

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: P585228

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

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P585228  
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-HM86080835-81RWWC  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7081.1 lumens  
Efficiency: N/A  
Efficacy: 101.2 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

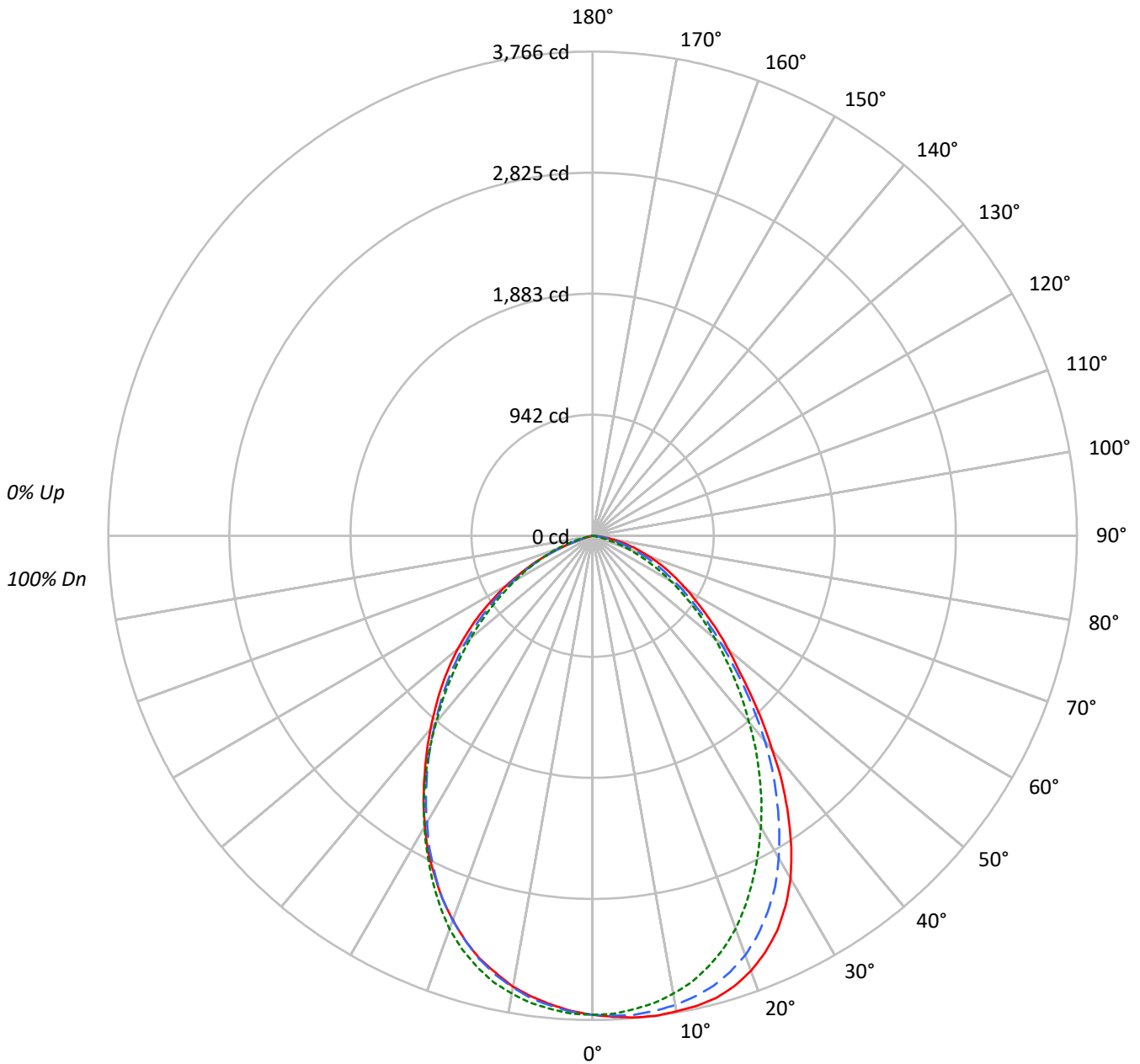
Input Watts (W): 70  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	84	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°	114893	114893	114893
5°	116406	114403	113329
10°	117599	113234	111521
15°	118786	110844	108619
20°	118184	106755	104307
25°	115427	100364	99010
30°	109640	93165	92809
35°	99810	85016	85761
40°	87504	76092	78894
45°	75492	67681	72452
50°	66102	59419	65622
55°	58568	51079	57767
60°	52767	42949	47852
65°	47551	34476	36658
70°	41708	25118	20187
75°	35552	13034	5338
80°	27383	3534	888
85°	17584	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	351.5	5.0
10°-20°	988.2	14.0
20°-30°	1402.6	19.8
30°-40°	1476.4	20.9
40°-50°	1256.0	17.7
50°-60°	907.6	12.8
60°-70°	516.2	7.3
70°-80°	162.7	2.3
80°-90°	19.8	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°	2742.3	38.7
0°-40°	4218.8	59.6
0°-60°	6382.4	90.1
0°-90°	7081.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7081.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	3726	3726	3726	3726	3726	
5°	3761	3741	3696	3671	3661	359
15°	3721	3626	3472	3407	3402	1048
25°	3392	3223	2950	2900	2910	1554
35°	2651	2497	2258	2243	2278	1650
45°	1731	1666	1552	1592	1661	1346
55°	1089	1010	950	1005	1074	982
65°	652	562	472	468	502	646
75°	298	229	109	50	45	321
85°	50	30	0	0	0	64
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°	3725.9	3725.9	3725.9	3725.9	3725.9	3725.9	3725.9	3725.9	3725.9	3725.9	3725.9
2.5°	3745.7	3750.7	3740.7	3740.7	3750.7	3740.7	3745.7	3745.7	3740.7	3740.7	3735.7
5°	3760.6	3755.7	3755.7	3755.7	3760.6	3750.7	3745.7	3750.7	3740.7	3740.7	3740.7
