

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: P585032

Luminaire Tested: **HC855D010-HM82555935-81WWW**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P585032
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-16)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 10/21/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC855D010-HM82555935-81WWW
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4766.9 lumens
Efficiency: N/A
Efficacy: 91.7 lumens/watt
Spacing Criteria (0/90/45): 1.09 / 1.04 / 1.13
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

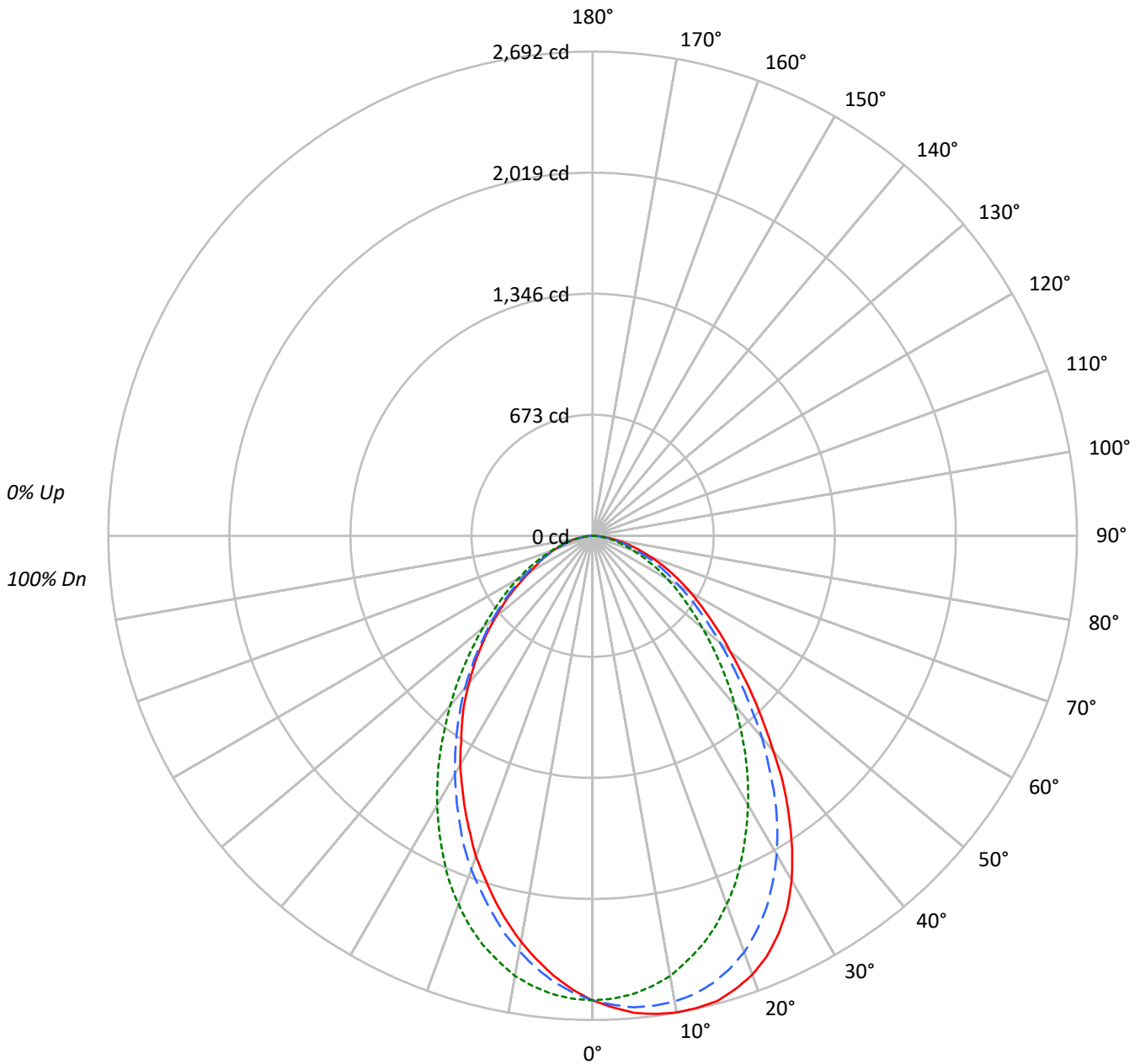
Input Watts (W): 52
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	110	106	103	99	108	104	101	98	100	97	95	96	94	92	93	91	89	87			87
2	102	95	89	84	99	93	88	83	90	85	81	86	83	79	83	80	78	76			76
3	94	85	78	72	92	83	77	71	81	75	70	78	73	69	75	71	68	66			66
4	87	76	69	63	85	75	68	62	73	67	62	71	65	61	68	64	60	58			58
5	81	69	61	55	79	68	61	55	66	60	54	64	59	54	63	57	53	51			51
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46			46
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	41			41
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38			38
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34			34
10	58	46	39	34	57	45	38	34	44	38	33	44	38	33	43	37	33	32			32

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	79647	79647	79647
5°	82446	79193	76045
10°	84276	77804	71770
15°	85480	75184	67018
20°	85218	71534	62215
25°	83111	66895	57120
30°	78741	61521	52410
35°	71637	55672	47627
40°	62921	49516	43027
45°	54865	43557	38363
50°	47747	38167	33792
55°	42579	33542	29391
60°	38693	29399	25076
65°	34782	25567	22758
70°	30961	21801	20538
75°	27141	18372	17538
80°	23014	14934	15574
85°	17372	11145	12383



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	241.9	5.1
10°-20°	666.6	14.0
20°-30°	925.3	19.4
30°-40°	956.6	20.1
40°-50°	801.0	16.8
50°-60°	581.5	12.2
60°-70°	367.0	7.7
70°-80°	181.8	3.8
80°-90°	45.2	0.9
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°	1833.8	38.5
0°-40°	2790.4	58.5
0°-60°	4172.9	87.5
0°-90°	4766.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4766.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2583	2583	2583	2583	2583	
