

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: P585194

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

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P585194  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-14)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 10/21/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC880D010-HM86080827-81RWWC  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5930.5 lumens  
Efficiency: N/A  
Efficacy: 84.7 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 1.08 / 1.17  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

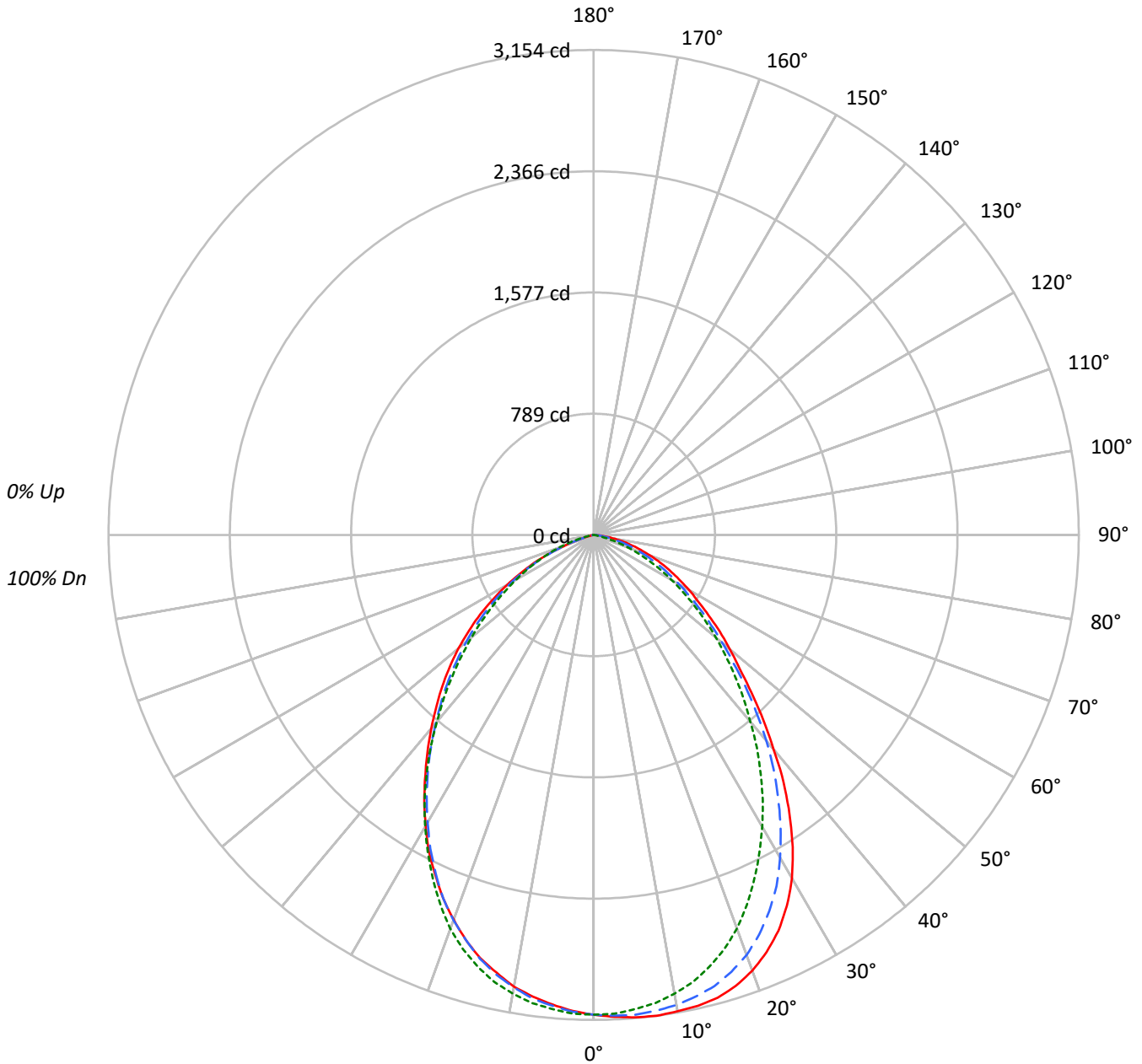
Input Watts (W): 70  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88			
2	103	96	90	85	100	94	89	84	91	86	82	87	84	81	85	82	79	77			
3	95	86	79	73	93	84	78	73	82	76	72	79	74	70	76	73	69	67			
4	88	77	70	64	86	76	69	64	74	68	63	72	66	62	69	65	61	59			
5	81	70	62	56	80	69	62	56	67	61	56	65	59	55	63	58	54	52			
6	76	64	56	50	74	63	55	50	61	55	50	60	54	49	58	53	49	47			
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44	42			
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38			
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35			
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32			

