

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: P585201

Luminaire Tested: **HC880D010-HM86080827-81WWBB**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P585201
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-HM86080827-81WWBB
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5189.2 lumens
Efficiency: N/A
Efficacy: 74.1 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

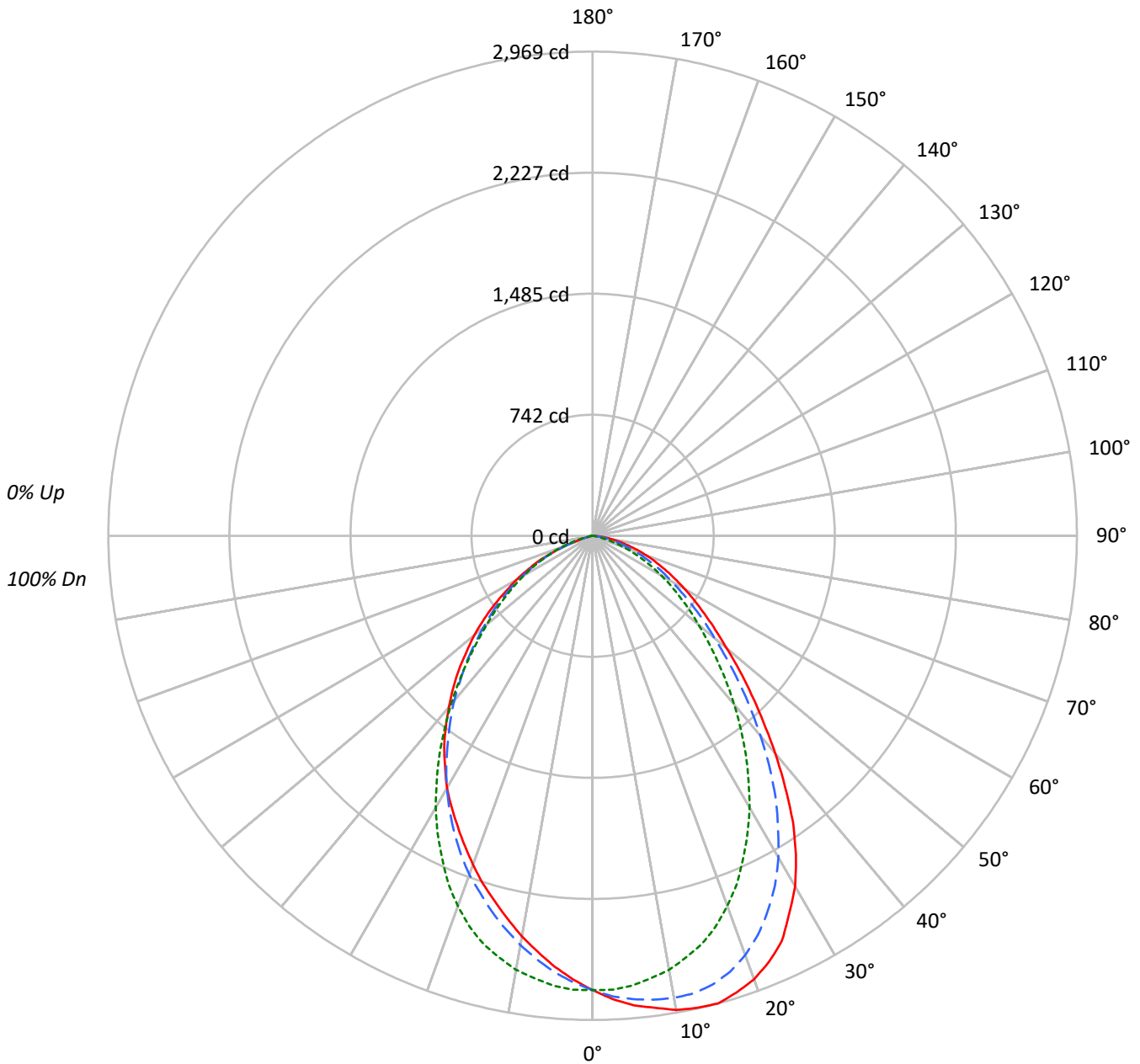
Input Watts (W): 70
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	85904	85904	85904
5°	89457	85718	82112
10°	92446	84624	78105
15°	94786	82687	74048
20°	94971	79256	70376
25°	93369	74244	66735
30°	88372	68504	63611
35°	80574	61605	59726
40°	70070	54311	55148
45°	60111	47032	50482
50°	51340	40556	45349
55°	45004	34929	39402
60°	40069	29794	33131
65°	35556	24312	26435
70°	31538	18023	15021
75°	26295	9424	4468
80°	20706	2948	746
85°	14718	1486	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	262.5	5.1
10°-20°	735.7	14.2
20°-30°	1041.4	20.1
30°-40°	1089.5	21.0
40°-50°	908.7	17.5
50°-60°	644.4	12.4
60°-70°	371.1	7.2
70°-80°	119.4	2.3
80°-90°	16.4	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°	2039.6	39.3
0°-40°	3129.1	60.3
0°-60°	4682.2	90.2
0°-90°	5189.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5189.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2786	2786	2786	2786	2786	
5°	2890	2852	2769	2686	2653	277
15°	2969	2848	2590	2386	2320	835
25°	2744	2540	2182	2007	1961	1252
35°	2140	1953	1636	1549	1587	1327
45°	1378	1266	1078	1091	1158	1068
55°	837	750	650	683	733	756
65°	487	408	333	333	362	487
75°	221	162	79	38	38	239
85°	42	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°	2785.8	2785.8	2785.8	2785.8	2785.8	2785.8	2785.8	2785.8	2785.8	2785.8	2785.8
2.5°	2844.2	2840.0	2835.9	2840.0	2835.9	2840.0	2835.9	2835.9	2831.6	2827.4	2827.4
5°	2890.0	2885.8	2885.8	2885.8	2881.7	2877.5	2877.5	2873.3	2865.0	2860.9	2852.5
7.5°	2919.1	2923.3	2923.3	2923.3	2915.0	2915.0	2906.6	2898.3	2890.0	2881.7	2869.2
10°	2952.4	2952.4	2948.2	2944.1	2935.8	2931.6	2927.4	2919.1	2906.6	2890.0	2877.5
12.5°	2964.9	2964.9	2960.7	2952.4	2948.2	2944.1	2939.9	2927.4	2910.8	2890.0	2873.3
15°	2969.1	2960.7	2956.6	2952.4	2944.1	2931.6	2931.6	2915.0	2894.1	2869.2	2848.4
17.5°	2935.8	2939.9	2931.6	2923.3	2910.8	2902.5	2890.0	2877.5	2852.5	2823.3	2802.5