5°	2664	2632	2558	2488	2457	255
15°	2678	2576	2355	2166	2099	754
25°	2443	2285	1966	1752	1679	1119
35°	1903	1763	1479	1311	1265	1185
45°	1258	1167	999	901	880	973
55°	792	722	624	571	547	715
65°	477	417	350	308	312	475
75°	228	189	154	147	147	244
85°	49	39	32	35	35	60
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°	2582.9	2582.9	2582.9	2582.9	2582.9	2582.9	2582.9	2582.9	2582.9	2582.9	2582.9
2.5°	2624.9	2624.9	2628.4	2624.9	2624.9	2624.9	2621.4	2621.4	2618.0	2618.0	2611.0
5°	2663.5	2656.5	2663.5	2656.5	2656.5	2656.5	2653.1	2646.0	2642.5	2635.5	2632.0
7.5°	2681.1	2677.6	2677.6	2674.0	2674.0	2670.5	2667.0	2663.5	2649.5	2646.0	2635.5
10°	2691.5	2688.1	2688.1	2684.6	2677.6	2677.6	2670.5	2667.0	2649.5	2642.5	2628.4
12.5°	2688.1	2688.1	2688.1	2684.6	2674.0	2670.5	2663.5	2653.1	2639.0	2624.9	2611.0
15°	2677.6	2677.6	2670.5	2667.0	2656.5	2649.5	2646.0	2628.4	2614.5	2596.9	2575.9
17.5°	2642.5	2642.5	2639.0	2632.0	2621.4	2614.5	2607.5	2589.9	2575.9	2547.8	2526.8
20°	2596.9	2593.4	2589.9	2579.5	2568.9	2565.4	2554.8	2530.3	2512.8	2491.8	2463.8
22.5°	2530.3	2526.8	2523.3	2516.3	2498.8	2491.8	2484.8	2467.3	2435.8	2414.7	2379.6
25°	2442.7	2442.7	2435.8	2425.2	2407.6	2400.7	2390.2	2372.6	2344.6	2313.1	2285.0
27.5°	2341.1	2337.6	2327.1	2320.1	2306.0	2295.5	2278.0	2257.0	2228.9	2204.4	2169.4
30°	2211.4	2211.4	2204.4	2193.9	2176.4	2169.4	2155.3	2130.8	2102.8	2071.3	2046.7
32.5°	2064.2	2064.2	2053.7	2046.7	2036.2	2018.7	2015.1	1987.1	1962.6	1938.0	1910.0
35°	1903.0	1906.5	1899.5	1885.5	1867.9	1867.9	1860.9	1836.4	1808.4	1783.9	1762.8
37.5°	1741.8	1731.3	1727.8	1720.7	1710.3	1696.2	1689.2	1678.8	1654.2	1636.7	1605.2
40°	1563.1	1566.6	1559.6	1552.5	1549.0	1538.5	1535.0	1517.5	1499.9	1478.9	1464.9
42.5°	1401.8	1401.8	1401.8	1394.8	1387.9	1377.3	1373.8	1363.3	1342.3	1328.2	1307.2
45°	1258.1	1247.6	1247.6	1244.2	1240.7	1233.6	1223.1	1216.1	1202.1	1191.6	1167.1
47.5°	1118.0	1121.5	1118.0	1114.5	1103.9	1100.5	1097.0	1082.9	1068.9	1058.4	1040.9
50°	995.3	1002.3	995.3	995.3	988.3	984.8	977.8	967.3	956.8	939.2	921.7
52.5°	893.6	893.6	890.1	886.6	876.2	869.2	865.6	862.1	844.7	830.6	816.5
55°	792.0	795.6	795.6	785.0	781.5	774.6	771.1	760.5	753.5	732.5	722.0