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

	0°	90°	180°
0°	96222	96222	96222
5°	97490	95815	94911
10°	98489	94835	93404
15°	99485	92832	90971
20°	98981	89409	87361
25°	96669	84057	82920
30°	91823	78025	77729
35°	83589	71196	71829
40°	73286	63730	66073
45°	63220	56683	60682
50°	55361	49767	54962
55°	49047	42778	48375
60°	44195	35967	40081
65°	39824	28880	30704
70°	34937	21034	16905
75°	29774	10925	4468
80°	22925	2948	746
85°	14718	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	294.4	5.0
10°-20°	827.6	14.0
20°-30°	1174.7	19.8
30°-40°	1236.5	20.9
40°-50°	1051.9	17.7
50°-60°	760.2	12.8
60°-70°	432.4	7.3
70°-80°	136.2	2.3
80°-90°	16.5	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°	2296.7	38.7
0°-40°	3533.3	59.6
0°-60°	5345.4	90.1
0°-90°	5930.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5930.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	3120	3120	3120	3120	3120	
5°	3150	3133	3095	3074	3066	300
15°	3116	3037	2908	2854	2850	878
25°	2841	2700	2470	2429	2437	1301
35°	2220	2091	1891	1879	1908	1382
45°	1450	1396	1300	1333	1392	1127
55°	912	846	796	842	900	823
65°	546	471	396	392	421	541
75°	250	192	92	42	38	269
85°	42	25	0	0	0	54
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°	3120.4	3120.4	3120.4	3120.4	3120.4	3120.4	3120.4	3120.4	3120.4	3120.4	3120.4
2.5°	3137.1	3141.2	3132.9	3132.9	3141.2	3132.9	3137.1	3137.1	3132.9	3132.9	3128.7
5°	3149.5	3145.4	3145.4	3145.4	3149.5	3141.2	3137.1	3141.2	3132.9	3132.9	3132.9
7.5°	3153.7	3153.7	3149.5	3145.4	3145.4	3145.4	3141.2	3137.1	3132.9	3124.6	3120.4
10°	3145.4	3145.4	3149.5	3141.2	3141.2	3132.9	3132.9	3124.6	3124.6	3116.3	3103.8
12.5°	3137.1	3132.9	3132.9	3124.6	3124.6	3116.3	3116.3	3103.8	3099.6	3087.0	3074.5
15°	3116.3	3112.1	3103.8	3099.6	3095.4	3091.3	3082.8	3078.7	3066.2	3049.5	3037.1
17.5°	3074.5	3070.4	3066.2	3057.9	3049.5	3045.4	3041.2	3028.7	3012.1	2999.6	2978.7
20°	3016.3	3012.1	3012.1	2999.6	2995.4	2983.0	2978.7	2962.0	2949.6	2924.6	2907.9
22.5°	2937.1	2941.2	2932.9	2924.6	2916.3	2903.8	2895.5	2878.8	2857.9	2832.9	2812.1
25°	2841.2	2845.4	2837.1	2828.7	2816.3	2807.9	2799.6	2774.7	2753.7	2724.6	2699.6
27.5°	2720.4	2720.4	2720.4	2712.1	2691.3	2687.1	2678.8	2653.7	2624.6	2599.6	2574.7