20°	2894.1	2890.0	2885.8	2873.3	2856.7	2852.5	2840.0	2819.1	2798.3	2765.0	2735.9
22.5°	2827.4	2823.3	2815.0	2806.6	2790.0	2781.7	2769.2	2744.2	2715.1	2681.8	2648.4
25°	2744.2	2735.9	2723.4	2706.8	2694.3	2686.0	2669.3	2644.2	2610.9	2573.5	2540.2
27.5°	2610.9	2623.4	2615.1	2590.1	2577.6	2561.0	2556.8	2523.5	2494.4	2456.8	2419.4
30°	2481.9	2481.9	2469.4	2456.8	2436.0	2423.5	2406.9	2381.9	2352.8	2307.0	2277.8
32.5°	2319.5	2315.3	2298.7	2294.5	2277.8	2252.8	2248.6	2215.3	2186.2	2152.9	2115.5
35°	2140.4	2132.1	2115.5	2102.9	2094.5	2082.1	2069.6	2040.4	2011.3	1978.0	1953.1
37.5°	1936.4	1936.4	1932.2	1911.3	1903.0	1894.7	1882.2	1853.1	1836.4	1803.1	1778.1
40°	1740.7	1736.4	1723.9	1719.8	1711.4	1699.0	1690.6	1674.0	1649.0	1624.1	1599.1
42.5°	1549.0	1553.2	1536.5	1540.7	1524.1	1515.7	1511.6	1486.6	1474.1	1449.2	1428.3
45°	1378.4	1374.2	1365.8	1361.6	1353.3	1345.0	1336.7	1324.2	1303.4	1278.4	1265.9
47.5°	1220.2	1207.7	1207.7	1203.5	1199.3	1182.6	1178.4	1165.9	1153.4	1128.5	1111.8
50°	1070.2	1070.2	1070.2	1066.1	1053.6	1049.4	1041.1	1028.6	1016.1	999.4	974.4
52.5°	949.4	949.4	949.4	945.3	928.6	924.4	920.3	903.6	887.0	874.5	857.9
55°	837.1	841.2	837.1	828.7	816.1	816.1	803.6	795.3	778.7	766.2	749.5
57.5°	741.2	741.2	732.9	728.7	720.4	716.3	707.9	699.6	678.8	666.3	645.5
60°	649.7	645.5	645.5	637.1	628.7	620.4	616.3	603.8	595.5	574.6	558.0
62.5°	566.3	566.3	558.0	558.0	541.4	541.4	537.2	524.7	512.2	491.4	483.1
65°	487.3	487.3	483.1	478.9	466.4	462.3	458.1	445.5	433.0	420.5	408.1
67.5°	416.4	416.4	408.1	403.9	395.6	391.4	383.1	374.8	362.3	349.8	337.3
70°	349.8	345.6	341.5	337.3	329.0	324.8	316.5	308.2	295.7	287.4	274.9
72.5°	283.2	283.2	279.1	270.6	266.5	262.3	258.1	249.8	237.3	224.8	216.5
75°	220.7	220.7	220.7	212.4	204.0	199.9	199.9	191.5	183.2	170.7	162.4
77.5°	170.7	166.6	162.4	162.4	154.1	149.9	145.8	141.6	129.1	125.0	116.6
80°	116.6	120.8	116.6	112.5	108.3	104.2	104.2	95.8	91.7	83.2	74.9
82.5°	79.1	74.9	74.9	70.7	70.7	66.6	66.6	58.3	54.1	49.9	45.8
85°	41.6	41.6	37.5	37.5	37.5	33.3	33.3	29.1	29.1	25.0	20.8
87.5°	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	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°	2785.8	2785.8	2785.8	2785.8	2785.8	2785.8	2785.8	2785.8	2785.8	2785.8	2785.8
2.5°	2823.3	2815.0	2810.8	2810.8	2806.6	2802.5	2798.3	2794.2	2785.8	2785.8	2777.5
