

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: P585237

Luminaire Tested: **HC880D010-HM86080835-81WWWB**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P585237  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-18)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 10/21/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC880D010-HM86080835-81WWWB  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7041.3 lumens  
Efficiency: N/A  
Efficacy: 100.6 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.09 / 1.18  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

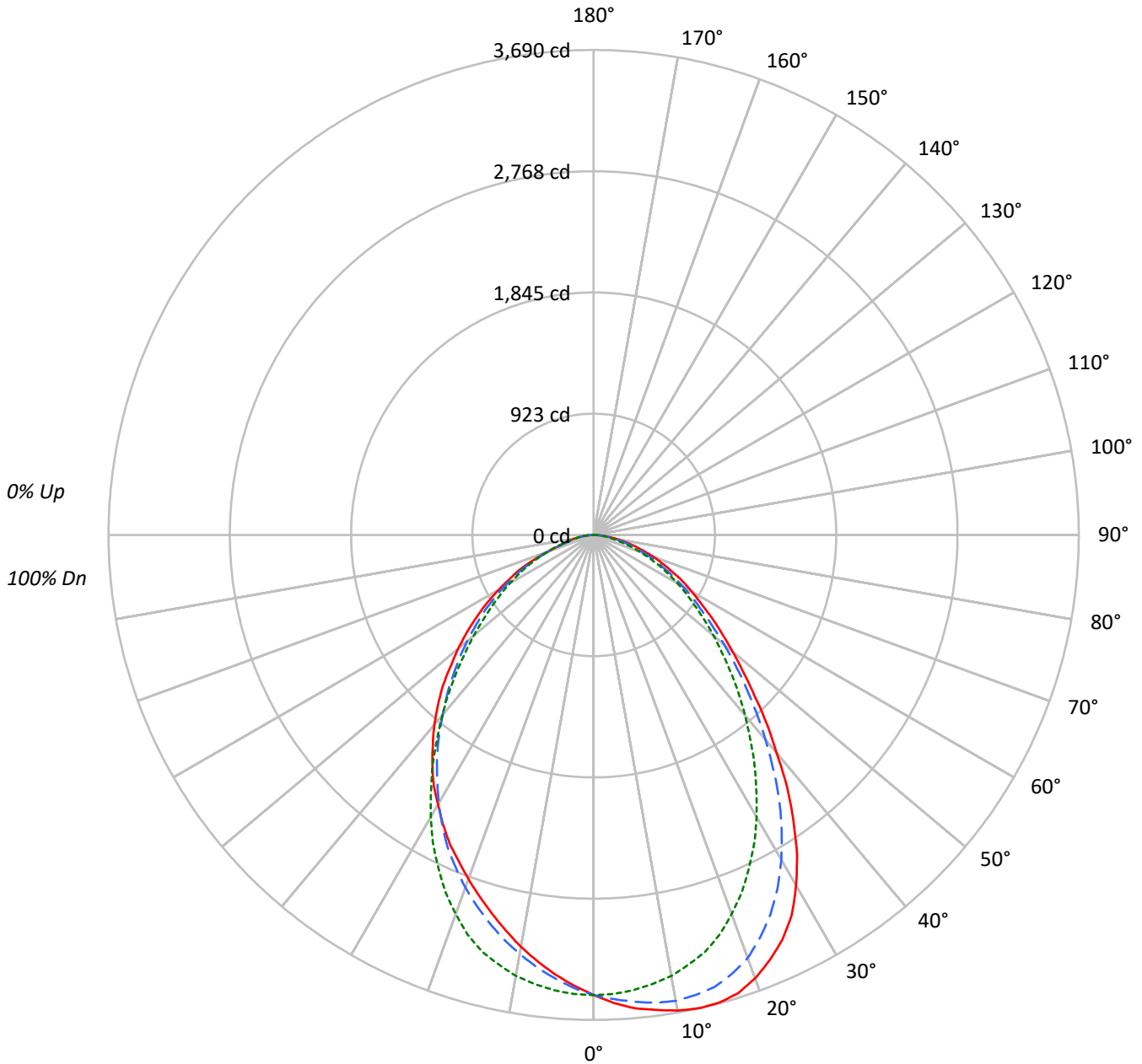
Input Watts (W): 70  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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								
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87								
2	102	94	88	83	99	93	87	82	89	85	81	86	82	79	83	80	77	75								
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65								
4	87	76	68	62	84	75	67	61	72	66	61	70	64	60	68	63	59	57								
5	80	69	60	54	78	67	60	54	65	59	54	64	58	53	62	57	52	50								
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45								
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42	40								
8	65	52	45	39	64	52	44	39	51	44	39	49	43	39	48	43	38	37								
9	61	48	41	36	60	48	41	36	47	40	35	46	40	35	45	39	35	33								
10	57	45	38	33	56	44	37	33	44	37	32	43	37	32	42	36	32	30								

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	107958	107958	107958
5°	111911	107603	103907
10°	115075	106664	99657
15°	117637	104778	95255
20°	117823	100687	91387
25°	115563	95094	88153
30°	109608	88184	84288
35°	99591	80310	80498
40°	87081	72067	75871
45°	75470	64193	70699
50°	66083	57016	64413
55°	58815	50530	58283
60°	53063	45391	51219
65°	47894	39919	44625
70°	43042	33629	33179
75°	37923	26664	24889
80°	31804	22091	23831
85°	24660	19353	21122



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	330.3	4.7
10°-20°	930.3	13.2
20°-30°	1329.5	18.9
30°-40°	1412.6	20.1
40°-50°	1216.2	17.3
50°-60°	909.3	12.9
60°-70°	580.0	8.2
70°-80°	264.0	3.7
80°-90°	69.3	1.0
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°	2590.0	36.8
0°-40°	4002.6	56.8
0°-60°	6128.1	87.0
