

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: P584939

Luminaire Tested: **HC855D010-HM82555830-81RWWC**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584939
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-HM82555830-81RWWC
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5049.1 lumens
Efficiency: N/A
Efficacy: 97.1 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

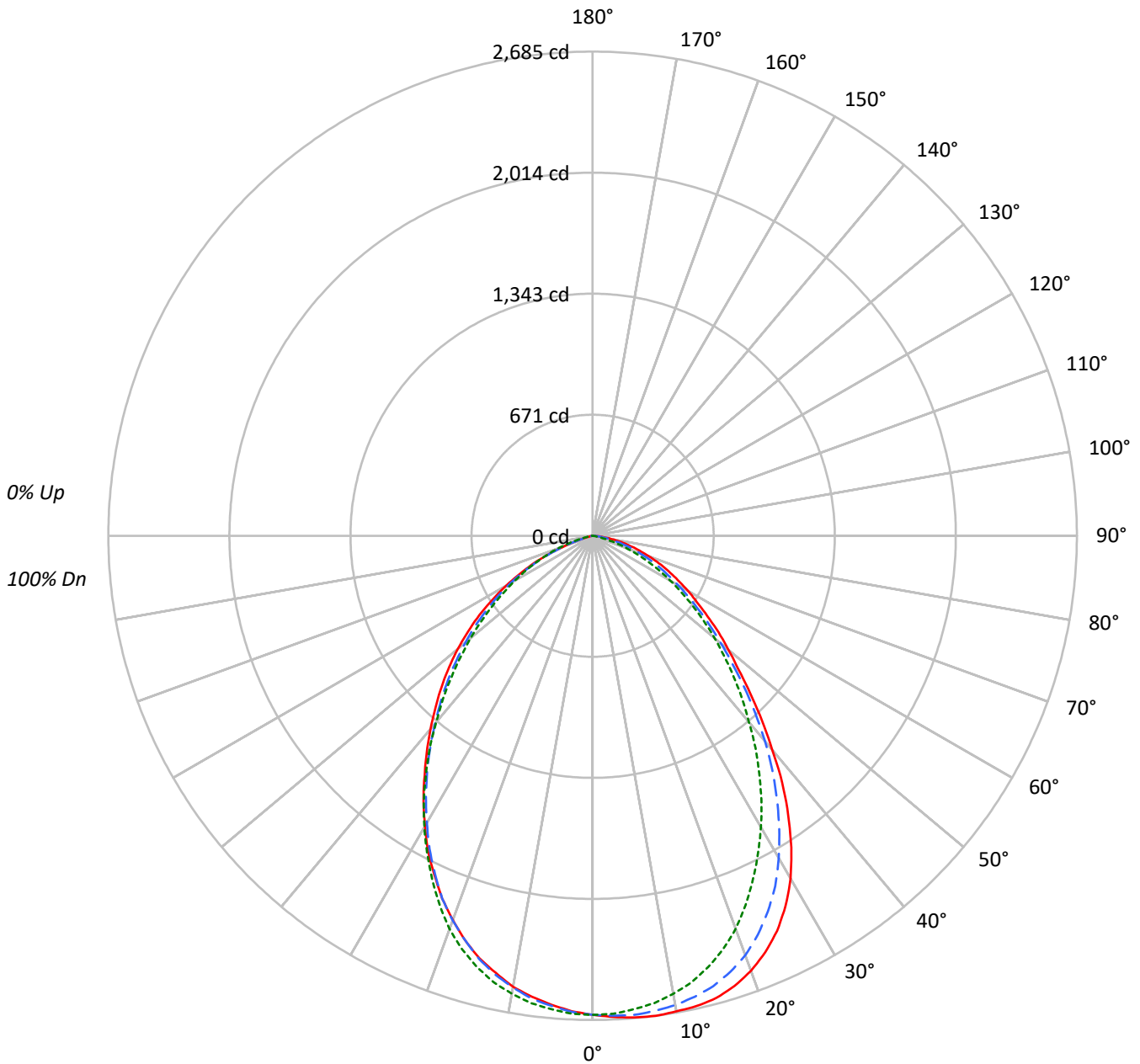
Input Watts (W): 52
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88				88
2	103	96	90	85	100	94	89	84	91	86	82	87	84	81	84	82	79	77				77
3	95	86	79	73	93	84	78	73	82	76	72	79	74	70	76	73	69	67				67
4	88	77	70	64	86	76	69	64	74	68	63	72	66	62	69	65	61	59				59
5	81	70	62	56	80	69	62	56	67	61	56	65	59	55	63	58	54	52				52
6	76	64	56	50	74	63	55	50	61	55	50	60	54	49	58	53	49	47				47
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44	42				42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38				38
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35				35
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32				32

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	81923	81923	81923
5°	83000	81576	80806
10°	83850	80741	79520
15°	84698	79034	77448
20°	84270	76122	74376
25°	82304	71563	70597
30°	78175	66431	66179
35°	71170	60618	61153
40°	62394	54254	56255
45°	53831	48258	51664
50°	47133	42370	46797
55°	41762	36418	41187
60°	37620	30627	34123
65°	33907	24589	26143
70°	29744	17915	14389
75°	25353	9305	3801
80°	19516	2522	622
85°	12560	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	250.7	5.0
10°-20°	704.6	14.0
20°-30°	1000.1	19.8
30°-40°	1052.8	20.9
40°-50°	895.6	17.7
50°-60°	647.2	12.8
60°-70°	368.1	7.3
70°-80°	116.0	2.3
80°-90°	14.1	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°	1955.4	38.7
0°-40°	3008.2	59.6
0°-60°	4550.9	90.1
0°-90°	5049.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5049.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2657	2657	2657	2657	2657	
5°	2681	2667	2635	2618	2610	256
15°	2653	2586	2476	2430	2426	747
25°	2419	2298	2103	2068	2075	1108
35°	1891	1780	1610	1600	1624	1176
45°	1234	1188	1107	1135	1185	959
55°	777	720	677	716	766	700
65°	465	401	337	333	358	461
75°	213	163	78	36	32	229
