136	29122
65°	40386	29697	26435
70°	35956	25317	23847
75°	31513	21338	20373
80°	26743	17332	18060
85°	20167	12985	14400



TEST NUMBER: P593837

CATALOG NUMBER: HC855D010-HM82555850-81WWW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	281.0	5.1
10°-20°	774.2	14.0
20°-30°	1074.6	19.4
30°-40°	1111.0	20.1
40°-50°	930.3	16.8
50°-60°	675.3	12.2
60°-70°	426.2	7.7
70°-80°	211.1	3.8
80°-90°	52.5	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°	2129.8	38.5
0°-40°	3240.8	58.5
0°-60°	4846.4	87.5
0°-90°	5536.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5536.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3000	3000	3000	3000	3000	
5°	3093	3057	2971	2890	2853	296
15°	3110	2992	2735	2515	2438	875
25°	2837	2654	2283	2035	1950	1300
35°	2210	2047	1718	1522	1469	1376
45°	1461	1355	1160	1046	1022	1130
55°	920	838	724	664	635	830
65°	554	484	407	358	362	552
75°	264	220	179	171	171	284
85°	57	45	37	41	41	69
90°	0	0	0	0	0	



TEST NUMBER: P593837

CATALOG NUMBER: HC855D010-HM82555850-81WWW

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2999.7	2999.7	2999.7	2999.7	2999.7	2999.7	2999.7	2999.7	2999.7	2999.7	2999.7
2.5°	3048.6	3048.6	3052.7	3048.6	3048.6	3048.6	3044.5	3044.5	3040.4	3040.4	3032.3
5°	3093.4	3085.2	3093.4	3085.2	3085.2	3085.2	3081.2	3073.0	3069.0	3060.8	3056.7
7.5°	3113.8	3109.7	3109.7	3105.6	3105.6	3101.5	3097.5	3093.4	3077.1	3073.0	3060.8
10°	3126.0	3121.9	3121.9	3117.8	3109.7	3109.7	3101.5	3097.5	3077.1	3069.0	3052.7
12.5°	3121.9	3121.9	3121.9	3117.8	3105.6	3101.5	3093.4	3081.2	3064.9	3048.6	3032.3
15°	3109.7	3109.7	3101.5	3097.5	3085.2	3077.1	3073.0	3052.7	3036.4	3016.0	2991.6
17.5°	3069.0	3069.0	3064.9	3056.7	3044.5	3036.4	3028.2	3007.9	2991.6	2959.1	2934.6
20°	3016.0	3011.9	3007.9	2995.6	2983.4	2979.3	2967.2	2938.7	2918.4	2893.9	2861.3
22.5°	2938.7	2934.6	2930.6	2922.4	2902.1	2893.9	2885.8	2865.4	2828.9	2804.4	2763.7
25°	2836.9	2836.9	2828.9	2816.6	2796.3	2788.1	2775.9	2755.5	2723.0	2686.3	2653.8