0°-90°	7041.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7041.3	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	3501	3501	3501	3501	3501	
5°	3615	3566	3476	3387	3357	346
15°	3685	3561	3282	3058	2984	1038
25°	3396	3183	2795	2626	2591	1555
35°	2646	2462	2133	2079	2138	1648
45°	1731	1636	1472	1512	1621	1345
55°	1094	1005	940	1019	1084	984
65°	656	582	547	572	612	655
75°	318	274	224	204	209	338
85°	70	60	55	60	60	84
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°	3501.0	3501.0	3501.0	3501.0	3501.0	3501.0	3501.0	3501.0	3501.0	3501.0	3501.0
2.5°	3565.6	3555.7	3560.7	3555.7	3560.7	3560.7	3550.7	3550.7	3550.7	3550.7	3535.7
5°	3615.4	3610.4	3610.4	3605.4	3600.4	3605.4	3600.4	3595.4	3585.5	3580.6	3565.6
7.5°	3645.2	3645.2	3645.2	3645.2	3640.2	3635.2	3630.3	3620.3	3610.4	3600.4	3590.5
10°	3675.1	3680.0	3675.1	3670.1	3665.1	3655.1	3650.1	3640.2	3625.3	3610.4	3600.4
12.5°	3689.9	3689.9	3684.9	3684.9	3675.1	3670.1	3655.1	3640.2	3625.3	3610.4	3585.5
15°	3684.9	3684.9	3680.0	3675.1	3660.1	3655.1	3645.2	3630.3	3605.4	3585.5	3560.7
17.5°	3655.1	3650.1	3640.2	3640.2	3620.3	3615.4	3605.4	3585.5	3560.7	3530.9	3501.0
20°	3590.5	3590.5	3585.5	3580.6	3560.7	3545.7	3535.7	3510.9	3491.0	3456.2	3426.3
22.5°	3501.0	3510.9	3501.0	3491.0	3466.2	3461.2	3446.3	3416.5	3386.6	3346.8	3312.0
25°	3396.5	3391.6	3386.6	3376.6	3356.8	3346.8	3326.9	3297.1	3267.3	3222.5	3182.7
27.5°	3262.3	3242.4	3242.4	3222.5	3207.6	3192.7	3182.7	3152.9	3113.0	3078.3	3028.5
30°	3078.3	3083.2	3058.3	3053.4	3028.5	3018.6	2998.7	2968.8	2934.1	2894.3	2854.4
32.5°	2879.4	2864.4	2864.4	2844.6	2824.7	2809.7	2804.7	2769.9	2740.1	2700.3	2660.5
35°	2645.6	2645.6	2630.7	2625.8	2605.8	2595.9	2581.0	2561.1	2526.3	2491.4	2461.6
37.5°	2416.9	2406.9	2401.9	2392.0	2377.0	2362.2	2362.2	2327.3	2322.4	2282.6	2242.8
40°	2163.3	2173.1	2163.3	2148.3	2143.4	2133.4	2128.4	2108.6	2093.6	2058.8	2033.9
42.5°	1949.4	1939.5	1939.5	1934.5	1914.6	1914.6	1904.7	1894.7	1869.8	1859.8	1830.1
45°	1730.6	1740.6	1725.6	1730.6	1710.7	1710.7	1710.7	1690.8	1670.9	1656.0	1636.1
47.5°	1541.7	1546.7	1546.7	1531.7	1526.7	1526.7	1516.8	1506.8	1491.8	1472.0	1457.1
50°	1377.5	1382.5	1372.6	1367.6	1357.6	1352.6	1352.6	1332.8	1322.8	1302.9	1292.9
52.5°	1228.4	1228.4	1223.4	1223.4	1208.4	1208.4	1198.5	1183.5	1173.7	1163.7	1138.8
