

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: P593834

Luminaire Tested: **HC855D010-HM82555850-81RWWC**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P593834  
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: HC855D010-HM82555850-81RWWC  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5796.7 lumens  
Efficiency: N/A  
Efficacy: 111.5 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

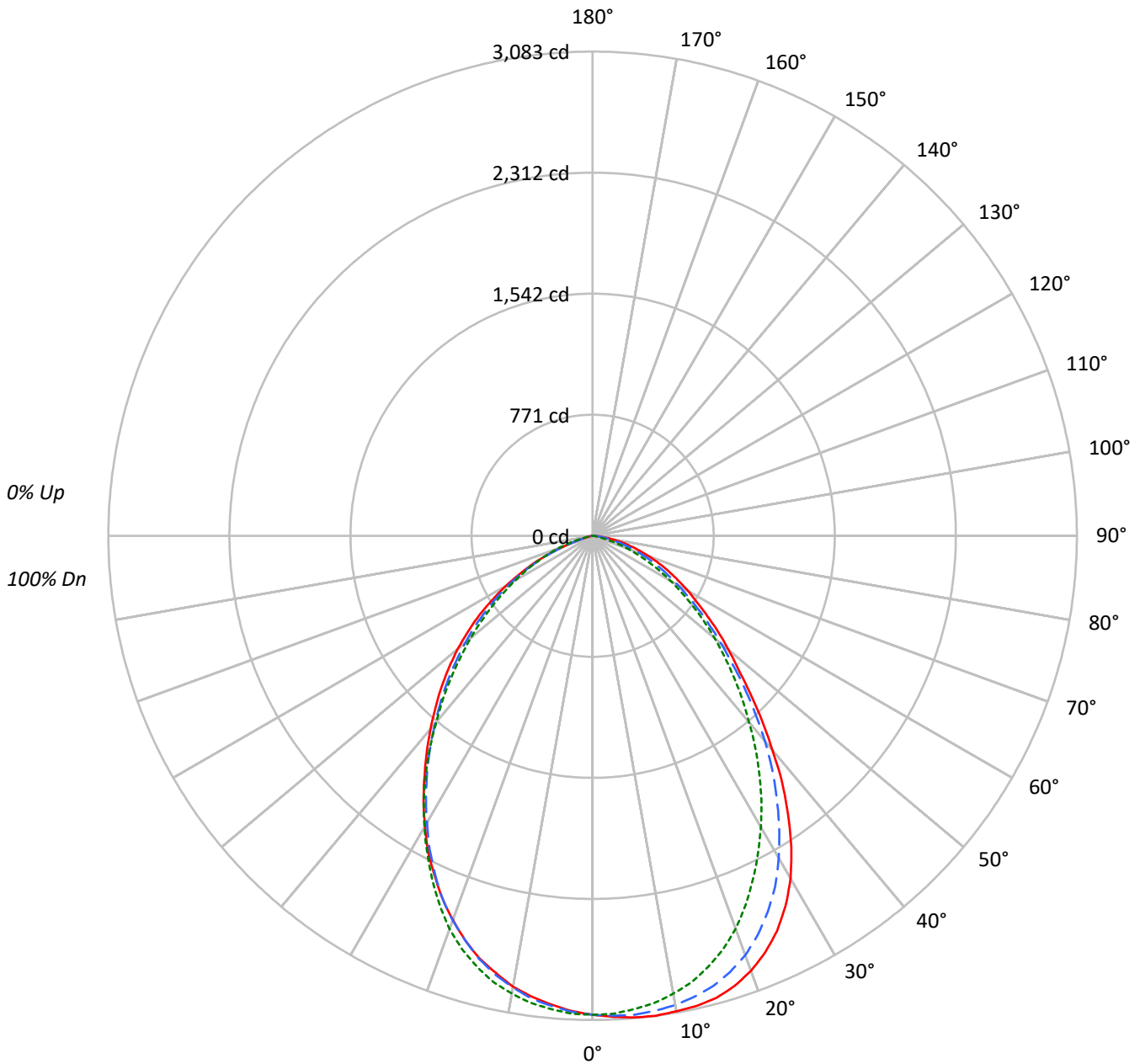
Input Watts (W): 52  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	94051	94051	94051
5°	95292	93652	92769
10°	96266	92696	91293
15°	97238	90738	88918
20°	96746	87390	85389
25°	94492	82161	81052
30°	89750	76266	75974
35°	81703	69593	70206
40°	71628	62289	64583
45°	61799	55401	59313
50°	54109	48640	53720
55°	47944	41810	47289
60°	43196	35160	39174
65°	38927	28230	30010
70°	34143	20565	16526
75°	29118	10663	4373
80°	22411	2895	728
85°	14400	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	287.8	5.0
10°-20°	809.0	14.0
20°-30°	1148.2	19.8
30°-40°	1208.6	20.9
40°-50°	1028.2	17.7
50°-60°	743.0	12.8
60°-70°	422.6	7.3
70°-80°	133.2	2.3
80°-90°	16.2	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°	2244.9	38.7
0°-40°	3453.6	59.6
0°-60°	5224.7	90.1
0°-90°	5796.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5796.7	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	3050	3050	3050	3050	3050	
5°	3078	3062	3026	3005	2997	294
15°	3046	2969	2842	2789	2785	858
25°	2777	2639	2415	2374	2382	1272
35°	2170	2044	1849	1836	1865	1351
45°	1417	1364	1270	1303	1360	1101
55°	892	827	778	822	880	804
65°	534	460	387	383	411	529
75°	244	187	90	41	37	263
85°	41	24	0	0	0	53
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°	3050.0	3050.0	3050.0	3050.0	3050.0	3050.0	3050.0	3050.0	3050.0	3050.0	3050.0
2.5°	3066.3	3070.3	3062.2	3062.2	3070.3	3062.2	3066.3	3066.3	3062.2	3062.2	3058.1
5°	3078.5	3074.4	3074.4	3074.4	3078.5	3070.3	3066.3	3070.3	3062.2	3062.2	3062.2
7.5°	3082.6	3082.6	3078.5	3074.4	3074.4	3074.4	3070.3	3066.3	3062.2	3054.0	3050.0
