

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: P585218

Luminaire Tested: **HC880D010-HM86080830-81WWBB**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P585218
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: HC880D010-HM86080830-81WWBB
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5151.6 lumens
Efficiency: N/A
Efficacy: 73.6 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

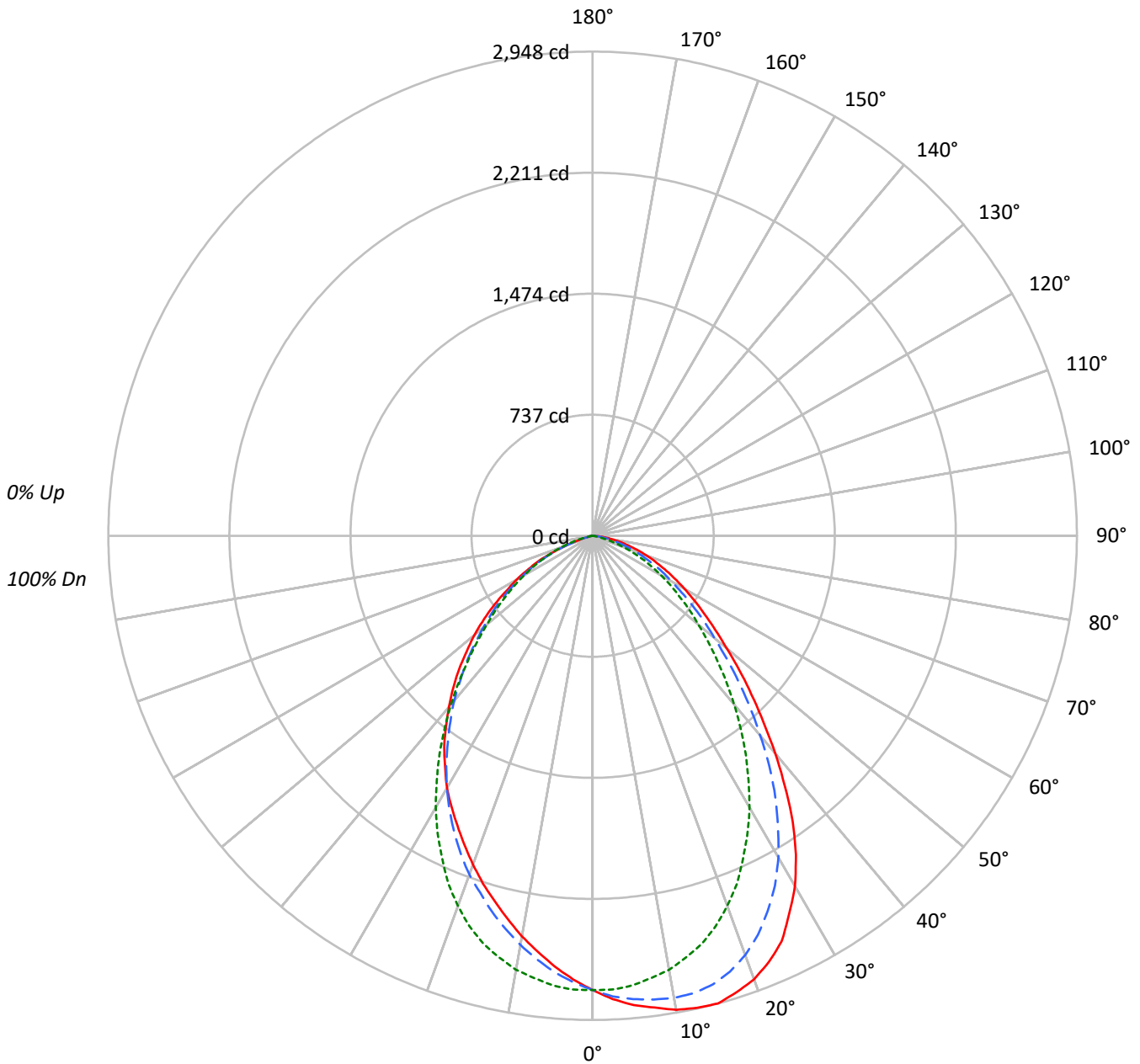
Input Watts (W): 70
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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			100
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88			88
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79	77			77
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	67			67
4	88	78	70	64	86	76	69	64	74	68	63	72	66	62	70	65	61	59			59
5	82	70	63	57	80	69	62	56	67	61	56	65	60	55	64	59	55	53			53
6	76	64	56	51	74	63	56	50	62	55	50	60	54	50	58	53	49	47			47
7	71	59	51	45	69	58	51	45	57	50	45	55	49	45	54	49	44	43			43
8	66	54	46	41	65	53	46	41	52	46	41	51	45	41	50	44	40	39			39
9	62	50	43	37	61	50	42	37	48	42	37	47	41	37	46	41	37	35			35
10	59	47	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32			32

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	85284	85284	85284
5°	88810	85096	81515
10°	91776	84010	77538
15°	94096	82086	73508
20°	94285	78681	69864
25°	92695	73703	66248
30°	87728	68005	63148
35°	79990	61157	59293
40°	69559	53916	54749
45°	59675	46692	50120
50°	50971	40259	45022
55°	44676	34671	39111
60°	39773	29572	32890
65°	35293	24137	26245
70°	31312	17888	14912
75°	26104	9365	4432
80°	20564	2930	746
85°	14648	1486	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	260.6	5.1
10°-20°	730.4	14.2
20°-30°	1033.8	20.1
30°-40°	1081.6	21.0
40°-50°	902.1	17.5
50°-60°	639.7	12.4
60°-70°	368.4	7.2
70°-80°	118.6	2.3
80°-90°	16.3	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°	2024.8	39.3
0°-40°	3106.4	60.3
0°-60°	4648.3	90.2
0°-90°	5151.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5151.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2766	2766	2766	2766	2766	