57.5°	704.4	701.0	704.4	697.5	690.4	683.4	679.9	672.8	662.4	648.4	634.3
60°	627.4	620.3	620.3	616.8	609.8	606.3	599.2	588.8	578.3	564.2	553.8
62.5°	550.3	546.7	543.2	539.7	532.7	529.2	525.6	515.2	504.7	494.1	483.7
65°	476.7	476.7	473.1	466.1	462.6	459.1	455.6	448.6	434.6	427.5	417.0
67.5°	410.1	406.6	406.6	399.5	392.5	389.0	389.0	382.0	371.5	361.0	353.9
70°	343.4	346.9	343.4	340.0	333.0	333.0	325.9	322.4	308.4	305.0	294.4
72.5°	283.9	283.9	280.3	280.3	273.3	269.9	269.9	262.9	255.8	248.8	241.8
75°	227.8	227.8	227.8	224.3	220.8	213.8	213.8	210.3	203.2	196.3	189.3
77.5°	178.7	175.2	175.2	171.7	168.2	164.7	164.7	161.3	154.2	150.7	143.7
80°	129.6	126.2	126.2	126.2	119.2	122.7	119.2	115.7	112.2	108.6	105.1
82.5°	84.1	87.7	87.7	84.1	80.6	80.6	80.6	77.1	77.1	73.6	70.1
85°	49.1	49.1	49.1	49.1	45.6	45.6	45.6	42.1	42.1	42.1	38.6
87.5°	21.0	21.0	21.0	21.0	21.0	21.0	17.6	17.6	17.6	17.6	17.6
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°	2582.9	2582.9	2582.9	2582.9	2582.9	2582.9	2582.9	2582.9	2582.9	2582.9	2582.9
2.5°	2611.0	2603.9	2600.4	2596.9	2596.9	2593.4	2589.9	2582.9	2582.9	2575.9	2572.4
5°	2624.9	2614.5	2607.5	2600.4	2596.9	2589.9	2582.9	2572.4	2568.9	2558.4	2547.8
7.5°	2628.4	2611.0	2603.9	2589.9	2582.9	2575.9	2561.9	2551.3	2537.4	2526.8	2512.8
10°	2614.5	2600.4	2582.9	2565.4	2561.9	2551.3	2530.3	2516.3	2498.8	2484.8	2463.8
12.5°	2593.4	2572.4	2554.8	2533.9	2523.3	2512.8	2491.8	2470.8	2446.2	2421.7	2400.7
15°	2558.4	2533.9	2509.4	2484.8	2470.8	2460.3	2435.8	2411.2	2386.7	2355.1	2334.0
17.5°	2505.9	2477.7	2453.2	2421.7	2407.6	2397.2	2365.6	2337.6	2306.0	2274.5	2253.5
20°	2439.2	2404.1	2376.1	2341.1	2330.5	2313.1	2281.5	2250.0	2215.0	2179.9	2155.3
22.5°	2351.6	2316.6	2285.0	2250.0	2232.4	2215.0	2183.4	2144.9	2109.8	2081.7	2057.2
25°	2250.0	2218.5	2179.9	2148.4	2127.3	2106.3	2071.3	2039.7	2008.1	1966.1	1941.5
27.5°	2137.8	2099.3	2071.3	2029.2	2008.1	1994.2	1955.6	1913.5	1885.5	1847.0	1818.9
30°	2011.6	1976.6	1945.1	1903.0	1882.0	1867.9	1832.9	1794.3	1766.3	1727.8	1699.8
32.5°	1878.5	1839.9	1801.4	1773.4	1748.9	1734.8	1696.2	1671.7	1636.7	1605.2	1573.5
35°	1734.8	1696.2	1668.2	1629.7	1615.6	1601.7	1570.1	1538.5	1507.0	1478.9	1454.5