27.5°	2718.9	2714.8	2702.6	2694.4	2678.3	2665.9	2645.7	2621.2	2588.7	2560.1	2519.4
30°	2568.3	2568.3	2560.1	2547.9	2527.7	2519.4	2503.2	2474.7	2442.1	2405.5	2377.1
32.5°	2397.3	2397.3	2385.1	2377.1	2364.7	2344.5	2340.4	2307.8	2279.3	2250.8	2218.2
35°	2210.2	2214.1	2206.1	2189.8	2169.4	2169.4	2161.3	2132.8	2100.2	2071.7	2047.4
37.5°	2022.9	2010.7	2006.6	1998.5	1986.3	1970.0	1961.8	1949.6	1921.1	1900.7	1864.2
40°	1815.3	1819.4	1811.2	1803.1	1799.0	1786.8	1782.7	1762.5	1742.1	1717.7	1701.4
42.5°	1628.1	1628.1	1628.1	1619.9	1611.9	1599.5	1595.6	1583.4	1558.9	1542.6	1518.2
45°	1461.2	1448.9	1448.9	1445.0	1440.9	1432.8	1420.5	1412.4	1396.1	1383.9	1355.4
47.5°	1298.3	1302.4	1298.3	1294.4	1282.2	1278.1	1274.0	1257.7	1241.4	1229.2	1208.8
50°	1155.9	1164.0	1155.9	1155.9	1147.9	1143.8	1135.6	1123.4	1111.2	1090.8	1070.5
52.5°	1037.9	1037.9	1033.8	1029.7	1017.5	1009.4	1005.3	1001.2	981.0	964.7	948.4
55°	919.9	923.9	923.9	911.7	907.7	899.5	895.4	883.2	875.1	850.6	838.4
57.5°	818.1	814.1	818.1	810.0	801.9	793.7	789.6	781.5	769.3	753.0	736.7
60°	728.5	720.4	720.4	716.3	708.2	704.1	696.1	683.7	671.6	655.3	643.1
62.5°	639.0	635.0	630.9	626.8	618.7	614.6	610.5	598.3	586.1	573.9	561.7
65°	553.5	553.5	549.4	541.3	537.2	533.1	529.2	521.0	504.7	496.6	484.4
67.5°	476.2	472.2	472.2	464.0	455.9	451.8	451.8	443.6	431.4	419.2	411.1
70°	398.8	402.9	398.8	394.8	386.6	386.6	378.6	374.5	358.2	354.1	341.9
72.5°	329.7	329.7	325.6	325.6	317.5	313.4	313.4	305.3	297.1	289.0	280.8
75°	264.5	264.5	264.5	260.5	256.4	248.2	248.2	244.2	236.0	228.0	219.8
77.5°	207.6	203.5	203.5	199.5	195.4	191.3	191.3	187.3	179.1	175.0	166.9
80°	150.6	146.5	146.5	146.5	138.4	142.5	138.4	134.3	130.2	126.2	122.1
82.5°	97.6	101.7	101.7	97.6	93.6	93.6	93.6	89.5	89.5	85.4	81.5
85°	57.0	57.0	57.0	57.0	52.9	52.9	52.9	48.9	48.9	48.9	44.8
87.5°	24.4	24.4	24.4	24.4	24.4	24.4	20.4	20.4	20.4	20.4	20.4
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: P593837