30°	2578.8	2574.7	2574.7	2562.2	2553.9	2537.1	2524.6	2503.8	2483.0	2453.9	2424.6
32.5°	2408.0	2412.1	2399.6	2391.3	2378.8	2378.8	2362.2	2345.5	2320.5	2291.3	2262.2
35°	2220.5	2224.7	2216.3	2212.1	2191.3	2187.2	2183.0	2162.2	2145.6	2124.7	2091.3
37.5°	2028.9	2024.7	2020.6	2020.6	2008.1	1999.7	1991.3	1978.9	1953.9	1937.2	1920.6
40°	1820.6	1820.6	1820.6	1816.4	1812.3	1804.0	1799.8	1791.5	1774.7	1758.1	1745.6
42.5°	1633.1	1633.1	1628.9	1624.8	1616.4	1620.6	1612.3	1604.0	1587.3	1574.8	1566.4
45°	1449.7	1449.7	1449.7	1453.9	1445.6	1433.1	1433.1	1424.8	1416.5	1408.1	1395.6
47.5°	1287.3	1299.8	1291.5	1287.3	1291.5	1274.8	1274.8	1266.5	1258.2	1249.9	1233.1
50°	1154.0	1154.0	1154.0	1145.7	1141.6	1141.6	1129.0	1120.6	1116.5	1108.1	1091.5
52.5°	1033.2	1024.8	1024.8	1020.6	1016.5	1008.2	1008.2	999.8	983.2	974.9	962.4
55°	912.3	912.3	908.2	904.0	899.8	895.7	891.5	879.0	870.7	858.2	845.7
57.5°	804.0	812.3	808.2	799.8	791.5	791.5	783.2	774.9	762.4	749.9	737.4
60°	716.6	712.4	712.4	708.3	699.8	695.7	691.5	679.0	666.6	654.1	641.6
62.5°	624.9	624.9	624.9	616.6	608.3	604.1	600.0	591.5	574.9	562.4	554.1
65°	545.8	541.6	537.4	533.3	529.1	520.8	516.6	508.3	495.8	483.2	470.7
67.5°	466.6	462.4	462.4	458.2	445.8	441.6	441.6	429.1	416.6	404.1	391.7
70°	387.5	387.5	387.5	379.1	374.9	370.7	366.6	358.2	345.8	333.3	320.8
72.5°	320.8	316.6	316.6	312.5	300.0	295.8	291.7	283.3	270.7	262.4	254.1
75°	249.9	249.9	245.8	241.6	237.4	233.3	229.1	220.8	208.3	195.8	191.7
77.5°	191.7	187.5	187.5	183.3	175.0	170.9	170.9	162.4	149.9	141.6	133.3
80°	129.1	133.3	129.1	125.0	120.8	116.6	112.5	108.3	100.0	91.7	83.3
82.5°	79.2	83.3	79.2	79.2	75.0	70.9	70.9	62.5	58.4	54.1	49.9
85°	41.6	41.6	41.6	41.6	37.5	37.5	37.5	33.3	29.1	25.0	25.0
87.5°	12.5	16.6	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°	3120.4	3120.4	3120.4	3120.4	3120.4	3120.4	3120.4	3120.4	3120.4	3120.4	3120.4
2.5°	3132.9	3128.7	3124.6	3124.6	3124.6	3124.6	3124.6	3120.4	3116.3	3116.3	3116.3
5°	3124.6	3124.6	3124.6	3120.4	3116.3	3116.3	3107.9	3103.8	3099.6	3095.4	3091.3
7.5°	3116.3	3107.9	3103.8	3099.6	3095.4	3095.4	3087.0	3078.7	3078.7	3070.4	3062.0
10°	3091.3	3087.0	3078.7	3070.4	3066.2	3062.0	3053.7	3041.2	3037.1	3028.7	3020.4
12.5°	3062.0	3053.7	3045.4	3028.7	3024.6	3020.4	3003.8	2991.3	2983.0	2978.7	2957.9