37.5°	1580.6	1552.5	1521.0	1493.0	1482.5	1468.4	1429.8	1401.8	1377.3	1349.3	1328.2
40°	1429.8	1405.3	1384.4	1356.2	1338.8	1328.2	1300.2	1275.7	1247.6	1230.1	1209.2
42.5°	1293.2	1265.2	1244.2	1223.1	1205.6	1195.1	1170.6	1153.0	1132.0	1114.5	1090.0
45°	1149.5	1135.6	1110.9	1093.5	1082.9	1068.9	1051.4	1030.3	1012.8	998.8	981.3
47.5°	1023.4	1009.3	991.9	970.8	963.7	953.3	935.7	921.7	907.7	893.6	876.2
50°	907.7	890.1	876.2	862.1	855.1	844.7	827.1	820.0	809.6	795.6	785.0
52.5°	802.6	788.5	774.6	757.0	753.5	746.4	736.0	722.0	711.4	704.4	697.5
55°	707.9	693.9	683.4	669.3	665.9	658.9	644.8	637.8	630.9	623.9	616.8
57.5°	623.9	609.8	595.8	588.8	581.8	574.7	571.2	560.7	553.8	550.3	543.2
60°	546.7	532.7	522.2	511.7	508.2	504.7	497.6	490.6	483.7	476.7	473.1
62.5°	473.1	459.1	452.0	445.1	438.1	438.1	431.1	424.0	417.0	413.6	406.6
65°	406.6	399.5	389.0	378.6	375.0	375.0	364.5	361.0	357.5	350.4	343.4
67.5°	343.4	336.5	325.9	322.4	318.9	315.4	311.9	305.0	297.9	294.4	287.4
70°	287.4	280.3	273.3	269.9	266.4	262.9	255.8	252.3	245.3	241.8	238.3
72.5°	231.4	227.8	220.8	217.3	213.8	210.3	206.7	203.2	196.3	192.8	189.3
75°	185.8	182.2	175.2	171.7	168.2	168.2	164.7	157.8	154.2	154.2	150.7
77.5°	140.2	136.7	133.1	129.6	126.2	126.2	122.7	119.2	115.7	115.7	112.2
80°	101.6	98.1	94.6	94.6	94.6	91.1	87.7	87.7	84.1	84.1	80.6
82.5°	66.6	66.6	63.1	63.1	63.1	59.5	59.5	56.0	56.0	56.0	56.0
85°	38.6	38.6	38.6	35.0	35.0	35.0	35.0	35.0	35.0	31.5	35.0
87.5°	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	14.1	14.1	14.1
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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2582.9	2582.9	2582.9	2582.9	2582.9	2582.9	2582.9	2582.9	2582.9	2582.9	2582.9
2.5°	2568.9	2565.4	2558.4	2558.4	2551.3	2551.3	2547.8	2544.4	2540.9	2537.4	2533.9
5°	2544.4	2530.3	2523.3	2519.8	2512.8	2509.4	2498.8	2491.8	2488.3	2481.2	2474.2
7.5°	2498.8	2484.8	2470.8	2467.3	2463.8	2449.7	2439.2	2428.7	2421.7	2414.7	2407.6
10°	2446.2	2432.3	2414.7	2407.6	2400.7	2383.1	2369.1	2358.6	2344.6	2330.5	2327.1
12.5°	2383.1	2362.2	2341.1	2334.0	2323.6	2306.0	2292.1	2274.5	2264.0	2246.5	2243.0
15°	2309.5	2285.0	2267.5	2250.0	2243.0	2225.4	2200.9	2186.8	2165.9	2158.8	2141.4