85°	36	21	0	0	0	46
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°	2656.7	2656.7	2656.7	2656.7	2656.7	2656.7	2656.7	2656.7	2656.7	2656.7	2656.7
2.5°	2670.9	2674.4	2667.2	2667.2	2674.4	2667.2	2670.9	2670.9	2667.2	2667.2	2663.7
5°	2681.4	2677.9	2677.9	2677.9	2681.4	2674.4	2670.9	2674.4	2667.2	2667.2	2667.2
7.5°	2685.1	2685.1	2681.4	2677.9	2677.9	2677.9	2674.4	2670.9	2667.2	2660.2	2656.7
10°	2677.9	2677.9	2681.4	2674.4	2674.4	2667.2	2667.2	2660.2	2660.2	2653.1	2642.5
12.5°	2670.9	2667.2	2667.2	2660.2	2660.2	2653.1	2653.1	2642.5	2638.9	2628.2	2617.7
15°	2653.1	2649.5	2642.5	2638.9	2635.4	2631.8	2624.7	2621.2	2610.5	2596.3	2585.7
17.5°	2617.7	2614.0	2610.5	2603.5	2596.3	2592.8	2589.3	2578.6	2564.5	2553.8	2536.1
20°	2568.0	2564.5	2564.5	2553.8	2550.3	2539.6	2536.1	2521.9	2511.2	2489.9	2475.7
22.5°	2500.6	2504.1	2497.1	2489.9	2482.9	2472.2	2465.1	2450.9	2433.2	2411.9	2394.2
25°	2419.0	2422.5	2415.5	2408.3	2397.7	2390.6	2383.5	2362.3	2344.5	2319.7	2298.4
27.5°	2316.1	2316.1	2316.1	2309.1	2291.3	2287.7	2280.7	2259.4	2234.5	2213.3	2192.0
30°	2195.5	2192.0	2192.0	2181.3	2174.3	2160.1	2149.4	2131.8	2113.9	2089.1	2064.4
32.5°	2050.1	2053.7	2043.0	2035.9	2025.3	2025.3	2011.2	1997.0	1975.6	1950.8	1925.9
35°	1890.6	1894.1	1886.9	1883.4	1865.7	1862.2	1858.6	1840.9	1826.7	1809.0	1780.5
37.5°	1727.3	1723.8	1720.3	1720.3	1709.6	1702.6	1695.4	1684.8	1663.5	1649.4	1635.2
40°	1550.0	1550.0	1550.0	1546.5	1542.9	1535.8	1532.3	1525.1	1510.9	1496.8	1486.2
42.5°	1390.3	1390.3	1386.8	1383.3	1376.2	1379.8	1372.6	1365.6	1351.4	1340.8	1333.6
45°	1234.4	1234.4	1234.4	1237.9	1230.8	1220.2	1220.2	1213.0	1206.0	1198.8	1188.2
47.5°	1096.1	1106.6	1099.6	1096.1	1099.6	1085.4	1085.4	1078.2	1071.2	1064.1	1049.9
50°	982.5	982.5	982.5	975.5	971.8	971.8	961.2	954.1	950.6	943.5	929.3
52.5°	879.6	872.6	872.6	869.0	865.4	858.4	858.4	851.2	837.0	830.0	819.3
55°	776.8	776.8	773.3	769.7	766.1	762.6	759.0	748.4	741.3	730.6	720.1
57.5°	684.6	691.6	688.1	681.0	673.9	673.9	666.9	659.7	649.1	638.4	627.8
60°	610.0	606.5	606.5	603.0	595.8	592.3	588.8	578.1	567.5	556.8	546.3
62.5°	532.1	532.1	532.1	524.9	517.9	514.3	510.8	503.6	489.4	478.9	471.7
65°	464.7	461.1	457.5	454.0	450.5	443.4	439.9	432.7	422.0	411.5	400.8