5°	2869	2832	2749	2666	2633	275
15°	2948	2828	2571	2369	2303	829
25°	2724	2522	2166	1993	1947	1243
35°	2125	1939	1625	1538	1575	1317
45°	1368	1257	1071	1083	1149	1060
55°	831	744	645	678	728	751
65°	484	405	331	331	360	483
75°	219	161	79	37	37	238
85°	41	21	4	0	0	52
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°	2765.7	2765.7	2765.7	2765.7	2765.7	2765.7	2765.7	2765.7	2765.7	2765.7	2765.7
2.5°	2823.5	2819.5	2815.3	2819.5	2815.3	2819.5	2815.3	2815.3	2811.2	2807.0	2807.0
5°	2869.1	2864.9	2864.9	2864.9	2860.7	2856.6	2856.6	2852.5	2844.2	2840.0	2831.8
7.5°	2897.9	2902.1	2902.1	2902.1	2893.8	2893.8	2885.6	2877.3	2869.1	2860.7	2848.4
10°	2931.0	2931.0	2927.0	2922.8	2914.5	2910.3	2906.3	2897.9	2885.6	2869.1	2856.6
12.5°	2943.5	2943.5	2939.3	2931.0	2927.0	2922.8	2918.6	2906.3	2889.7	2869.1	2852.5
15°	2947.5	2939.3	2935.2	2931.0	2922.8	2910.3	2910.3	2893.8	2873.2	2848.4	2827.7
17.5°	2914.5	2918.6	2910.3	2902.1	2889.7	2881.4	2869.1	2856.6	2831.8	2802.8	2782.3
20°	2873.2	2869.1	2864.9	2852.5	2836.0	2831.8	2819.5	2798.8	2778.1	2745.0	2716.0
22.5°	2807.0	2802.8	2794.6	2786.3	2769.8	2761.6	2749.1	2724.4	2695.3	2662.3	2629.2
25°	2724.4	2716.0	2703.7	2687.1	2674.8	2666.5	2649.9	2625.1	2592.0	2554.8	2521.8
27.5°	2592.0	2604.5	2596.2	2571.3	2559.0	2542.4	2538.3	2505.2	2476.3	2439.1	2401.9
30°	2463.8	2463.8	2451.5	2439.1	2418.4	2406.1	2389.5	2364.7	2335.8	2290.3	2261.4
32.5°	2302.6	2298.6	2282.0	2277.9	2261.4	2236.5	2232.3	2199.3	2170.4	2137.3	2100.1
35°	2124.9	2116.7	2100.1	2087.6	2079.4	2067.1	2054.6	2025.7	1996.7	1963.6	1938.9
37.5°	1922.4	1922.4	1918.2	1897.5	1889.2	1881.0	1868.6	1839.6	1823.1	1790.0	1765.2
40°	1728.0	1723.9	1711.4	1707.4	1699.1	1686.7	1678.4	1661.9	1637.1	1612.3	1587.4
42.5°	1537.9	1542.0	1525.5	1529.6	1513.1	1504.8	1500.6	1475.9	1463.4	1438.7	1418.0
45°	1368.4	1364.3	1355.9	1351.9	1343.6	1335.2	1327.0	1314.7	1294.0	1269.1	1256.8
47.5°	1211.2	1198.9	1198.9	1194.7	1190.7	1174.0	1170.0	1157.5	1145.1	1120.3	1103.7
50°	1062.5	1062.5	1062.5	1058.3	1046.0	1041.8	1033.5	1021.1	1008.7	992.2	967.4
52.5°	942.5	942.5	942.5	938.5	922.0	917.8	913.6	897.1	880.6	868.2	851.6