55°	1094.0	1094.0	1089.1	1084.1	1084.1	1069.1	1064.3	1049.3	1039.3	1019.4	1004.6
57.5°	964.8	969.7	964.8	959.8	954.8	949.9	939.9	924.9	915.1	900.1	890.2
60°	860.4	860.4	855.4	850.4	840.4	835.5	830.5	820.5	805.7	795.7	780.8
62.5°	760.8	755.8	751.0	746.0	736.0	736.0	726.0	716.1	701.2	691.3	681.3
65°	656.4	656.4	651.5	651.5	646.5	636.6	631.6	626.6	606.7	601.8	581.9
67.5°	561.9	566.9	556.9	556.9	547.1	547.1	542.1	527.1	522.2	512.2	502.2
70°	477.4	477.4	477.4	472.4	462.5	457.5	452.5	442.5	437.7	427.7	417.7
72.5°	392.8	392.8	387.9	387.9	383.0	378.0	373.0	363.0	363.0	353.1	343.1
75°	318.3	318.3	313.3	308.3	303.3	303.3	298.3	293.4	283.5	278.5	273.5
77.5°	243.6	243.6	243.6	238.8	233.8	233.8	233.8	223.8	213.8	213.8	208.9
80°	179.1	179.1	174.1	174.1	169.1	169.1	169.1	164.1	159.1	154.2	149.2
82.5°	119.4	119.4	119.4	119.4	114.4	114.4	114.4	109.4	104.4	104.4	104.4
85°	69.7	69.7	69.7	69.7	64.7	64.7	64.7	64.7	64.7	59.7	59.7
87.5°	29.8	24.9	29.8	24.9	29.8	24.9	29.8	24.9	24.9	24.9	24.9
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°	3501.0	3501.0	3501.0	3501.0	3501.0	3501.0	3501.0	3501.0	3501.0	3501.0	3501.0
2.5°	3540.7	3535.7	3530.9	3525.9	3525.9	3520.9	3510.9	3506.0	3501.0	3496.0	3496.0
5°	3560.7	3555.7	3545.7	3535.7	3530.9	3520.9	3510.9	3501.0	3491.0	3476.2	3471.2
7.5°	3575.6	3560.7	3550.7	3530.9	3525.9	3515.9	3501.0	3486.0	3466.2	3446.3	3431.3
10°	3575.6	3555.7	3540.7	3515.9	3506.0	3496.0	3476.2	3451.2	3426.3	3406.5	3381.6
12.5°	3565.6	3540.7	3515.9	3491.0	3476.2	3461.2	3431.3	3406.5	3376.6	3346.8	3326.9
15°	3530.9	3501.0	3471.2	3441.3	3426.3	3406.5	3376.6	3341.8	3312.0	3282.1	3247.4
17.5°	3466.2	3436.3	3401.5	3366.7	3346.8	3331.9	3287.1	3262.3	3217.6	3187.7	3157.9
20°	3381.6	3346.8	3302.1	3267.3	3242.4	3227.4	3192.7	3147.9	3113.0	3068.3	3038.5
22.5°	3272.2	3227.4	3182.7	3147.9	3123.0	3103.2	3058.3	3013.6	2983.8	2944.0	2909.2
25°	3142.9	3098.2	3053.4	3003.7	2978.8	2958.9	2919.1	2879.4	2839.6	2794.9	2765.0
27.5°	2988.8	2939.0	2899.3	2854.4	2829.6	2799.7	2755.0	2715.2	2675.5	2645.6	2605.8
30°	2819.7	2765.0	2725.2	2680.5	2655.5	2630.7	2586.0	2546.1	2511.4	2476.6	2456.6
32.5°	2615.8	2576.0	2536.3	2491.4	2471.6	2456.6	2411.9	2372.1	2332.3	2302.5	2287.5
35°	2421.9	2377.0	2342.3	2302.5	2277.6	2262.7	2223.0	2188.1	2168.3	2133.4	2113.6