67.5°	397.3	393.7	393.7	390.2	379.5	376.0	376.0	365.3	354.6	344.1	333.4
70°	329.9	329.9	329.9	322.8	319.3	315.6	312.1	305.1	294.4	283.7	273.1
72.5°	273.1	269.6	269.6	266.0	255.4	251.9	248.2	241.2	230.5	223.5	216.4
75°	212.8	212.8	209.3	205.7	202.2	198.7	195.1	188.0	177.3	166.7	163.1
77.5°	163.1	159.6	159.6	156.1	149.0	145.4	145.4	138.3	127.6	120.6	113.4
80°	109.9	113.4	109.9	106.4	102.9	99.3	95.8	92.2	85.1	78.1	70.9
82.5°	67.4	70.9	67.4	67.4	63.9	60.2	60.2	53.2	49.7	46.1	42.5
85°	35.5	35.5	35.5	35.5	31.9	31.9	31.9	28.4	24.8	21.3	21.3
87.5°	10.7	14.2	10.7	10.7	10.7	10.7	10.7	10.7	7.1	7.1	7.1
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°	2656.7	2656.7	2656.7	2656.7	2656.7	2656.7	2656.7	2656.7	2656.7	2656.7	2656.7
2.5°	2667.2	2663.7	2660.2	2660.2	2660.2	2660.2	2660.2	2656.7	2653.1	2653.1	2653.1
5°	2660.2	2660.2	2660.2	2656.7	2653.1	2653.1	2646.0	2642.5	2638.9	2635.4	2631.8
7.5°	2653.1	2646.0	2642.5	2638.9	2635.4	2635.4	2628.2	2621.2	2621.2	2614.0	2607.0
10°	2631.8	2628.2	2621.2	2614.0	2610.5	2607.0	2599.8	2589.3	2585.7	2578.6	2571.5
12.5°	2607.0	2599.8	2592.8	2578.6	2575.1	2571.5	2557.3	2546.6	2539.6	2536.1	2518.3
15°	2575.1	2560.8	2550.3	2532.5	2528.9	2521.9	2511.2	2500.6	2486.4	2475.7	2468.7
17.5°	2518.3	2504.1	2486.4	2468.7	2461.6	2461.6	2443.9	2429.7	2411.9	2404.8	2390.6
20°	2450.9	2433.2	2419.0	2397.7	2387.1	2376.5	2365.8	2344.5	2330.3	2319.7	2301.9
22.5°	2372.8	2348.1	2330.3	2309.1	2291.3	2280.7	2262.9	2245.2	2227.5	2216.8	2202.7
25°	2273.6	2252.3	2223.9	2202.7	2192.0	2177.8	2156.5	2138.8	2121.1	2103.3	2096.2
27.5°	2163.6	2135.3	2110.4	2085.6	2074.9	2064.4	2039.5	2018.2	2004.0	1986.3	1979.2
30°	2043.0	2014.7	1986.3	1965.0	1954.3	1936.6	1922.4	1897.6	1879.9	1865.7	1847.9
32.5°	1904.7	1883.4	1858.6	1826.7	1819.5	1805.3	1784.1	1773.5	1752.1	1741.6	1727.3
35°	1755.8	1741.6	1716.7	1691.9	1681.2	1674.2	1656.4	1635.2	1621.0	1610.3	1603.2
37.5°	1613.8	1596.1	1571.3	1553.6	1546.5	1535.8	1514.6	1503.9	1489.7	1482.6	1468.4
40°	1461.4	1443.6	1425.9	1415.2	1404.5	1397.5	1383.3	1372.6	1358.5	1347.8	1344.3
42.5°	1312.4	1301.7	1287.6	1273.4	1269.7	1259.2	1252.0	1241.4	1230.8	1227.2	1216.5
45°	1177.6	1167.0	1152.8	1138.6	1135.0	1127.9	1124.4	1113.8	1106.6	1106.6	1106.6
47.5°	1042.8	1032.2	1018.0	1010.8	1014.4	1000.2	1000.2	996.7	989.6	989.6	993.2