7.5°	3765.6	3765.6	3760.6	3755.7	3755.7	3755.7	3750.7	3745.7	3740.7	3730.7	3725.9
10°	3755.7	3755.7	3760.6	3750.7	3750.7	3740.7	3740.7	3730.7	3730.7	3720.9	3705.9
12.5°	3745.7	3740.7	3740.7	3730.7	3730.7	3720.9	3720.9	3705.9	3700.9	3686.0	3671.0
15°	3720.9	3715.9	3705.9	3700.9	3695.9	3691.0	3681.0	3676.0	3661.2	3641.2	3626.3
17.5°	3671.0	3666.0	3661.2	3651.2	3641.2	3636.2	3631.3	3616.3	3596.5	3581.5	3556.7
20°	3601.5	3596.5	3596.5	3581.5	3576.5	3561.6	3556.7	3536.8	3521.8	3492.0	3472.1
22.5°	3507.0	3511.9	3502.0	3492.0	3482.1	3467.1	3457.1	3437.3	3412.4	3382.6	3357.7
25°	3392.5	3397.4	3387.6	3377.6	3362.6	3352.7	3342.8	3312.9	3288.1	3253.2	3223.4
27.5°	3248.2	3248.2	3248.2	3238.4	3213.4	3208.5	3198.5	3168.7	3133.8	3104.0	3074.2
30°	3079.2	3074.2	3074.2	3059.2	3049.3	3029.3	3014.5	2989.6	2964.8	2929.9	2895.1
32.5°	2875.1	2880.1	2865.3	2855.3	2840.4	2840.4	2820.4	2800.6	2770.7	2735.9	2701.1
35°	2651.4	2656.3	2646.4	2641.4	2616.5	2611.5	2606.5	2581.7	2561.8	2537.0	2497.1
37.5°	2422.5	2417.6	2412.6	2412.6	2397.6	2387.6	2377.8	2362.8	2332.9	2313.1	2293.2
40°	2173.8	2173.8	2173.8	2168.9	2163.9	2153.9	2148.9	2139.0	2119.0	2099.2	2084.2
42.5°	1950.0	1950.0	1945.0	1940.0	1930.1	1935.0	1925.1	1915.1	1895.3	1880.3	1870.4
45°	1731.1	1731.1	1731.1	1736.1	1726.1	1711.2	1711.2	1701.2	1691.2	1681.4	1666.4
47.5°	1537.0	1552.0	1542.0	1537.0	1542.0	1522.2	1522.2	1512.2	1502.3	1492.3	1472.5
50°	1377.9	1377.9	1377.9	1367.9	1363.0	1363.0	1348.1	1338.1	1333.1	1323.1	1303.3
52.5°	1233.6	1223.7	1223.7	1218.7	1213.7	1203.7	1203.7	1193.9	1173.9	1164.0	1149.0
55°	1089.4	1089.4	1084.4	1079.5	1074.5	1069.5	1064.5	1049.5	1039.7	1024.7	1009.8
57.5°	960.0	970.0	965.0	955.1	945.1	945.1	935.1	925.3	910.3	895.4	880.5
60°	855.6	850.6	850.6	845.6	835.7	830.8	825.8	810.8	795.9	780.9	766.1
62.5°	746.1	746.1	746.1	736.2	726.2	721.2	716.3	706.4	686.4	671.5	661.6
65°	651.7	646.7	641.7	636.7	631.7	621.8	616.9	606.9	592.0	577.0	562.2
67.5°	557.2	552.2	552.2	547.2	532.3	527.3	527.3	512.3	497.5	482.5	467.6
70°	462.6	462.6	462.6	452.7	447.7	442.7	437.8	427.8	412.8	398.0	383.0