37.5°	2218.0	2183.1	2143.4	2103.6	2088.6	2073.7	2043.9	2009.1	1979.2	1954.4	1944.5
40°	2004.1	1974.2	1939.5	1914.6	1899.7	1884.8	1859.8	1835.0	1815.1	1790.3	1780.3
42.5°	1800.3	1780.3	1750.4	1720.6	1705.7	1700.7	1670.9	1651.0	1641.1	1631.2	1621.2
45°	1616.2	1586.4	1566.5	1546.7	1531.7	1521.7	1506.8	1491.8	1482.0	1472.0	1462.1
47.5°	1437.1	1412.3	1392.4	1377.5	1362.6	1357.6	1347.7	1332.8	1322.8	1322.8	1322.8
50°	1273.1	1253.2	1233.3	1223.4	1218.4	1208.4	1198.5	1193.5	1188.5	1188.5	1188.5
52.5°	1128.8	1109.0	1094.0	1084.1	1084.1	1074.1	1064.3	1059.3	1059.3	1059.3	1059.3
55°	994.6	979.6	969.7	959.8	949.9	944.9	944.9	944.9	939.9	939.9	944.9
57.5°	875.2	865.4	850.4	840.4	835.5	835.5	830.5	825.5	830.5	835.5	840.4
60°	765.8	755.8	751.0	736.0	736.0	736.0	731.0	731.0	731.0	736.0	741.0
62.5°	666.4	661.4	651.5	646.5	641.5	641.5	636.6	636.6	636.6	636.6	641.5
65°	576.9	566.9	556.9	556.9	556.9	552.1	552.1	542.1	547.1	547.1	542.1
67.5°	492.4	482.4	477.4	472.4	467.5	467.5	462.5	457.5	452.5	452.5	452.5
70°	412.7	402.8	402.8	392.8	392.8	387.9	383.0	383.0	378.0	373.0	368.0
72.5°	333.2	328.2	323.3	318.3	318.3	318.3	313.3	308.3	303.3	298.3	288.5
75°	263.6	263.6	253.6	248.6	248.6	243.6	238.8	233.8	228.8	223.8	218.8
77.5°	203.9	198.9	188.9	184.1	184.1	184.1	179.1	174.1	169.1	164.1	159.1
80°	149.2	144.2	139.2	134.2	134.2	134.2	129.2	129.2	124.4	124.4	124.4
82.5°	99.4	99.4	94.5	94.5	94.5	94.5	89.5	89.5	89.5	89.5	89.5
85°	59.7	59.7	54.7	54.7	54.7	54.7	54.7	54.7	54.7	54.7	54.7
87.5°	24.9	24.9	24.9	24.9	24.9	24.9	24.9	24.9	24.9	24.9	24.9
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°	3501.0	3501.0	3501.0	3501.0	3501.0	3501.0	3501.0	3501.0	3501.0	3501.0	3501.0
2.5°	3486.0	3486.0	3476.2	3471.2	3466.2	3471.2	3461.2	3456.2	3451.2	3451.2	3446.3
5°	3456.2	3451.2	3431.3	3426.3	3421.3	3416.5	3406.5	3396.5	3386.6	3381.6	3376.6
7.5°	3416.5	3401.5	3381.6	3376.6	3371.6	3356.8	3341.8	3331.9	3317.0	3312.0	3302.1
10°	3361.8	3341.8	3326.9	3312.0	3302.1	3287.1	3272.2	3257.3	3237.4	3232.4	3217.6
12.5°	3297.1	3272.2	3242.4	3237.4	3222.5	3202.6	3182.7	3167.7	3152.9	3142.9	3128.0
15°	3217.6	3192.7	3162.9	3147.9	3133.0	3118.0	3093.2	3073.3	3058.3	3043.5	3028.5
17.5°	3123.0	3093.2	3068.3	3053.4	3043.5	3018.6	2998.7	2973.8	2958.9	2944.0	2929.1