17.5°	2221.9	2197.4	2172.9	2165.9	2155.3	2130.8	2106.3	2088.7	2067.8	2057.2	2046.7
20°	2130.8	2099.3	2074.8	2067.8	2053.7	2032.7	2008.1	1990.6	1973.1	1952.1	1941.5
22.5°	2025.7	1990.6	1969.5	1952.1	1948.6	1924.1	1895.9	1882.0	1867.9	1850.5	1836.4
25°	1910.0	1878.5	1854.0	1839.9	1832.9	1811.9	1790.8	1773.4	1752.3	1741.8	1724.2
27.5°	1790.8	1769.8	1738.3	1724.2	1713.8	1696.2	1671.7	1661.2	1640.2	1626.1	1615.6
30°	1675.3	1643.6	1626.1	1608.6	1598.1	1580.6	1559.6	1549.0	1531.6	1517.5	1507.0
32.5°	1549.0	1528.1	1503.4	1496.5	1482.5	1464.9	1450.9	1433.4	1419.4	1405.3	1401.8
35°	1433.4	1405.3	1380.9	1373.8	1363.3	1345.8	1338.8	1328.2	1310.8	1307.2	1293.2
37.5°	1307.2	1293.2	1265.2	1254.6	1251.1	1237.2	1223.1	1216.1	1205.6	1195.1	1191.6
40°	1188.1	1170.6	1156.5	1146.0	1138.9	1128.5	1114.5	1110.9	1103.9	1090.0	1086.4
42.5°	1075.9	1058.4	1044.4	1040.9	1030.3	1019.9	1012.8	1002.3	998.8	995.3	988.3
45°	967.3	956.8	942.8	939.2	935.7	921.7	914.7	907.7	900.7	897.2	890.1
47.5°	869.2	858.6	848.2	844.7	837.6	834.1	823.6	820.0	809.6	806.1	802.6
50°	774.6	767.5	760.5	757.0	750.0	746.4	739.5	732.5	725.5	722.0	718.4
52.5°	690.4	683.4	676.4	672.8	669.3	662.4	655.4	648.4	644.8	641.3	637.8
55°	609.8	602.8	599.2	595.8	592.3	588.8	578.3	574.7	571.2	567.7	560.7
57.5°	536.2	529.2	522.2	522.2	518.7	515.2	508.2	501.1	501.1	494.1	487.2
60°	469.6	462.6	455.6	452.0	448.6	441.6	438.1	434.6	431.1	427.5	420.5
62.5°	399.5	396.0	389.0	389.0	382.0	378.6	375.0	371.5	368.0	361.0	357.5
65°	340.0	336.5	329.4	325.9	325.9	322.4	315.4	311.9	308.4	308.4	305.0
67.5°	283.9	280.3	273.3	269.9	269.9	266.4	262.9	262.9	259.4	255.8	259.4
70°	234.8	227.8	227.8	224.3	224.3	220.8	217.3	217.3	217.3	220.8	220.8
72.5°	185.8	182.2	178.7	178.7	178.7	178.7	175.2	175.2	178.7	182.2	182.2
75°	147.2	143.7	143.7	143.7	140.2	140.2	143.7	143.7	147.2	147.2	147.2
77.5°	108.6	108.6	108.6	108.6	108.6	108.6	112.2	112.2	115.7	115.7	115.7
80°	80.6	80.6	80.6	80.6	80.6	84.1	84.1	84.1	84.1	84.1	87.7
82.5°	56.0	56.0	56.0	56.0	56.0	56.0	56.0	59.5	59.5	59.5	59.5
85°	31.5	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
87.5°	14.1	14.1	14.1	14.1	14.1	14.1	14.1	14.1	14.1	14.1	14.1
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: P585032