15°	3024.6	3007.9	2995.4	2974.5	2970.4	2962.0	2949.6	2937.1	2920.4	2907.9	2899.6
17.5°	2957.9	2941.2	2920.4	2899.6	2891.3	2891.3	2870.4	2853.7	2832.9	2824.6	2807.9
20°	2878.8	2857.9	2841.2	2816.3	2803.8	2791.3	2778.8	2753.7	2737.1	2724.6	2703.8
22.5°	2787.1	2757.9	2737.1	2712.1	2691.3	2678.8	2658.0	2637.1	2616.3	2603.8	2587.1
25°	2670.5	2645.4	2612.1	2587.1	2574.7	2558.0	2532.9	2512.1	2491.3	2470.5	2462.2
27.5°	2541.2	2508.0	2478.8	2449.7	2437.1	2424.6	2395.5	2370.5	2353.9	2333.1	2324.6
30°	2399.6	2366.3	2333.1	2308.0	2295.5	2274.7	2258.0	2228.9	2208.0	2191.3	2170.5
32.5°	2237.2	2212.1	2183.0	2145.6	2137.2	2120.6	2095.5	2083.0	2058.0	2045.6	2028.9
35°	2062.2	2045.6	2016.4	1987.2	1974.7	1966.4	1945.6	1920.6	1903.9	1891.3	1883.0
37.5°	1895.5	1874.7	1845.6	1824.8	1816.4	1804.0	1778.9	1766.4	1749.7	1741.4	1724.8
40°	1716.4	1695.6	1674.7	1662.2	1649.7	1641.4	1624.8	1612.3	1595.6	1583.2	1579.0
42.5°	1541.4	1528.9	1512.3	1495.6	1491.5	1479.0	1470.7	1458.1	1445.6	1441.4	1428.9
45°	1383.2	1370.7	1353.9	1337.3	1333.1	1324.8	1320.6	1308.1	1299.8	1299.8	1299.8
47.5°	1224.8	1212.3	1195.7	1187.3	1191.5	1174.9	1174.9	1170.7	1162.4	1162.4	1166.5
50°	1083.2	1066.5	1062.4	1054.0	1045.7	1037.4	1041.6	1029.0	1029.0	1037.4	1033.2
52.5°	949.9	933.2	929.1	920.6	916.5	916.5	912.3	912.3	908.2	912.3	912.3
55°	829.1	816.6	808.2	799.8	795.7	795.7	795.7	791.5	787.4	795.7	799.8
57.5°	720.8	716.6	708.3	695.7	691.5	687.4	683.2	683.2	683.2	683.2	687.4
60°	624.9	616.6	608.3	595.7	595.7	591.5	587.4	583.2	583.2	583.2	583.2
62.5°	541.6	529.1	516.6	508.3	504.1	500.0	495.8	487.4	487.4	487.4	487.4
65°	458.2	445.8	437.4	429.1	420.8	420.8	412.5	408.3	400.0	395.8	387.5
67.5°	379.1	370.7	362.4	349.9	345.8	341.6	333.3	329.1	316.6	312.5	308.3
70°	308.3	295.8	287.5	279.2	275.0	266.6	258.3	249.9	241.6	233.3	225.0
72.5°	241.6	229.1	220.8	212.5	204.2	204.2	191.7	183.3	170.9	162.4	149.9
75°	179.2	166.7	158.3	145.8	141.6	137.4	125.0	116.6	104.2	91.7	83.3
77.5°	120.8	112.5	104.2	91.7	83.3	83.3	70.9	62.5	54.1	41.6	37.5
80°	75.0	66.7	58.4	49.9	49.9	41.6	37.5	29.1	20.8	16.6	12.5
82.5°	41.6	37.5	33.3	25.0	25.0	20.8	16.6	12.5	8.3	4.2	4.2
85°	20.8	16.6	12.5	12.5	8.3	8.3	8.3	4.2	4.2	0.0	0.0
87.5°	8.3	4.2	4.2	4.2	4.2	4.2	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