20°	3008.6	2983.8	2949.0	2934.1	2929.1	2909.2	2884.3	2874.4	2854.4	2839.6	2829.6
22.5°	2879.4	2854.4	2824.7	2814.7	2794.9	2784.9	2760.0	2750.0	2740.1	2725.2	2720.2
25°	2735.2	2710.3	2685.4	2680.5	2665.5	2655.5	2640.7	2625.8	2625.8	2610.8	2610.8
27.5°	2586.0	2561.1	2541.2	2531.3	2526.3	2516.3	2501.4	2496.4	2491.4	2486.4	2486.4
30°	2426.9	2397.0	2387.0	2382.0	2377.0	2367.2	2362.2	2352.2	2357.2	2362.2	2357.2
32.5°	2257.7	2247.8	2227.9	2218.0	2223.0	2218.0	2208.0	2218.0	2213.0	2223.0	2227.9
35°	2093.6	2083.7	2073.7	2073.7	2063.7	2063.7	2063.7	2068.7	2078.7	2083.7	2093.6
37.5°	1934.5	1919.5	1914.6	1909.7	1914.6	1914.6	1914.6	1924.5	1934.5	1944.5	1959.4
40°	1765.4	1755.4	1755.4	1755.4	1755.4	1770.4	1765.4	1775.3	1785.3	1800.3	1815.1
42.5°	1606.2	1606.2	1611.2	1611.2	1611.2	1611.2	1621.2	1636.1	1651.0	1665.9	1680.9
45°	1457.1	1457.1	1457.1	1467.0	1467.0	1472.0	1491.8	1501.8	1511.8	1526.7	1541.7
47.5°	1317.9	1317.9	1322.8	1327.8	1332.8	1342.7	1352.6	1367.6	1382.5	1392.4	1407.3
50°	1188.5	1193.5	1203.5	1213.4	1213.4	1218.4	1233.3	1243.2	1253.2	1268.1	1273.1
52.5°	1064.3	1074.1	1084.1	1089.1	1094.0	1104.0	1109.0	1123.8	1128.8	1143.8	1148.8
55°	949.9	954.8	969.7	974.7	974.7	984.6	994.6	1004.6	1019.4	1019.4	1029.4
57.5°	845.4	850.4	860.4	865.4	860.4	875.2	880.2	890.2	895.1	905.1	910.1
60°	741.0	751.0	755.8	755.8	760.8	765.8	775.8	775.8	785.7	795.7	795.7
62.5°	641.5	646.5	651.5	656.4	661.4	656.4	671.3	671.3	681.3	686.3	696.2
65°	547.1	552.1	552.1	556.9	556.9	561.9	561.9	566.9	571.9	581.9	586.8
67.5°	452.5	452.5	452.5	457.5	452.5	457.5	457.5	462.5	462.5	472.4	477.4
70°	368.0	363.0	358.0	358.0	358.0	358.0	353.1	358.0	358.0	363.0	363.0
72.5°	283.5	278.5	273.5	268.6	268.6	263.6	258.6	263.6	263.6	268.6	268.6
75°	213.8	203.9	203.9	203.9	198.9	198.9	198.9	203.9	203.9	203.9	208.9
77.5°	159.1	159.1	154.2	154.2	154.2	159.1	159.1	164.1	164.1	164.1	164.1
80°	119.4	124.4	124.4	124.4	124.4	129.2	129.2	129.2	129.2	134.2	134.2
82.5°	89.5	89.5	89.5	89.5	94.5	94.5	94.5	94.5	94.5	94.5	94.5
85°	54.7	59.7	59.7	54.7	59.7	59.7	59.7	59.7	59.7	59.7	59.7
87.5°	24.9	24.9	24.9	24.9	24.9	24.9	24.9	24.9	24.9	24.9	24.9
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: P585237

CATALOG NUMBER: HC880D010-HM86080835-81WWWB