10°	3074.4	3074.4	3078.5	3070.3	3070.3	3062.2	3062.2	3054.0	3054.0	3045.9	3033.7
12.5°	3066.3	3062.2	3062.2	3054.0	3054.0	3045.9	3045.9	3033.7	3029.6	3017.4	3005.2
15°	3045.9	3041.8	3033.7	3029.6	3025.5	3021.5	3013.3	3009.2	2997.0	2980.7	2968.6
17.5°	3005.2	3001.1	2997.0	2989.0	2980.7	2976.6	2972.7	2960.4	2944.1	2931.9	2911.5
20°	2948.2	2944.1	2944.1	2931.9	2927.8	2915.6	2911.5	2895.2	2883.0	2858.6	2842.3
22.5°	2870.8	2874.9	2866.7	2858.6	2850.4	2838.2	2830.1	2813.9	2793.5	2769.0	2748.7
25°	2777.2	2781.3	2773.1	2765.0	2752.7	2744.6	2736.4	2712.0	2691.6	2663.1	2638.8
27.5°	2659.0	2659.0	2659.0	2650.9	2630.6	2626.5	2618.4	2593.9	2565.4	2541.0	2516.5
30°	2520.6	2516.5	2516.5	2504.3	2496.1	2479.8	2467.6	2447.4	2427.0	2398.5	2369.9
32.5°	2353.6	2357.7	2345.5	2337.3	2325.1	2325.1	2308.8	2292.5	2268.2	2239.7	2211.1
35°	2170.4	2174.5	2166.3	2162.2	2141.9	2137.8	2133.7	2113.4	2097.1	2076.8	2044.2
37.5°	1983.1	1979.0	1974.9	1974.9	1962.7	1954.5	1946.5	1934.3	1909.8	1893.5	1877.2
40°	1779.4	1779.4	1779.4	1775.5	1771.4	1763.2	1759.2	1751.0	1734.7	1718.4	1706.2
42.5°	1596.3	1596.3	1592.2	1588.1	1580.0	1584.1	1575.9	1567.8	1551.5	1539.2	1531.1
45°	1417.1	1417.1	1417.1	1421.2	1413.0	1400.8	1400.8	1392.7	1384.5	1376.4	1364.1
47.5°	1258.3	1270.4	1262.4	1258.3	1262.4	1246.1	1246.1	1237.9	1229.8	1221.6	1205.3
50°	1127.9	1127.9	1127.9	1119.8	1115.7	1115.7	1103.6	1095.4	1091.4	1083.2	1066.9
52.5°	1009.9	1001.7	1001.7	997.6	993.6	985.4	985.4	977.3	961.0	952.8	940.6
55°	891.8	891.8	887.7	883.7	879.6	875.5	871.4	859.2	851.1	838.8	826.6
57.5°	785.9	794.0	789.9	781.8	773.6	773.6	765.6	757.5	745.2	733.0	720.8
60°	700.4	696.3	696.3	692.3	684.1	680.0	676.0	663.7	651.5	639.3	627.1
62.5°	610.8	610.8	610.8	602.6	594.6	590.5	586.4	578.3	562.0	549.8	541.6
65°	533.5	529.4	525.3	521.2	517.2	509.0	504.9	496.8	484.6	472.3	460.1
67.5°	456.0	452.0	452.0	447.9	435.7	431.6	431.6	419.5	407.2	395.0	382.8
70°	378.7	378.7	378.7	370.6	366.5	362.4	358.4	350.2	338.0	325.8	313.5