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**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	3120.4	3120.4	3120.4	3120.4	3120.4	3120.4	3120.4	3120.4	3120.4	3120.4	3120.4
2.5°	3112.1	3112.1	3107.9	3107.9	3107.9	3103.8	3107.9	3103.8	3103.8	3103.8	3107.9
5°	3095.4	3087.0	3087.0	3082.8	3082.8	3078.7	3082.8	3078.7	3074.5	3070.4	3074.5
7.5°	3062.0	3053.7	3049.5	3045.4	3045.4	3045.4	3041.2	3037.1	3041.2	3028.7	3037.1
10°	3016.3	3012.1	3003.8	2999.6	2995.4	2999.6	2995.4	2987.1	2987.1	2987.1	2983.0
12.5°	2957.9	2949.6	2945.4	2941.2	2932.9	2932.9	2937.1	2928.7	2928.7	2920.4	2920.4
15°	2887.1	2878.8	2870.4	2870.4	2862.0	2862.0	2857.9	2857.9	2853.7	2849.6	2849.6
17.5°	2799.6	2787.1	2778.8	2783.0	2778.8	2774.7	2774.7	2766.3	2762.0	2766.3	2766.3
20°	2695.5	2687.1	2678.8	2683.0	2674.7	2670.5	2674.7	2662.2	2666.3	2666.3	2666.3
22.5°	2578.8	2574.7	2562.2	2562.2	2553.9	2549.7	2553.9	2553.9	2558.0	2553.9	2553.9
25°	2449.7	2441.4	2432.9	2432.9	2428.8	2424.6	2428.8	2432.9	2428.8	2432.9	2432.9
27.5°	2312.1	2299.6	2299.6	2291.3	2291.3	2295.5	2291.3	2295.5	2299.6	2299.6	2308.0
30°	2162.2	2158.0	2153.9	2149.7	2149.7	2153.9	2153.9	2153.9	2158.0	2166.4	2166.4
32.5°	2020.6	2012.3	2003.8	2003.8	2012.3	2008.1	2012.3	2012.3	2020.6	2020.6	2028.9
35°	1866.4	1866.4	1858.1	1862.2	1862.2	1862.2	1862.2	1870.5	1878.9	1883.0	1891.3
37.5°	1724.8	1712.3	1716.4	1716.4	1720.6	1716.4	1728.9	1728.9	1737.2	1737.2	1745.6
40°	1570.6	1570.6	1574.8	1570.6	1574.8	1574.8	1583.2	1591.5	1595.6	1604.0	1608.1
42.5°	1424.8	1433.1	1424.8	1428.9	1433.1	1437.3	1441.4	1445.6	1462.2	1470.7	1483.2
45°	1291.5	1295.7	1299.8	1304.0	1299.8	1308.1	1312.3	1320.6	1333.1	1337.3	1341.4
47.5°	1162.4	1166.5	1170.7	1174.9	1174.9	1183.2	1187.3	1195.7	1204.0	1208.1	1212.3
50°	1037.4	1045.7	1049.9	1049.9	1054.0	1062.4	1070.7	1070.7	1079.0	1091.5	1095.7
52.5°	924.9	924.9	933.2	937.4	941.6	941.6	954.1	958.2	962.4	970.7	979.0
55°	799.8	812.3	816.6	816.6	824.9	833.3	837.4	841.6	841.6	858.2	858.2
57.5°	691.5	695.7	704.0	704.0	704.0	716.6	716.6	724.9	729.1	733.3	741.6
60°	583.2	591.5	591.5	595.7	591.5	600.0	604.1	612.5	616.6	620.8	624.9
62.5°	483.2	483.2	487.4	487.4	487.4	487.4	495.8	495.8	504.1	508.3	512.5
65°	387.5	387.5	387.5	387.5	387.5	387.5	387.5	387.5	391.7	391.7	400.0
67.5°	300.0	295.8	287.5	291.7	287.5	287.5	283.3	283.3	287.5	287.5	295.8
70°	216.6	212.5	204.2	204.2	200.0	195.8	191.7	187.5	183.3	183.3	183.3
72.5°	141.6	133.3	120.8	116.6	116.6	108.3	100.0	95.8	95.8	95.8	95.8
75°	70.9	62.5	54.1	49.9	49.9	41.6	45.8	41.6	41.6	41.6	41.6
77.5°	29.1	20.8	16.6	16.6	16.6	12.5	12.5	12.5	12.5	12.5	12.5
80°	8.3	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
82.5°	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	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	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: P585194