55°	831.0	835.0	831.0	822.7	810.3	810.3	797.8	789.6	773.1	760.7	744.1
57.5°	735.9	735.9	727.5	723.5	715.2	711.0	702.8	694.5	673.8	661.4	640.8
60°	644.9	640.8	640.8	632.5	624.2	616.0	611.9	599.5	591.2	570.5	554.0
62.5°	562.3	562.3	554.0	554.0	537.4	537.4	533.3	520.9	508.5	487.8	479.5
65°	483.7	483.7	479.5	475.4	463.0	458.8	454.8	442.3	429.9	417.6	405.1
67.5°	413.4	413.4	405.1	401.0	392.7	388.6	380.4	372.0	359.7	347.3	334.8
70°	347.3	343.1	339.0	334.8	326.6	322.5	314.1	305.9	293.6	285.2	272.9
72.5°	281.1	281.1	277.0	268.7	264.6	260.4	256.3	248.0	235.7	223.3	215.0
75°	219.1	219.1	219.1	210.8	202.6	198.4	198.4	190.1	181.9	169.6	161.2
77.5°	169.6	165.4	161.2	161.2	152.9	148.9	144.7	140.5	128.2	124.0	115.8
80°	115.8	119.9	115.8	111.6	107.5	103.3	103.3	95.1	91.0	82.6	74.4
82.5°	78.6	74.4	74.4	70.3	70.3	66.1	66.1	57.9	53.7	49.6	45.4
85°	41.4	41.4	37.2	37.2	37.2	33.1	33.1	28.9	28.9	24.9	20.7
87.5°	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	8.3	8.3	8.3
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°	2765.7	2765.7	2765.7	2765.7	2765.7	2765.7	2765.7	2765.7	2765.7	2765.7	2765.7
2.5°	2802.8	2794.6	2790.5	2790.5	2786.3	2782.3	2778.1	2773.9	2765.7	2765.7	2757.4
5°	2823.5	2815.3	2811.2	2798.8	2790.5	2790.5	2773.9	2769.8	2757.4	2749.1	2740.9
7.5°	2840.0	2823.5	2811.2	2798.8	2790.5	2782.3	2765.7	2749.1	2732.6	2716.0	2707.8
10°	2840.0	2823.5	2802.8	2782.3	2773.9	2765.7	2745.0	2720.2	2699.5	2683.0	2662.3
12.5°	2831.8	2807.0	2782.3	2765.7	2749.1	2736.7	2712.0	2687.1	2662.3	2629.2	2612.7
15°	2807.0	2773.9	2749.1	2720.2	2707.8	2687.1	2666.5	2629.2	2600.3	2571.3	2550.8
17.5°	2757.4	2716.0	2687.1	2658.2	2637.6	2625.1	2592.0	2559.0	2525.9	2492.9	2468.0
20°	2683.0	2645.8	2612.7	2575.5	2559.0	2542.4	2501.1	2468.0	2435.0	2397.7	2372.9
22.5°	2592.0	2554.8	2509.4	2480.4	2455.6	2435.0	2397.7	2360.5	2327.5	2294.4	2261.4
25°	2480.4	2443.3	2401.9	2356.4	2339.8	2319.1	2277.9	2240.7	2203.5	2166.2	2137.3
27.5°	2360.5	2310.9	2277.9	2228.3	2211.7	2191.1	2145.6	2104.2	2071.1	2042.2	2009.2
30°	2215.8	2178.6	2133.2	2087.6	2071.1	2050.4	2013.3	1976.1	1942.9	1909.9	1876.8
32.5°	2058.8	2021.5	1976.1	1942.9	1918.2	1901.7	1864.5	1831.4	1798.4	1765.2	1736.3