72.5°	313.5	309.5	309.5	305.4	293.2	289.1	285.0	276.9	264.6	256.6	248.3
75°	244.4	244.4	240.3	236.2	232.1	228.1	224.0	215.8	203.6	191.4	187.3
77.5°	187.3	183.3	183.3	179.2	171.0	167.0	167.0	158.8	146.6	138.4	130.3
80°	126.2	130.3	126.2	122.1	118.1	114.0	109.9	105.8	97.7	89.5	81.5
82.5°	77.4	81.5	77.4	77.4	73.2	69.3	69.3	61.1	57.0	53.0	48.9
85°	40.7	40.7	40.7	40.7	36.7	36.7	36.7	32.6	28.5	24.4	24.4
87.5°	12.2	16.3	12.2	12.2	12.2	12.2	12.2	12.2	8.1	8.1	8.1
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°	3050.0	3050.0	3050.0	3050.0	3050.0	3050.0	3050.0	3050.0	3050.0	3050.0	3050.0
2.5°	3062.2	3058.1	3054.0	3054.0	3054.0	3054.0	3054.0	3050.0	3045.9	3045.9	3045.9
5°	3054.0	3054.0	3054.0	3050.0	3045.9	3045.9	3037.7	3033.7	3029.6	3025.5	3021.5
7.5°	3045.9	3037.7	3033.7	3029.6	3025.5	3025.5	3017.4	3009.2	3009.2	3001.1	2992.9
10°	3021.5	3017.4	3009.2	3001.1	2997.0	2992.9	2984.8	2972.7	2968.6	2960.4	2952.3
12.5°	2992.9	2984.8	2976.6	2960.4	2956.4	2952.3	2936.0	2923.8	2915.6	2911.5	2891.2
15°	2956.4	2940.1	2927.8	2907.5	2903.4	2895.2	2883.0	2870.8	2854.5	2842.3	2834.1
17.5°	2891.2	2874.9	2854.5	2834.1	2826.0	2826.0	2805.7	2789.4	2769.0	2760.9	2744.6
20°	2813.9	2793.5	2777.2	2752.7	2740.5	2728.3	2716.1	2691.6	2675.3	2663.1	2642.7
22.5°	2724.2	2695.7	2675.3	2650.9	2630.6	2618.4	2598.0	2577.6	2557.3	2545.0	2528.7
25°	2610.2	2585.8	2553.2	2528.7	2516.5	2500.2	2475.8	2455.5	2435.1	2414.8	2406.6
27.5°	2483.9	2451.4	2422.9	2394.4	2382.2	2369.9	2341.4	2317.0	2300.8	2280.4	2272.3
30°	2345.5	2312.9	2280.4	2256.0	2243.7	2223.4	2207.1	2178.5	2158.2	2141.9	2121.6
32.5°	2186.7	2162.2	2133.7	2097.1	2089.0	2072.7	2048.3	2036.0	2011.6	1999.4	1983.1
35°	2015.7	1999.4	1970.8	1942.4	1930.2	1922.0	1901.7	1877.2	1860.9	1848.7	1840.6
37.5°	1852.8	1832.4	1803.9	1783.5	1775.5	1763.2	1738.8	1726.6	1710.3	1702.1	1685.8
40°	1677.7	1657.3	1636.9	1624.7	1612.6	1604.4	1588.1	1575.9	1559.6	1547.4	1543.3
42.5°	1506.7	1494.4	1478.1	1461.8	1457.9	1445.5	1437.5	1425.3	1413.0	1409.0	1396.7