5°	2844.2	2835.9	2831.6	2819.1	2810.8	2810.8	2794.2	2790.0	2777.5	2769.2	2760.9
7.5°	2860.9	2844.2	2831.6	2819.1	2810.8	2802.5	2785.8	2769.2	2752.5	2735.9	2727.6
10°	2860.9	2844.2	2823.3	2802.5	2794.2	2785.8	2765.0	2740.1	2719.2	2702.6	2681.8
12.5°	2852.5	2827.4	2802.5	2785.8	2769.2	2756.7	2731.7	2706.8	2681.8	2648.4	2631.7
15°	2827.4	2794.2	2769.2	2740.1	2727.6	2706.8	2686.0	2648.4	2619.2	2590.1	2569.3
17.5°	2777.5	2735.9	2706.8	2677.6	2656.8	2644.2	2610.9	2577.6	2544.3	2511.0	2486.1
20°	2702.6	2665.1	2631.7	2594.3	2577.6	2561.0	2519.4	2486.1	2452.7	2415.2	2390.2
22.5°	2610.9	2573.5	2527.7	2498.6	2473.6	2452.7	2415.2	2377.8	2344.5	2311.2	2277.8
25°	2498.6	2461.0	2419.4	2373.6	2357.0	2336.1	2294.5	2257.0	2219.5	2182.1	2152.9
27.5°	2377.8	2327.8	2294.5	2244.5	2227.8	2207.0	2161.2	2119.6	2086.2	2057.1	2023.8
30°	2232.0	2194.5	2148.8	2102.9	2086.2	2065.4	2028.0	1990.5	1957.2	1923.9	1890.5
32.5°	2073.7	2036.3	1990.5	1957.2	1932.2	1915.5	1878.0	1844.7	1811.4	1778.1	1749.0
35°	1907.2	1865.5	1832.2	1799.0	1778.1	1757.3	1719.8	1690.6	1665.7	1636.5	1607.4
37.5°	1736.4	1707.3	1674.0	1636.5	1615.7	1599.1	1570.0	1536.5	1515.7	1490.8	1470.0
40°	1570.0	1536.5	1507.4	1474.1	1457.5	1445.0	1415.9	1390.9	1370.0	1349.2	1336.7
42.5°	1399.2	1370.0	1340.8	1320.0	1307.5	1295.1	1274.3	1245.1	1232.6	1211.8	1199.3
45°	1241.0	1216.0	1195.2	1165.9	1157.6	1149.3	1124.3	1103.5	1091.0	1078.5	1070.2
47.5°	1091.0	1074.4	1049.4	1032.8	1020.3	1012.0	995.2	978.5	966.1	957.7	949.4
50°	961.9	941.1	924.4	907.8	899.5	887.0	870.3	862.0	853.7	845.4	845.4
52.5°	841.2	820.3	803.6	791.2	782.8	774.5	762.0	757.9	749.5	749.5	745.4
55°	728.7	716.3	699.6	683.0	678.8	674.6	666.3	658.0	653.8	649.7	653.8
57.5°	632.9	620.4	603.8	591.3	587.1	583.0	578.8	570.5	566.3	566.3	566.3
60°	545.5	533.0	520.5	508.1	508.1	499.7	495.6	491.4	487.3	483.1	483.1
62.5°	466.4	453.8	441.4	433.0	428.9	424.7	416.4	412.2	408.1	408.1	403.9
65°	395.6	378.9	374.8	362.3	358.1	354.0	349.8	341.5	337.3	333.2	329.0
67.5°	324.8	316.5	304.0	295.7	291.5	287.4	283.2	274.9	270.6	266.5	258.1
70°	262.3	254.0	245.6	237.3	233.2	229.0	220.7	212.4	208.2	199.9	187.4
72.5°	204.0	195.7	187.4	179.1	174.9	170.7	162.4	154.1	145.8	137.4	129.1
75°	154.1	145.8	133.3	125.0	120.8	120.8	108.3	100.0	91.7	79.1	70.7
77.5°	108.3	95.8	91.7	83.2	79.1	70.7	62.4	54.1	45.8	41.6	33.3
80°	70.7	62.4	54.1	49.9	45.8	41.6	37.5	29.1	20.8	16.6	12.5