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	3501.0	3501.0	3501.0	3501.0	3501.0	3501.0	3501.0	3501.0
2.5°	3441.3	3441.3	3441.3	3441.3	3436.3	3436.3	3436.3	3431.3
5°	3366.7	3366.7	3366.7	3356.8	3361.8	3361.8	3351.8	3356.8
7.5°	3292.1	3287.1	3282.1	3282.1	3277.2	3272.2	3267.3	3272.2
10°	3207.6	3192.7	3192.7	3187.7	3187.7	3177.7	3177.7	3182.7
12.5°	3113.0	3103.2	3103.2	3098.2	3093.2	3088.2	3083.2	3083.2
15°	3018.6	3008.6	3003.7	2998.7	2993.8	2983.8	2988.8	2983.8
17.5°	2924.1	2909.2	2909.2	2904.3	2899.3	2889.3	2889.3	2884.3
20°	2814.7	2809.7	2799.7	2804.7	2799.7	2789.9	2784.9	2784.9
22.5°	2705.3	2705.3	2700.3	2700.3	2695.3	2690.4	2685.4	2685.4
25°	2600.8	2595.9	2600.8	2600.8	2586.0	2586.0	2586.0	2590.9
27.5°	2481.6	2486.4	2481.6	2481.6	2481.6	2481.6	2486.4	2481.6
30°	2362.2	2362.2	2362.2	2367.2	2377.0	2372.1	2372.1	2367.2
32.5°	2232.8	2237.8	2237.8	2242.8	2247.8	2257.7	2257.7	2262.7
35°	2103.6	2113.6	2118.4	2113.6	2128.4	2128.4	2138.4	2138.4
37.5°	1969.3	1974.2	1984.2	1989.2	1999.2	2004.1	2009.1	2009.1
40°	1825.1	1845.0	1850.0	1855.0	1869.8	1869.8	1874.8	1884.8
42.5°	1690.8	1710.7	1715.7	1720.6	1730.6	1745.6	1740.6	1750.4
45°	1561.5	1576.4	1581.4	1586.4	1601.3	1606.2	1606.2	1621.2
47.5°	1422.3	1432.3	1437.1	1447.1	1457.1	1467.0	1477.0	1472.0
50°	1283.0	1297.9	1307.9	1312.9	1327.8	1332.8	1337.7	1342.7
52.5°	1158.7	1168.7	1173.7	1178.5	1193.5	1198.5	1203.5	1213.4
55°	1039.3	1044.3	1054.3	1049.3	1064.3	1069.1	1074.1	1084.1
57.5°	920.0	924.9	929.9	929.9	939.9	949.9	954.8	959.8
60°	805.7	815.5	820.5	820.5	820.5	830.5	830.5	830.5
62.5°	701.2	701.2	706.1	706.1	716.1	716.1	716.1	716.1
65°	591.8	596.8	601.8	601.8	611.6	606.7	616.6	611.6
67.5°	477.4	477.4	487.4	487.4	482.4	487.4	487.4	487.4
70°	363.0	363.0	368.0	368.0	368.0	368.0	368.0	368.0
72.5°	268.6	268.6	268.6	273.5	268.6	268.6	273.5	268.6
75°	208.9	208.9	208.9	208.9	208.9	208.9	208.9	208.9
77.5°	164.1	164.1	169.1	169.1	169.1	169.1	169.1	169.1
80°	134.2	134.2	134.2	134.2	139.2	134.2	134.2	134.2
82.5°	99.4	94.5	99.4	94.5	99.4	99.4	99.4	99.4
85°	59.7	59.7	59.7	59.7	59.7	59.7	59.7	59.7
87.5°	24.9	24.9	24.9	24.9	24.9	24.9	24.9	24.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Report Generated By 670245859 / DESKTOP-HRDQ47P





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















(END OF REPORT)