72.5°	383.0	378.1	378.1	373.1	358.1	353.1	348.3	338.3	323.3	313.4	303.4
75°	298.4	298.4	293.4	288.6	283.6	278.6	273.6	263.6	248.7	233.8	228.8
77.5°	228.8	223.9	223.9	218.9	208.9	203.9	203.9	194.0	179.1	169.1	159.2
80°	154.2	159.2	154.2	149.2	144.2	139.2	134.4	129.4	119.4	109.4	99.5
82.5°	94.5	99.5	94.5	94.5	89.5	84.5	84.5	74.7	69.7	64.7	59.7
85°	49.7	49.7	49.7	49.7	44.8	44.8	44.8	39.8	34.8	29.8	29.8
87.5°	15.0	19.9	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
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):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	3725.9	3725.9	3725.9	3725.9	3725.9	3725.9	3725.9	3725.9	3725.9	3725.9	3725.9
2.5°	3740.7	3735.7	3730.7	3730.7	3730.7	3730.7	3730.7	3725.9	3720.9	3720.9	3720.9
5°	3730.7	3730.7	3730.7	3725.9	3720.9	3720.9	3710.9	3705.9	3700.9	3695.9	3691.0
7.5°	3720.9	3710.9	3705.9	3700.9	3695.9	3695.9	3686.0	3676.0	3676.0	3666.0	3656.2
10°	3691.0	3686.0	3676.0	3666.0	3661.2	3656.2	3646.2	3631.3	3626.3	3616.3	3606.4
12.5°	3656.2	3646.2	3636.2	3616.3	3611.3	3606.4	3586.5	3571.6	3561.6	3556.7	3531.8
15°	3611.3	3591.5	3576.5	3551.7	3546.7	3536.8	3521.8	3507.0	3487.0	3472.1	3462.1
17.5°	3531.8	3511.9	3487.0	3462.1	3452.3	3452.3	3427.3	3407.4	3382.6	3372.6	3352.7
20°	3437.3	3412.4	3392.5	3362.6	3347.7	3332.8	3317.9	3288.1	3268.2	3253.2	3228.4
22.5°	3327.9	3293.1	3268.2	3238.4	3213.4	3198.5	3173.7	3148.7	3123.9	3109.0	3089.0
25°	3188.5	3158.7	3118.9	3089.0	3074.2	3054.3	3024.5	2999.5	2974.6	2949.8	2939.8
27.5°	3034.3	2994.6	2959.8	2924.9	2910.0	2895.1	2860.3	2830.4	2810.6	2785.6	2775.7
30°	2865.3	2825.4	2785.6	2755.7	2740.9	2716.0	2696.1	2661.3	2636.4	2616.5	2591.7
32.5°	2671.2	2641.4	2606.5	2561.8	2551.8	2532.0	2502.1	2487.2	2457.3	2442.4	2422.5
35°	2462.3	2442.4	2407.6	2372.8	2357.8	2347.9	2323.1	2293.2	2273.2	2258.4	2248.4
37.5°	2263.4	2238.4	2203.7	2178.7	2168.9	2153.9	2124.0	2109.2	2089.2	2079.3	2059.3
40°	2049.5	2024.5	1999.7	1984.8	1969.8	1959.9	1940.0	1925.1	1905.1	1890.3	1885.3
42.5°	1840.5	1825.6	1805.7	1785.8	1780.8	1765.9	1755.9	1741.1	1726.1	1721.1	1706.2