82.5°	41.6	37.5	33.3	29.1	25.0	20.8	16.6	16.6	12.5	8.3	4.2
85°	20.8	16.6	12.5	12.5	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°	2785.8	2785.8	2785.8	2785.8	2785.8	2785.8	2785.8	2785.8	2785.8	2785.8	2785.8
2.5°	2773.3	2769.2	2765.0	2760.9	2760.9	2752.5	2752.5	2748.4	2740.1	2735.9	2735.9
5°	2748.4	2735.9	2727.6	2723.4	2719.2	2706.8	2702.6	2694.3	2686.0	2677.6	2673.5
7.5°	2710.9	2690.1	2681.8	2677.6	2665.1	2652.7	2644.2	2631.7	2619.2	2606.8	2602.6
10°	2665.1	2644.2	2623.4	2615.1	2602.6	2594.3	2577.6	2561.0	2548.5	2536.0	2523.5
12.5°	2606.8	2581.8	2561.0	2552.7	2540.2	2523.5	2498.6	2490.2	2469.4	2461.0	2444.3
15°	2540.2	2511.0	2490.2	2477.8	2465.2	2440.2	2423.5	2406.9	2386.1	2377.8	2361.1
17.5°	2456.8	2423.5	2402.7	2390.2	2381.9	2361.1	2336.1	2315.3	2294.5	2286.2	2273.6
20°	2357.0	2336.1	2307.0	2294.5	2286.2	2261.1	2236.2	2227.8	2211.2	2194.5	2182.1
22.5°	2244.5	2223.7	2194.5	2182.1	2177.9	2157.1	2136.3	2123.8	2111.3	2098.7	2086.2
25°	2128.0	2102.9	2077.9	2069.6	2061.3	2044.6	2028.0	2019.6	2007.2	1998.8	1990.5
27.5°	2003.0	1978.0	1957.2	1944.7	1936.4	1923.9	1915.5	1907.2	1898.8	1890.5	1886.3
30°	1869.7	1844.7	1828.1	1819.8	1811.4	1807.3	1794.8	1790.6	1786.5	1778.1	1782.3
32.5°	1736.4	1715.6	1699.0	1686.5	1686.5	1678.2	1674.0	1674.0	1669.8	1669.8	1669.8
35°	1590.8	1578.3	1565.8	1561.6	1557.5	1553.2	1549.0	1553.2	1549.0	1553.2	1557.5
37.5°	1457.5	1445.0	1436.7	1432.5	1428.3	1432.5	1428.3	1428.3	1432.5	1440.8	1445.0
40°	1320.0	1311.7	1303.4	1307.5	1303.4	1303.4	1303.4	1315.9	1320.0	1324.2	1328.4
42.5°	1191.0	1182.6	1178.4	1178.4	1182.6	1178.4	1186.7	1191.0	1199.3	1211.8	1220.2
45°	1066.1	1061.9	1061.9	1066.1	1061.9	1070.2	1070.2	1078.5	1091.0	1099.3	1107.7
47.5°	949.4	949.4	949.4	953.6	953.6	957.7	966.1	970.2	978.5	986.9	995.2
50°	841.2	845.4	849.5	849.5	849.5	857.9	866.2	870.3	874.5	878.7	891.2
52.5°	745.4	749.5	749.5	753.7	757.9	762.0	766.2	774.5	778.7	787.0	791.2
55°	653.8	653.8	662.2	666.3	666.3	666.3	674.6	674.6	683.0	687.1	695.4
57.5°	566.3	570.5	570.5	574.6	574.6	578.8	583.0	587.1	591.3	595.5	599.6
60°	483.1	483.1	483.1	487.3	491.4	495.6	491.4	499.7	499.7	508.1	512.2
62.5°	403.9	408.1	408.1	408.1	408.1	408.1	408.1	412.2	416.4	420.5	424.7
65°	329.0	329.0	329.0	324.8	329.0	324.8	329.0	333.2	333.2	337.3	341.5
67.5°	254.0	254.0	245.6	245.6	249.8	249.8	249.8	249.8	245.6	254.0	254.0