CATALOG NUMBER: HC855D010-HM82555850-81WWW

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2999.7	2999.7	2999.7	2999.7	2999.7	2999.7	2999.7	2999.7	2999.7	2999.7	2999.7
2.5°	3032.3	3024.2	3020.1	3016.0	3016.0	3011.9	3007.9	2999.7	2999.7	2991.6	2987.5
5°	3048.6	3036.4	3028.2	3020.1	3016.0	3007.9	2999.7	2987.5	2983.4	2971.3	2959.1
7.5°	3052.7	3032.3	3024.2	3007.9	2999.7	2991.6	2975.4	2963.2	2946.9	2934.6	2918.4
10°	3036.4	3020.1	2999.7	2979.3	2975.4	2963.2	2938.7	2922.4	2902.1	2885.8	2861.3
12.5°	3011.9	2987.5	2967.2	2942.8	2930.6	2918.4	2893.9	2869.5	2841.0	2812.6	2788.1
15°	2971.3	2942.8	2914.3	2885.8	2869.5	2857.3	2828.9	2800.3	2771.8	2735.2	2710.7
17.5°	2910.2	2877.6	2849.1	2812.6	2796.3	2784.1	2747.4	2714.8	2678.3	2641.6	2617.2
20°	2832.8	2792.2	2759.6	2718.9	2706.7	2686.3	2649.7	2613.1	2572.4	2531.6	2503.2
22.5°	2731.1	2690.4	2653.8	2613.1	2592.7	2572.4	2535.7	2491.0	2450.3	2417.7	2389.2
25°	2613.1	2576.4	2531.6	2495.1	2470.6	2446.2	2405.5	2368.8	2332.3	2283.4	2254.9
27.5°	2482.9	2438.1	2405.5	2356.7	2332.3	2316.0	2271.2	2222.3	2189.8	2145.0	2112.4
30°	2336.3	2295.6	2258.9	2210.2	2185.7	2169.4	2128.7	2083.9	2051.4	2006.6	1974.0
32.5°	2181.7	2136.9	2092.1	2059.6	2031.1	2014.8	1970.0	1941.5	1900.7	1864.2	1827.5
35°	2014.8	1970.0	1937.4	1892.7	1876.4	1860.1	1823.5	1786.8	1750.1	1717.7	1689.1
37.5°	1835.7	1803.1	1766.4	1733.9	1721.7	1705.4	1660.6	1628.1	1599.5	1567.1	1542.6
40°	1660.6	1632.1	1607.7	1575.2	1554.8	1542.6	1510.0	1481.5	1448.9	1428.7	1404.2
42.5°	1501.9	1469.3	1445.0	1420.5	1400.2	1388.0	1359.4	1339.1	1314.6	1294.4	1265.9
45°	1335.0	1318.7	1290.3	1269.9	1257.7	1241.4	1221.1	1196.6	1176.3	1160.0	1139.7
47.5°	1188.5	1172.2	1151.8	1127.5	1119.3	1107.1	1086.8	1070.5	1054.2	1037.9	1017.5
50°	1054.2	1033.8	1017.5	1001.2	993.2	981.0	960.6	952.5	940.2	923.9	911.7
52.5°	932.1	915.8	899.5	879.1	875.1	866.9	854.7	838.4	826.3	818.1	810.0
55°	822.2	805.9	793.7	777.4	773.3	765.2	748.9	740.8	732.6	724.5	716.3
57.5°	724.5	708.2	691.9	683.7	675.7	667.6	663.5	651.3	643.1	639.0	630.9
60°	635.0	618.7	606.5	594.2	590.2	586.1	577.9	569.8	561.7	553.5	549.4
62.5°	549.4	533.1	525.1	517.0	508.8	508.8	500.7	492.5	484.4	480.3	472.2
65°	472.2	464.0	451.8	439.6	435.5	435.5	423.3	419.2	415.1	407.0	398.8
67.5°	398.8	390.7	378.6	374.5	370.4	366.4	362.3	354.1	346.0	341.9	333.8
70°	333.8	325.6	317.5	313.4	309.3	305.3	297.1	293.0	284.9	280.8	276.8
72.5°	268.6	264.5	256.4	252.3	248.2	244.2	240.1	236.0	228.0	223.9	219.8
75°	215.8	211.7	203.5	199.5	195.4	195.4	191.3	183.2	179.1	179.1	175.0
77.5°	162.8	158.7	154.7	150.6	146.5	146.5	142.5	138.4	134.3	134.3	130.2
80°	118.0	113.9	109.9	109.9	109.9	105.8	101.7	101.7	97.6	97.6	93.6
82.5°	77.4	77.4	73.2	73.2	73.2	69.1	69.1	65.2	65.2	65.2	65.2
85°	44.8	44.8	44.8	40.7	40.7	40.7	40.7	40.7	40.7	36.7	40.7
87.5°	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	16.3	16.3	16.3
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: P593837