45°	1651.5	1636.5	1616.7	1596.8	1591.8	1581.8	1576.9	1562.0	1552.0	1552.0	1552.0
47.5°	1462.5	1447.5	1427.6	1417.6	1422.6	1402.8	1402.8	1397.8	1387.8	1387.8	1392.8
50°	1293.3	1273.4	1268.4	1258.6	1248.6	1238.6	1243.6	1228.7	1228.7	1238.6	1233.6
52.5°	1134.2	1114.2	1109.3	1099.3	1094.4	1094.4	1089.4	1089.4	1084.4	1089.4	1089.4
55°	989.8	975.0	965.0	955.1	950.1	950.1	950.1	945.1	940.1	950.1	955.1
57.5°	860.6	855.6	845.6	830.8	825.8	820.8	815.8	815.8	815.8	815.8	820.8
60°	746.1	736.2	726.2	711.4	711.4	706.4	701.4	696.4	696.4	696.4	696.4
62.5°	646.7	631.7	616.9	606.9	601.9	596.9	592.0	582.0	582.0	582.0	582.0
65°	547.2	532.3	522.3	512.3	502.4	502.4	492.5	487.5	477.5	472.5	462.6
67.5°	452.7	442.7	432.8	417.8	412.8	407.9	398.0	393.0	378.1	373.1	368.1
70°	368.1	353.1	343.3	333.3	328.3	318.4	308.4	298.4	288.6	278.6	268.6
72.5°	288.6	273.6	263.6	253.7	243.7	243.7	228.8	218.9	203.9	194.0	179.1
75°	213.9	198.9	189.1	174.1	169.1	164.2	149.2	139.2	124.4	109.4	99.5
77.5°	144.2	134.4	124.4	109.4	99.5	99.5	84.5	74.7	64.7	49.7	44.8
80°	89.5	79.5	69.7	59.7	59.7	49.7	44.8	34.8	24.9	19.9	15.0
82.5°	49.7	44.8	39.8	29.8	29.8	24.9	19.9	15.0	10.0	5.0	5.0
85°	24.9	19.9	15.0	15.0	10.0	10.0	10.0	5.0	5.0	0.0	0.0
87.5°	10.0	5.0	5.0	5.0	5.0	5.0	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



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**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	3725.9	3725.9	3725.9	3725.9	3725.9	3725.9	3725.9	3725.9	3725.9	3725.9	3725.9
2.5°	3715.9	3715.9	3710.9	3710.9	3710.9	3705.9	3710.9	3705.9	3705.9	3705.9	3710.9
5°	3695.9	3686.0	3686.0	3681.0	3681.0	3676.0	3681.0	3676.0	3671.0	3666.0	3671.0
7.5°	3656.2	3646.2	3641.2	3636.2	3636.2	3636.2	3631.3	3626.3	3631.3	3616.3	3626.3
10°	3601.5	3596.5	3586.5	3581.5	3576.5	3581.5	3576.5	3566.6	3566.6	3566.6	3561.6
12.5°	3531.8	3521.8	3516.8	3511.9	3502.0	3502.0	3507.0	3497.0	3497.0	3487.0	3487.0
15°	3447.3	3437.3	3427.3	3427.3	3417.4	3417.4	3412.4	3412.4	3407.4	3402.4	3402.4
17.5°	3342.8	3327.9	3317.9	3322.9	3317.9	3312.9	3312.9	3302.9	3298.0	3302.9	3302.9