35°	1893.4	1852.1	1818.9	1785.9	1765.2	1744.6	1707.4	1678.4	1653.7	1624.6	1595.8
37.5°	1723.9	1694.9	1661.9	1624.6	1604.0	1587.4	1558.5	1525.5	1504.8	1479.9	1459.4
40°	1558.5	1525.5	1496.5	1463.4	1446.9	1434.5	1405.6	1380.8	1360.1	1339.4	1327.0
42.5°	1389.0	1360.1	1331.2	1310.5	1298.2	1285.7	1265.0	1236.1	1223.7	1203.0	1190.7
45°	1231.9	1207.2	1186.5	1157.5	1149.3	1141.0	1116.2	1095.5	1083.2	1070.7	1062.5
47.5°	1083.2	1066.5	1041.8	1025.3	1012.8	1004.6	988.1	971.5	959.0	950.8	942.5
50°	955.0	934.3	917.8	901.3	892.9	880.6	864.0	855.7	847.5	839.2	839.2
52.5°	835.0	814.5	797.8	785.5	777.2	768.9	756.6	752.4	744.1	744.1	740.0
55°	723.5	711.0	694.5	678.0	673.8	669.8	661.4	653.2	649.1	644.9	649.1
57.5°	628.4	616.0	599.5	587.0	582.8	578.8	574.6	566.3	562.3	562.3	562.3
60°	541.6	529.1	516.7	504.4	504.4	496.1	492.0	487.8	483.7	479.5	479.5
62.5°	463.0	450.6	438.3	429.9	425.8	421.6	413.4	409.3	405.1	405.1	401.0
65°	392.7	376.2	372.0	359.7	355.5	351.3	347.3	339.0	334.8	330.8	326.6
67.5°	322.5	314.1	301.8	293.6	289.4	285.2	281.1	272.9	268.7	264.6	256.3
70°	260.4	252.2	243.9	235.7	231.5	227.3	219.1	210.8	206.6	198.4	186.1
72.5°	202.6	194.3	186.1	177.8	173.6	169.6	161.2	152.9	144.7	136.4	128.2
75°	152.9	144.7	132.3	124.0	119.9	119.9	107.5	99.2	91.0	78.6	70.3
77.5°	107.5	95.1	91.0	82.6	78.6	70.3	62.1	53.7	45.4	41.4	33.1
80°	70.3	62.1	53.7	49.6	45.4	41.4	37.2	28.9	20.7	16.5	12.4
82.5°	41.4	37.2	33.1	28.9	24.9	20.7	16.5	16.5	12.4	8.3	4.2
85°	20.7	16.5	12.4	12.4	8.3	8.3	8.3	4.2	4.2	4.2	4.2
87.5°	8.3	4.2	4.2	4.2	4.2	4.2	4.2	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°	2765.7	2765.7	2765.7	2765.7	2765.7	2765.7	2765.7	2765.7	2765.7	2765.7	2765.7
2.5°	2753.2	2749.1	2745.0	2740.9	2740.9	2732.6	2732.6	2728.5	2720.2	2716.0	2716.0
5°	2728.5	2716.0	2707.8	2703.7	2699.5	2687.1	2683.0	2674.8	2666.5	2658.2	2654.1
7.5°	2691.3	2670.6	2662.3	2658.2	2645.8	2633.4	2625.1	2612.7	2600.3	2587.9	2583.8
10°	2645.8	2625.1	2604.5	2596.2	2583.8	2575.5	2559.0	2542.4	2530.1	2517.6	2505.2
12.5°	2587.9	2563.1	2542.4	2534.1	2521.8	2505.2	2480.4	2472.2	2451.5	2443.3	2426.6
15°	2521.8	2492.9	2472.2	2459.8	2447.3	2422.6	2406.1	2389.5	2368.8	2360.5	2344.0