45°	1351.9	1339.7	1323.4	1307.1	1303.0	1294.9	1290.8	1278.7	1270.4	1270.4	1270.4
47.5°	1197.2	1185.0	1168.7	1160.5	1164.6	1148.3	1148.3	1144.2	1136.1	1136.1	1140.1
50°	1058.8	1042.5	1038.4	1030.2	1022.1	1013.9	1018.0	1005.8	1005.8	1013.9	1009.9
52.5°	928.5	912.2	908.1	900.0	895.9	895.9	891.8	891.8	887.7	891.8	891.8
55°	810.3	798.1	789.9	781.8	777.7	777.7	777.7	773.6	769.7	777.7	781.8
57.5°	704.5	700.4	692.3	680.0	676.0	671.9	667.8	667.8	667.8	667.8	671.9
60°	610.8	602.6	594.6	582.2	582.2	578.3	574.2	570.1	570.1	570.1	570.1
62.5°	529.4	517.2	504.9	496.8	492.7	488.6	484.6	476.4	476.4	476.4	476.4
65°	447.9	435.7	427.5	419.5	411.3	411.3	403.2	399.1	390.9	386.9	378.7
67.5°	370.6	362.4	354.3	342.1	338.0	333.9	325.8	321.7	309.5	305.4	301.3
70°	301.3	289.1	280.9	272.8	268.7	260.7	252.4	244.4	236.2	228.1	219.9
72.5°	236.2	224.0	215.8	207.7	199.5	199.5	187.3	179.2	167.0	158.8	146.6
75°	175.1	162.9	154.7	142.5	138.4	134.4	122.1	114.0	101.8	89.5	81.5
77.5°	118.1	109.9	101.8	89.5	81.5	81.5	69.3	61.1	53.0	40.7	36.7
80°	73.2	65.2	57.0	48.9	48.9	40.7	36.7	28.5	20.4	16.3	12.2
82.5°	40.7	36.7	32.6	24.4	24.4	20.4	16.3	12.2	8.1	4.1	4.1
85°	20.4	16.3	12.2	12.2	8.1	8.1	8.1	4.1	4.1	0.0	0.0
87.5°	8.1	4.1	4.1	4.1	4.1	4.1	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°	3050.0	3050.0	3050.0	3050.0	3050.0	3050.0	3050.0	3050.0	3050.0	3050.0	3050.0
2.5°	3041.8	3041.8	3037.7	3037.7	3037.7	3033.7	3037.7	3033.7	3033.7	3033.7	3037.7
5°	3025.5	3017.4	3017.4	3013.3	3013.3	3009.2	3013.3	3009.2	3005.2	3001.1	3005.2
7.5°	2992.9	2984.8	2980.7	2976.6	2976.6	2976.6	2972.7	2968.6	2972.7	2960.4	2968.6
10°	2948.2	2944.1	2936.0	2931.9	2927.8	2931.9	2927.8	2919.7	2919.7	2919.7	2915.6
12.5°	2891.2	2883.0	2878.9	2874.9	2866.7	2866.7	2870.8	2862.6	2862.6	2854.5	2854.5
15°	2821.9	2813.9	2805.7	2805.7	2797.6	2797.6	2793.5	2793.5	2789.4	2785.3	2785.3
17.5°	2736.4	2724.2	2716.1	2720.1	2716.1	2712.0	2712.0	2703.8	2699.8	2703.8	2703.8
20°	2634.7	2626.5	2618.4	2622.5	2614.3	2610.2	2614.3	2602.1	2606.2	2606.2	2606.2