20°	3218.4	3208.5	3198.5	3203.5	3193.5	3188.5	3193.5	3178.6	3183.5	3183.5	3183.5
22.5°	3079.2	3074.2	3059.2	3059.2	3049.3	3044.3	3049.3	3049.3	3054.3	3049.3	3049.3
25°	2924.9	2915.0	2905.0	2905.0	2900.1	2895.1	2900.1	2905.0	2900.1	2905.0	2905.0
27.5°	2760.7	2745.9	2745.9	2735.9	2735.9	2740.9	2735.9	2740.9	2745.9	2745.9	2755.7
30°	2581.7	2576.7	2571.7	2566.8	2566.8	2571.7	2571.7	2571.7	2576.7	2586.7	2586.7
32.5°	2412.6	2402.6	2392.6	2392.6	2402.6	2397.6	2402.6	2402.6	2412.6	2412.6	2422.5
35°	2228.5	2228.5	2218.6	2223.5	2223.5	2223.5	2223.5	2233.5	2243.4	2248.4	2258.4
37.5°	2059.3	2044.5	2049.5	2049.5	2054.4	2049.5	2064.3	2064.3	2074.3	2074.3	2084.2
40°	1875.3	1875.3	1880.3	1875.3	1880.3	1880.3	1890.3	1900.3	1905.1	1915.1	1920.1
42.5°	1701.2	1711.2	1701.2	1706.2	1711.2	1716.2	1721.1	1726.1	1746.0	1755.9	1770.9
45°	1542.0	1547.0	1552.0	1557.0	1552.0	1562.0	1566.9	1576.9	1591.8	1596.8	1601.7
47.5°	1387.8	1392.8	1397.8	1402.8	1402.8	1412.8	1417.6	1427.6	1437.6	1442.6	1447.5
50°	1238.6	1248.6	1253.6	1253.6	1258.6	1268.4	1278.4	1278.4	1288.4	1303.3	1308.3
52.5°	1104.3	1104.3	1114.2	1119.2	1124.2	1124.2	1139.2	1144.1	1149.0	1159.0	1169.0
55°	955.1	970.0	975.0	975.0	985.0	994.8	999.8	1004.8	1004.8	1024.7	1024.7
57.5°	825.8	830.8	840.6	840.6	840.6	855.6	855.6	865.6	870.5	875.5	885.4
60°	696.4	706.4	706.4	711.4	706.4	716.3	721.2	731.2	736.2	741.2	746.1
62.5°	577.0	577.0	582.0	582.0	582.0	582.0	592.0	592.0	601.9	606.9	611.9
65°	462.6	462.6	462.6	462.6	462.6	462.6	462.6	462.6	467.6	467.6	477.5
67.5°	358.1	353.1	343.3	348.3	343.3	343.3	338.3	338.3	343.3	343.3	353.1
70°	258.6	253.7	243.7	243.7	238.8	233.8	228.8	223.9	218.9	218.9	218.9
72.5°	169.1	159.2	144.2	139.2	139.2	129.4	119.4	114.4	114.4	114.4	114.4
75°	84.5	74.7	64.7	59.7	59.7	49.7	54.7	49.7	49.7	49.7	49.7
77.5°	34.8	24.9	19.9	19.9	19.9	15.0	15.0	15.0	15.0	15.0	15.0
80°	10.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
82.5°	5.0	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: P585228

CATALOG NUMBER: HC880D010-HM86080835-81RWWC