CATALOG NUMBER: HC855D010-HM82555850-81WWW

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2999.7	2999.7	2999.7	2999.7	2999.7	2999.7	2999.7	2999.7	2999.7	2999.7	2999.7
2.5°	2983.4	2979.3	2971.3	2971.3	2963.2	2963.2	2959.1	2955.0	2950.9	2946.9	2942.8
5°	2955.0	2938.7	2930.6	2926.5	2918.4	2914.3	2902.1	2893.9	2889.8	2881.7	2873.6
7.5°	2902.1	2885.8	2869.5	2865.4	2861.3	2845.0	2832.8	2820.7	2812.6	2804.4	2796.3
10°	2841.0	2824.8	2804.4	2796.3	2788.1	2767.8	2751.5	2739.2	2723.0	2706.7	2702.6
12.5°	2767.8	2743.3	2718.9	2710.7	2698.5	2678.3	2662.0	2641.6	2629.4	2609.0	2604.9
15°	2682.2	2653.8	2633.5	2613.1	2604.9	2584.6	2556.1	2539.8	2515.3	2507.3	2486.9
17.5°	2580.5	2552.0	2523.6	2515.3	2503.2	2474.7	2446.2	2425.8	2401.4	2389.2	2377.1
20°	2474.7	2438.1	2409.5	2401.4	2385.1	2360.8	2332.3	2311.9	2291.5	2267.1	2254.9
22.5°	2352.6	2311.9	2287.5	2267.1	2263.0	2234.5	2202.0	2185.7	2169.4	2149.1	2132.8
25°	2218.2	2181.7	2153.2	2136.9	2128.7	2104.3	2079.8	2059.6	2035.1	2022.9	2002.6
27.5°	2079.8	2055.5	2018.8	2002.6	1990.3	1970.0	1941.5	1929.2	1904.9	1888.6	1876.4
30°	1945.5	1909.0	1888.6	1868.3	1856.0	1835.7	1811.2	1799.0	1778.6	1762.5	1750.1
32.5°	1799.0	1774.6	1746.2	1738.0	1721.7	1701.4	1685.1	1664.7	1648.4	1632.1	1628.1
35°	1664.7	1632.1	1603.6	1595.6	1583.4	1563.0	1554.8	1542.6	1522.3	1518.2	1501.9
37.5°	1518.2	1501.9	1469.3	1457.1	1453.0	1436.8	1420.5	1412.4	1400.2	1388.0	1383.9
40°	1379.8	1359.4	1343.2	1330.9	1322.8	1310.6	1294.4	1290.3	1282.2	1265.9	1261.8
42.5°	1249.6	1229.2	1212.9	1208.8	1196.6	1184.4	1176.3	1164.0	1160.0	1155.9	1147.9
45°	1123.4	1111.2	1094.9	1090.8	1086.8	1070.5	1062.3	1054.2	1046.0	1042.0	1033.8
47.5°	1009.4	997.3	984.9	981.0	972.8	968.7	956.5	952.5	940.2	936.2	932.1
50°	899.5	891.4	883.2	879.1	871.0	866.9	858.8	850.6	842.6	838.4	834.3
52.5°	801.9	793.7	785.6	781.5	777.4	769.3	761.1	753.0	748.9	744.8	740.8
55°	708.2	700.0	696.1	691.9	687.8	683.7	671.6	667.6	663.5	659.4	651.3
57.5°	622.8	614.6	606.5	606.5	602.4	598.3	590.2	582.0	582.0	573.9	565.7
60°	545.4	537.2	529.2	525.1	521.0	512.9	508.8	504.7	500.7	496.6	488.4
62.5°	464.0	459.9	451.8	451.8	443.6	439.6	435.5	431.4	427.4	419.2	415.1
65°	394.8	390.7	382.7	378.6	378.6	374.5	366.4	362.3	358.2	358.2	354.1
67.5°	329.7	325.6	317.5	313.4	313.4	309.3	305.3	305.3	301.2	297.1	301.2
70°	272.7	264.5	264.5	260.5	260.5	256.4	252.3	252.3	252.3	256.4	256.4
72.5°	215.8	211.7	207.6	207.6	207.6	207.6	203.5	203.5	207.6	211.7	211.7
75°	171.0	166.9	166.9	166.9	162.8	162.8	166.9	166.9	171.0	171.0	171.0
77.5°	126.2	126.2	126.2	126.2	126.2	126.2	130.2	130.2	134.3	134.3	134.3
80°	93.6	93.6	93.6	93.6	93.6	97.6	97.6	97.6	97.6	97.6	101.7
82.5°	65.2	65.2	65.2	65.2	65.2	65.2	65.2	69.1	69.1	69.1	69.1
85°	36.7	40.7	40.7	40.7	40.7	40.7	40.7	40.7	40.7	40.7	40.7
87.5°	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3
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: P593837