22.5°	2520.6	2516.5	2504.3	2504.3	2496.1	2492.1	2496.1	2496.1	2500.2	2496.1	2496.1
25°	2394.4	2386.2	2378.1	2378.1	2374.0	2369.9	2374.0	2378.1	2374.0	2378.1	2378.1
27.5°	2260.0	2247.8	2247.8	2239.7	2239.7	2243.7	2239.7	2243.7	2247.8	2247.8	2256.0
30°	2113.4	2109.4	2105.3	2101.2	2101.2	2105.3	2105.3	2105.3	2109.4	2117.5	2117.5
32.5°	1974.9	1966.9	1958.6	1958.6	1966.9	1962.7	1966.9	1966.9	1974.9	1974.9	1983.1
35°	1824.3	1824.3	1816.1	1820.2	1820.2	1820.2	1820.2	1828.3	1836.5	1840.6	1848.7
37.5°	1685.8	1673.6	1677.7	1677.7	1681.8	1677.7	1689.9	1689.9	1698.1	1698.1	1706.2
40°	1535.2	1535.2	1539.2	1535.2	1539.2	1539.2	1547.4	1555.5	1559.6	1567.8	1571.8
42.5°	1392.7	1400.8	1392.7	1396.7	1400.8	1404.9	1409.0	1413.0	1429.3	1437.5	1449.6
45°	1262.4	1266.5	1270.4	1274.6	1270.4	1278.7	1282.8	1290.8	1303.0	1307.1	1311.2
47.5°	1136.1	1140.1	1144.2	1148.3	1148.3	1156.4	1160.5	1168.7	1176.8	1180.9	1185.0
50°	1013.9	1022.1	1026.2	1026.2	1030.2	1038.4	1046.5	1046.5	1054.7	1066.9	1071.0
52.5°	904.0	904.0	912.2	916.3	920.3	920.3	932.6	936.5	940.6	948.7	956.9
55°	781.8	794.0	798.1	798.1	806.2	814.4	818.5	822.5	822.5	838.8	838.8
57.5°	676.0	680.0	688.2	688.2	688.2	700.4	700.4	708.6	712.6	716.7	724.9
60°	570.1	578.3	578.3	582.2	578.3	586.4	590.5	598.5	602.6	606.7	610.8
62.5°	472.3	472.3	476.4	476.4	476.4	476.4	484.6	484.6	492.7	496.8	500.9
65°	378.7	378.7	378.7	378.7	378.7	378.7	378.7	378.7	382.8	382.8	390.9
67.5°	293.2	289.1	280.9	285.0	280.9	280.9	276.9	276.9	280.9	280.9	289.1
70°	211.8	207.7	199.5	199.5	195.5	191.4	187.3	183.3	179.2	179.2	179.2
72.5°	138.4	130.3	118.1	114.0	114.0	105.8	97.7	93.6	93.6	93.6	93.6
75°	69.3	61.1	53.0	48.9	48.9	40.7	44.8	40.7	40.7	40.7	40.7
77.5°	28.5	20.4	16.3	16.3	16.3	12.2	12.2	12.2	12.2	12.2	12.2
80°	8.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
82.5°	4.1	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: P593834

CATALOG NUMBER: HC855D010-HM82555850-81RWWC