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	3725.9	3725.9	3725.9	3725.9	3725.9	3725.9	3725.9	3725.9
2.5°	3705.9	3705.9	3695.9	3700.9	3700.9	3700.9	3700.9	3700.9
5°	3661.2	3666.0	3661.2	3666.0	3666.0	3661.2	3661.2	3661.2
7.5°	3616.3	3621.3	3616.3	3621.3	3621.3	3621.3	3616.3	3616.3
10°	3561.6	3561.6	3561.6	3561.6	3561.6	3556.7	3561.6	3561.6
12.5°	3487.0	3487.0	3487.0	3492.0	3492.0	3487.0	3487.0	3482.1
15°	3407.4	3397.4	3402.4	3407.4	3402.4	3402.4	3402.4	3402.4
17.5°	3298.0	3302.9	3298.0	3298.0	3298.0	3298.0	3302.9	3298.0
20°	3183.5	3183.5	3188.5	3183.5	3183.5	3183.5	3183.5	3178.6
22.5°	3054.3	3049.3	3049.3	3054.3	3054.3	3049.3	3054.3	3054.3
25°	2910.0	2915.0	2910.0	2910.0	2915.0	2915.0	2915.0	2910.0
27.5°	2755.7	2760.7	2765.7	2760.7	2760.7	2760.7	2765.7	2770.7
30°	2596.7	2606.5	2596.7	2596.7	2606.5	2601.5	2606.5	2606.5
32.5°	2427.5	2442.4	2432.5	2442.4	2442.4	2447.4	2442.4	2447.4
35°	2258.4	2273.2	2273.2	2273.2	2278.2	2283.2	2283.2	2278.2
37.5°	2099.2	2104.2	2104.2	2114.0	2119.0	2124.0	2124.0	2119.0
40°	1935.0	1945.0	1950.0	1950.0	1950.0	1959.9	1969.8	1959.9
42.5°	1775.9	1780.8	1785.8	1785.8	1795.7	1800.7	1805.7	1805.7
45°	1621.7	1631.5	1636.5	1641.5	1646.5	1656.5	1651.5	1661.4
47.5°	1462.5	1477.3	1482.3	1487.3	1497.3	1502.3	1507.2	1512.2
50°	1318.2	1328.1	1328.1	1338.1	1353.1	1353.1	1363.0	1367.9
52.5°	1173.9	1178.9	1183.9	1188.9	1198.9	1208.7	1208.7	1218.7
55°	1034.7	1039.7	1039.7	1044.7	1049.5	1069.5	1074.5	1074.5
57.5°	890.4	890.4	900.3	905.3	910.3	920.3	920.3	920.3
60°	751.1	756.1	756.1	761.1	766.1	775.9	780.9	775.9
62.5°	611.9	616.9	616.9	621.8	631.7	636.7	631.7	631.7
65°	482.5	487.5	487.5	492.5	502.4	502.4	497.5	502.4
67.5°	353.1	353.1	353.1	353.1	353.1	353.1	353.1	353.1
70°	223.9	218.9	213.9	218.9	218.9	218.9	213.9	223.9
72.5°	109.4	114.4	114.4	114.4	114.4	114.4	114.4	109.4
75°	49.7	49.7	44.8	44.8	44.8	49.7	49.7	44.8
77.5°	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
80°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
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)