CATALOG NUMBER: HC855D010-HM82555935-81WWW

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2582.9	2582.9	2582.9	2582.9	2582.9	2582.9	2582.9	2582.9
2.5°	2530.3	2530.3	2530.3	2533.9	2526.8	2526.8	2526.8	2526.8
5°	2470.8	2467.3	2463.8	2467.3	2460.3	2460.3	2456.7	2456.7
7.5°	2397.2	2393.7	2390.2	2390.2	2383.1	2383.1	2379.6	2376.1
10°	2316.6	2309.5	2313.1	2306.0	2302.5	2299.0	2295.5	2292.1
12.5°	2228.9	2221.9	2218.5	2211.4	2204.4	2200.9	2204.4	2197.4
15°	2134.3	2123.8	2120.3	2113.2	2106.3	2102.8	2102.8	2099.3
17.5°	2029.2	2022.2	2018.7	2011.6	2008.1	2001.2	1997.7	1994.2
20°	1931.1	1913.5	1917.0	1910.0	1906.5	1892.5	1892.5	1895.9
22.5°	1822.5	1811.9	1804.9	1797.8	1794.3	1787.4	1787.4	1783.9
25°	1713.8	1703.3	1699.8	1692.7	1689.2	1682.2	1678.8	1678.8
27.5°	1608.6	1594.6	1594.6	1587.6	1580.6	1577.0	1573.5	1570.1
30°	1496.5	1486.0	1482.5	1482.5	1478.9	1478.9	1468.4	1471.9
32.5°	1391.3	1384.4	1380.9	1373.8	1373.8	1370.3	1370.3	1359.8
35°	1286.2	1275.7	1279.2	1272.2	1268.7	1265.2	1268.7	1265.2
37.5°	1184.5	1177.5	1177.5	1170.6	1170.6	1167.1	1163.6	1170.6
40°	1082.9	1079.4	1075.9	1072.4	1075.9	1072.4	1065.3	1068.9
42.5°	981.3	981.3	977.8	977.8	974.3	974.3	974.3	974.3
45°	890.1	886.6	886.6	883.2	883.2	883.2	883.2	879.7
47.5°	799.1	795.6	795.6	795.6	792.0	792.0	788.5	792.0
50°	711.4	711.4	707.9	707.9	711.4	707.9	704.4	704.4
52.5°	630.9	630.9	627.4	627.4	623.9	620.3	623.9	623.9
55°	557.3	553.8	550.3	550.3	546.7	543.2	543.2	546.7
57.5°	487.2	483.7	480.2	480.2	473.1	469.6	469.6	469.6
60°	420.5	413.6	413.6	410.1	410.1	406.6	406.6	406.6
62.5°	357.5	353.9	353.9	353.9	353.9	350.4	350.4	350.4
65°	305.0	305.0	305.0	308.4	308.4	311.9	311.9	311.9
67.5°	262.9	266.4	266.4	266.4	269.9	269.9	269.9	266.4
70°	224.3	224.3	224.3	227.8	227.8	227.8	227.8	227.8
72.5°	185.8	185.8	185.8	185.8	185.8	185.8	185.8	185.8
75°	147.2	150.7	150.7	150.7	147.2	150.7	150.7	147.2
77.5°	115.7	115.7	115.7	115.7	115.7	115.7	115.7	115.7
80°	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7
82.5°	59.5	59.5	59.5	59.5	59.5	59.5	59.5	59.5
85°	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
87.5°	14.1	14.1	14.1	14.1	14.1	14.1	14.1	14.1
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)