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	3050.0	3050.0	3050.0	3050.0	3050.0	3050.0	3050.0	3050.0
2.5°	3033.7	3033.7	3025.5	3029.6	3029.6	3029.6	3029.6	3029.6
5°	2997.0	3001.1	2997.0	3001.1	3001.1	2997.0	2997.0	2997.0
7.5°	2960.4	2964.5	2960.4	2964.5	2964.5	2964.5	2960.4	2960.4
10°	2915.6	2915.6	2915.6	2915.6	2915.6	2911.5	2915.6	2915.6
12.5°	2854.5	2854.5	2854.5	2858.6	2858.6	2854.5	2854.5	2850.4
15°	2789.4	2781.3	2785.3	2789.4	2785.3	2785.3	2785.3	2785.3
17.5°	2699.8	2703.8	2699.8	2699.8	2699.8	2699.8	2703.8	2699.8
20°	2606.2	2606.2	2610.2	2606.2	2606.2	2606.2	2606.2	2602.1
22.5°	2500.2	2496.1	2496.1	2500.2	2500.2	2496.1	2500.2	2500.2
25°	2382.2	2386.2	2382.2	2382.2	2386.2	2386.2	2386.2	2382.2
27.5°	2256.0	2260.0	2264.1	2260.0	2260.0	2260.0	2264.1	2268.2
30°	2125.7	2133.7	2125.7	2125.7	2133.7	2129.6	2133.7	2133.7
32.5°	1987.1	1999.4	1991.2	1999.4	1999.4	2003.4	1999.4	2003.4
35°	1848.7	1860.9	1860.9	1860.9	1865.0	1869.1	1869.1	1865.0
37.5°	1718.4	1722.5	1722.5	1730.6	1734.7	1738.8	1738.8	1734.7
40°	1584.1	1592.2	1596.3	1596.3	1596.3	1604.4	1612.6	1604.4
42.5°	1453.7	1457.9	1461.8	1461.8	1470.0	1474.1	1478.1	1478.1
45°	1327.5	1335.6	1339.7	1343.8	1347.8	1356.0	1351.9	1360.1
47.5°	1197.2	1209.4	1213.5	1217.6	1225.7	1229.8	1233.9	1237.9
50°	1079.1	1087.3	1087.3	1095.4	1107.7	1107.7	1115.7	1119.8
52.5°	961.0	965.0	969.1	973.2	981.3	989.5	989.5	997.6
55°	847.0	851.1	851.1	855.1	859.2	875.5	879.6	879.6
57.5°	728.9	728.9	737.1	741.2	745.2	753.4	753.4	753.4
60°	614.8	618.9	618.9	623.0	627.1	635.2	639.3	635.2
62.5°	500.9	504.9	504.9	509.0	517.2	521.2	517.2	517.2
65°	395.0	399.1	399.1	403.2	411.3	411.3	407.2	411.3
67.5°	289.1	289.1	289.1	289.1	289.1	289.1	289.1	289.1
70°	183.3	179.2	175.1	179.2	179.2	179.2	175.1	183.3
72.5°	89.5	93.6	93.6	93.6	93.6	93.6	93.6	89.5
75°	40.7	40.7	36.7	36.7	36.7	40.7	40.7	36.7
77.5°	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2
80°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
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)