17.5°	2439.1	2406.1	2385.4	2372.9	2364.7	2344.0	2319.1	2298.6	2277.9	2269.6	2257.2
20°	2339.8	2319.1	2290.3	2277.9	2269.6	2244.8	2220.0	2211.7	2195.1	2178.6	2166.2
22.5°	2228.3	2207.6	2178.6	2166.2	2162.1	2141.4	2120.8	2108.3	2096.0	2083.6	2071.1
25°	2112.5	2087.6	2062.9	2054.6	2046.4	2029.9	2013.3	2005.0	1992.6	1984.3	1976.1
27.5°	1988.5	1963.6	1942.9	1930.6	1922.4	1909.9	1901.7	1893.4	1885.2	1876.8	1872.7
30°	1856.1	1831.4	1814.9	1806.6	1798.4	1794.2	1781.7	1777.7	1773.5	1765.2	1769.4
32.5°	1723.9	1703.2	1686.7	1674.2	1674.2	1666.0	1661.9	1661.9	1657.7	1657.7	1657.7
35°	1579.2	1566.7	1554.4	1550.2	1546.2	1542.0	1537.9	1542.0	1537.9	1542.0	1546.2
37.5°	1446.9	1434.5	1426.2	1422.2	1418.0	1422.2	1418.0	1418.0	1422.2	1430.4	1434.5
40°	1310.5	1302.2	1294.0	1298.2	1294.0	1294.0	1294.0	1306.4	1310.5	1314.7	1318.7
42.5°	1182.3	1174.0	1170.0	1170.0	1174.0	1170.0	1178.2	1182.3	1190.7	1203.0	1211.2
45°	1058.3	1054.2	1054.2	1058.3	1054.2	1062.5	1062.5	1070.7	1083.2	1091.4	1099.7
47.5°	942.5	942.5	942.5	946.7	946.7	950.8	959.0	963.2	971.5	979.7	988.1
50°	835.0	839.2	843.4	843.4	843.4	851.6	859.9	864.0	868.2	872.3	884.7
52.5°	740.0	744.1	744.1	748.2	752.4	756.6	760.7	768.9	773.1	781.3	785.5
55°	649.1	649.1	657.3	661.4	661.4	661.4	669.8	669.8	678.0	682.1	690.3
57.5°	562.3	566.3	566.3	570.5	570.5	574.6	578.8	582.8	587.0	591.2	595.3
60°	479.5	479.5	479.5	483.7	487.8	492.0	487.8	496.1	496.1	504.4	508.5
62.5°	401.0	405.1	405.1	405.1	405.1	405.1	405.1	409.3	413.4	417.6	421.6
65°	326.6	326.6	326.6	322.5	326.6	322.5	326.6	330.8	330.8	334.8	339.0
67.5°	252.2	252.2	243.9	243.9	248.0	248.0	248.0	248.0	243.9	252.2	252.2
70°	181.9	177.8	173.6	169.6	169.6	165.4	165.4	161.2	161.2	161.2	161.2
72.5°	119.9	111.6	103.3	99.2	95.1	95.1	86.8	82.6	86.8	86.8	86.8
75°	62.1	53.7	49.6	45.4	41.4	41.4	37.2	37.2	37.2	37.2	37.2
77.5°	24.9	20.7	16.5	16.5	12.4	12.4	12.4	12.4	12.4	12.4	12.4
80°	8.3	8.3	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
82.5°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
85°	4.2	0.0	0.0	4.2	0.0	4.2	4.2	4.2	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: P585218