CATALOG NUMBER: HC855D010-HM82555850-81WWW

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2999.7	2999.7	2999.7	2999.7	2999.7	2999.7	2999.7	2999.7
2.5°	2938.7	2938.7	2938.7	2942.8	2934.6	2934.6	2934.6	2934.6
5°	2869.5	2865.4	2861.3	2865.4	2857.3	2857.3	2853.2	2853.2
7.5°	2784.1	2780.0	2775.9	2775.9	2767.8	2767.8	2763.7	2759.6
10°	2690.4	2682.2	2686.3	2678.3	2674.2	2670.1	2665.9	2662.0
12.5°	2588.7	2580.5	2576.4	2568.3	2560.1	2556.1	2560.1	2552.0
15°	2478.8	2466.6	2462.5	2454.3	2446.2	2442.1	2442.1	2438.1
17.5°	2356.7	2348.6	2344.5	2336.3	2332.3	2324.1	2320.0	2316.0
20°	2242.7	2222.3	2226.4	2218.2	2214.1	2198.0	2198.0	2202.0
22.5°	2116.5	2104.3	2096.1	2088.0	2083.9	2075.8	2075.8	2071.7
25°	1990.3	1978.1	1974.0	1965.9	1961.8	1953.7	1949.6	1949.6
27.5°	1868.3	1852.0	1852.0	1843.8	1835.7	1831.6	1827.5	1823.5
30°	1738.0	1725.8	1721.7	1721.7	1717.7	1717.7	1705.4	1709.5
32.5°	1615.8	1607.7	1603.6	1595.6	1595.6	1591.5	1591.5	1579.3
35°	1493.7	1481.5	1485.6	1477.5	1473.4	1469.3	1473.4	1469.3
37.5°	1375.7	1367.6	1367.6	1359.4	1359.4	1355.4	1351.3	1359.4
40°	1257.7	1253.6	1249.6	1245.5	1249.6	1245.5	1237.4	1241.4
42.5°	1139.7	1139.7	1135.6	1135.6	1131.6	1131.6	1131.6	1131.6
45°	1033.8	1029.7	1029.7	1025.7	1025.7	1025.7	1025.7	1021.6
47.5°	928.0	923.9	923.9	923.9	919.9	919.9	915.8	919.9
50°	826.3	826.3	822.2	822.2	826.3	822.2	818.1	818.1
52.5°	732.6	732.6	728.5	728.5	724.5	720.4	724.5	724.5
55°	647.2	643.1	639.0	639.0	635.0	630.9	630.9	635.0
57.5°	565.7	561.7	557.6	557.6	549.4	545.4	545.4	545.4
60°	488.4	480.3	480.3	476.2	476.2	472.2	472.2	472.2
62.5°	415.1	411.1	411.1	411.1	411.1	407.0	407.0	407.0
65°	354.1	354.1	354.1	358.2	358.2	362.3	362.3	362.3
67.5°	305.3	309.3	309.3	309.3	313.4	313.4	313.4	309.3
70°	260.5	260.5	260.5	264.5	264.5	264.5	264.5	264.5
72.5°	215.8	215.8	215.8	215.8	215.8	215.8	215.8	215.8
75°	171.0	175.0	175.0	175.0	171.0	175.0	175.0	171.0
77.5°	134.3	134.3	134.3	134.3	134.3	134.3	134.3	134.3
80°	101.7	101.7	101.7	101.7	101.7	101.7	101.7	101.7
82.5°	69.1	69.1	69.1	69.1	69.1	69.1	69.1	69.1
85°	40.7	40.7	40.7	40.7	40.7	40.7	40.7	40.7
87.5°	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3
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)