CATALOG NUMBER: HC880D010-HM86080827-81RWWC

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	3120.4	3120.4	3120.4	3120.4	3120.4	3120.4	3120.4	3120.4
2.5°	3103.8	3103.8	3095.4	3099.6	3099.6	3099.6	3099.6	3099.6
5°	3066.2	3070.4	3066.2	3070.4	3070.4	3066.2	3066.2	3066.2
7.5°	3028.7	3032.9	3028.7	3032.9	3032.9	3032.9	3028.7	3028.7
10°	2983.0	2983.0	2983.0	2983.0	2983.0	2978.7	2983.0	2983.0
12.5°	2920.4	2920.4	2920.4	2924.6	2924.6	2920.4	2920.4	2916.3
15°	2853.7	2845.4	2849.6	2853.7	2849.6	2849.6	2849.6	2849.6
17.5°	2762.0	2766.3	2762.0	2762.0	2762.0	2762.0	2766.3	2762.0
20°	2666.3	2666.3	2670.5	2666.3	2666.3	2666.3	2666.3	2662.2
22.5°	2558.0	2553.9	2553.9	2558.0	2558.0	2553.9	2558.0	2558.0
25°	2437.1	2441.4	2437.1	2437.1	2441.4	2441.4	2441.4	2437.1
27.5°	2308.0	2312.1	2316.3	2312.1	2312.1	2312.1	2316.3	2320.5
30°	2174.7	2183.0	2174.7	2174.7	2183.0	2178.8	2183.0	2183.0
32.5°	2033.1	2045.6	2037.2	2045.6	2045.6	2049.7	2045.6	2049.7
35°	1891.3	1903.9	1903.9	1903.9	1908.1	1912.3	1912.3	1908.1
37.5°	1758.1	1762.2	1762.2	1770.5	1774.7	1778.9	1778.9	1774.7
40°	1620.6	1628.9	1633.1	1633.1	1633.1	1641.4	1649.7	1641.4
42.5°	1487.3	1491.5	1495.6	1495.6	1504.0	1508.1	1512.3	1512.3
45°	1358.2	1366.5	1370.7	1374.8	1379.0	1387.3	1383.2	1391.5
47.5°	1224.8	1237.3	1241.4	1245.6	1254.0	1258.2	1262.4	1266.5
50°	1104.0	1112.3	1112.3	1120.6	1133.1	1133.1	1141.6	1145.7
52.5°	983.2	987.3	991.5	995.7	1004.0	1012.3	1012.3	1020.6
55°	866.5	870.7	870.7	874.9	879.0	895.7	899.8	899.8
57.5°	745.7	745.7	754.1	758.2	762.4	770.7	770.7	770.7
60°	629.1	633.3	633.3	637.4	641.6	649.9	654.1	649.9
62.5°	512.5	516.6	516.6	520.8	529.1	533.3	529.1	529.1
65°	404.1	408.3	408.3	412.5	420.8	420.8	416.6	420.8
67.5°	295.8	295.8	295.8	295.8	295.8	295.8	295.8	295.8
70°	187.5	183.3	179.2	183.3	183.3	183.3	179.2	187.5
72.5°	91.7	95.8	95.8	95.8	95.8	95.8	95.8	91.7
75°	41.6	41.6	37.5	37.5	37.5	41.6	41.6	37.5
77.5°	12.5	12.5	12.5	12.5	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°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	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



Report Generated By 670245859 / DESKTOP-HRDQ47P





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















(END OF REPORT)