CATALOG NUMBER: HC880D010-HM86080830-81WWBB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2765.7	2765.7	2765.7	2765.7	2765.7	2765.7	2765.7	2765.7
2.5°	2712.0	2712.0	2707.8	2712.0	2703.7	2707.8	2703.7	2703.7
5°	2649.9	2641.6	2641.6	2641.6	2637.6	2637.6	2633.4	2633.4
7.5°	2575.5	2571.3	2567.3	2563.1	2559.0	2554.8	2554.8	2554.8
10°	2501.1	2492.9	2492.9	2488.7	2480.4	2476.3	2476.3	2476.3
12.5°	2414.3	2410.1	2406.1	2406.1	2389.5	2393.6	2389.5	2389.5
15°	2331.6	2327.5	2327.5	2315.1	2306.8	2306.8	2306.8	2302.6
17.5°	2244.8	2240.7	2236.5	2228.3	2220.0	2220.0	2215.8	2220.0
20°	2153.9	2149.7	2141.4	2141.4	2137.3	2133.2	2124.9	2129.0
22.5°	2062.9	2054.6	2050.4	2050.4	2046.4	2046.4	2038.1	2038.1
25°	1967.8	1963.6	1959.6	1963.6	1955.4	1955.4	1947.1	1947.1
27.5°	1868.6	1864.5	1864.5	1864.5	1860.3	1864.5	1860.3	1860.3
30°	1769.4	1769.4	1765.2	1765.2	1769.4	1765.2	1769.4	1773.5
32.5°	1661.9	1661.9	1666.0	1666.0	1670.2	1670.2	1670.2	1670.2
35°	1550.2	1558.5	1558.5	1562.7	1566.7	1570.9	1570.9	1575.1
37.5°	1446.9	1451.1	1455.2	1459.4	1467.6	1467.6	1467.6	1467.6
40°	1335.2	1339.4	1347.7	1343.6	1360.1	1364.3	1360.1	1360.1
42.5°	1219.6	1227.8	1231.9	1240.2	1244.4	1252.6	1256.8	1256.8
45°	1112.1	1116.2	1124.4	1132.8	1136.9	1149.3	1149.3	1149.3
47.5°	1000.4	1008.7	1012.8	1021.1	1025.3	1037.6	1041.8	1037.6
50°	892.9	901.3	909.5	909.5	922.0	926.0	934.3	938.5
52.5°	789.6	793.8	802.0	806.1	814.5	822.7	826.8	831.0
55°	690.3	694.5	702.8	702.8	715.2	719.3	727.5	727.5
57.5°	599.5	603.5	611.9	607.7	616.0	624.2	624.2	620.1
60°	512.6	512.6	512.6	520.9	525.1	529.1	533.3	533.3
62.5°	421.6	429.9	434.1	434.1	438.3	442.3	442.3	438.3
65°	339.0	347.3	351.3	351.3	355.5	355.5	355.5	359.7
67.5°	256.3	256.3	256.3	260.4	256.3	256.3	256.3	256.3
70°	161.2	161.2	161.2	161.2	157.1	161.2	161.2	165.4
72.5°	86.8	86.8	86.8	86.8	86.8	86.8	86.8	86.8
75°	37.2	37.2	37.2	41.4	37.2	37.2	37.2	37.2
77.5°	16.5	12.4	16.5	16.5	12.4	12.4	12.4	12.4
80°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
82.5°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
85°	0.0	4.2	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)