70°	183.2	179.1	174.9	170.7	170.7	166.6	166.6	162.4	162.4	162.4	162.4
72.5°	120.8	112.5	104.2	100.0	95.8	95.8	87.4	83.2	87.4	87.4	87.4
75°	62.4	54.1	49.9	45.8	41.6	41.6	37.5	37.5	37.5	37.5	37.5
77.5°	25.0	20.8	16.6	16.6	12.5	12.5	12.5	12.5	12.5	12.5	12.5
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: P585201

CATALOG NUMBER: HC880D010-HM86080827-81WWBB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2785.8	2785.8	2785.8	2785.8	2785.8	2785.8	2785.8	2785.8
2.5°	2731.7	2731.7	2727.6	2731.7	2723.4	2727.6	2723.4	2723.4
5°	2669.3	2661.0	2661.0	2661.0	2656.8	2656.8	2652.7	2652.7
7.5°	2594.3	2590.1	2586.0	2581.8	2577.6	2573.5	2573.5	2573.5
10°	2519.4	2511.0	2511.0	2506.9	2498.6	2494.4	2494.4	2494.4
12.5°	2431.9	2427.7	2423.5	2423.5	2406.9	2411.1	2406.9	2406.9
15°	2348.6	2344.5	2344.5	2332.0	2323.7	2323.7	2323.7	2319.5
17.5°	2261.1	2257.0	2252.8	2244.5	2236.2	2236.2	2232.0	2236.2
20°	2169.6	2165.4	2157.1	2157.1	2152.9	2148.8	2140.4	2144.6
22.5°	2077.9	2069.6	2065.4	2065.4	2061.3	2061.3	2052.9	2052.9
25°	1982.2	1978.0	1973.9	1978.0	1969.7	1969.7	1961.4	1961.4
27.5°	1882.2	1878.0	1878.0	1878.0	1873.9	1878.0	1873.9	1873.9
30°	1782.3	1782.3	1778.1	1778.1	1782.3	1778.1	1782.3	1786.5
32.5°	1674.0	1674.0	1678.2	1678.2	1682.3	1682.3	1682.3	1682.3
35°	1561.6	1570.0	1570.0	1574.1	1578.3	1582.4	1582.4	1586.6
37.5°	1457.5	1461.6	1465.8	1470.0	1478.3	1478.3	1478.3	1478.3
40°	1345.0	1349.2	1357.5	1353.3	1370.0	1374.2	1370.0	1370.0
42.5°	1228.5	1236.8	1241.0	1249.3	1253.4	1261.8	1265.9	1265.9
45°	1120.2	1124.3	1132.6	1141.0	1145.1	1157.6	1157.6	1157.6
47.5°	1007.8	1016.1	1020.3	1028.6	1032.8	1045.2	1049.4	1045.2
50°	899.5	907.8	916.1	916.1	928.6	932.8	941.1	945.3
52.5°	795.3	799.5	807.8	812.0	820.3	828.7	832.9	837.1
55°	695.4	699.6	707.9	707.9	720.4	724.6	732.9	732.9
57.5°	603.8	607.9	616.3	612.1	620.4	628.7	628.7	624.6
60°	516.4	516.4	516.4	524.7	528.9	533.0	537.2	537.2
62.5°	424.7	433.0	437.2	437.2	441.4	445.5	445.5	441.4
65°	341.5	349.8	354.0	354.0	358.1	358.1	358.1	362.3
67.5°	258.1	258.1	258.1	262.3	258.1	258.1	258.1	258.1
70°	162.4	162.4	162.4	162.4	158.3	162.4	162.4	166.6
72.5°	87.4	87.4	87.4	87.4	87.4	87.4	87.4	87.4
75°	37.5	37.5	37.5	41.6	37.5	37.5	37.5	37.5
77.5°	16.6	12.5	16.6	16.6	12.5	12.5	12.5	12.5
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)