50°	922.2	908.1	904.4	897.4	890.3	883.2	886.7	876.1	876.1	883.2	879.6
52.5°	808.7	794.5	791.0	783.8	780.3	780.3	776.8	776.8	773.3	776.8	776.8
55°	705.8	695.2	688.1	681.0	677.4	677.4	677.4	673.9	670.4	677.4	681.0
57.5°	613.7	610.0	603.0	592.3	588.8	585.3	581.7	581.7	581.7	581.7	585.3
60°	532.1	524.9	517.9	507.2	507.2	503.6	500.1	496.6	496.6	496.6	496.6
62.5°	461.1	450.5	439.9	432.7	429.2	425.7	422.0	415.0	415.0	415.0	415.0
65°	390.2	379.5	372.5	365.3	358.3	358.3	351.1	347.6	340.5	337.0	329.9
67.5°	322.8	315.6	308.6	297.9	294.4	290.9	283.7	280.2	269.6	266.0	262.5
70°	262.5	251.9	244.7	237.7	234.0	227.0	219.9	212.8	205.7	198.7	191.5
72.5°	205.7	195.1	188.0	180.8	173.8	173.8	163.1	156.1	145.4	138.3	127.6
75°	152.5	141.9	134.8	124.1	120.6	117.1	106.4	99.3	88.7	78.1	70.9
77.5°	102.9	95.8	88.7	78.1	70.9	70.9	60.2	53.2	46.1	35.5	31.9
80°	63.9	56.7	49.7	42.5	42.5	35.5	31.9	24.8	17.7	14.2	10.7
82.5°	35.5	31.9	28.4	21.3	21.3	17.7	14.2	10.7	7.1	3.5	3.5
85°	17.7	14.2	10.7	10.7	7.1	7.1	7.1	3.5	3.5	0.0	0.0
87.5°	7.1	3.5	3.5	3.5	3.5	3.5	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°	2656.7	2656.7	2656.7	2656.7	2656.7	2656.7	2656.7	2656.7	2656.7	2656.7	2656.7
2.5°	2649.5	2649.5	2646.0	2646.0	2646.0	2642.5	2646.0	2642.5	2642.5	2642.5	2646.0
5°	2635.4	2628.2	2628.2	2624.7	2624.7	2621.2	2624.7	2621.2	2617.7	2614.0	2617.7
7.5°	2607.0	2599.8	2596.3	2592.8	2592.8	2592.8	2589.3	2585.7	2589.3	2578.6	2585.7
10°	2568.0	2564.5	2557.3	2553.8	2550.3	2553.8	2550.3	2543.1	2543.1	2543.1	2539.6
12.5°	2518.3	2511.2	2507.7	2504.1	2497.1	2497.1	2500.6	2493.4	2493.4	2486.4	2486.4
15°	2458.0	2450.9	2443.9	2443.9	2436.7	2436.7	2433.2	2433.2	2429.7	2426.0	2426.0
17.5°	2383.5	2372.8	2365.8	2369.3	2365.8	2362.3	2362.3	2355.1	2351.6	2355.1	2355.1
20°	2294.9	2287.7	2280.7	2284.2	2277.1	2273.6	2277.1	2266.5	2270.0	2270.0	2270.0
22.5°	2195.5	2192.0	2181.3	2181.3	2174.3	2170.7	2174.3	2174.3	2177.8	2174.3	2174.3
25°	2085.6	2078.5	2071.4	2071.4	2067.9	2064.4	2067.9	2071.4	2067.9	2071.4	2071.4
27.5°	1968.5	1957.9	1957.9	1950.8	1950.8	1954.3	1950.8	1954.3	1957.9	1957.9	1965.0
30°	1840.9	1837.3	1833.7	1830.2	1830.2	1833.7	1833.7	1833.7	1837.3	1844.4	1844.4
32.5°	1720.3	1713.1	1706.1	1706.1	1713.1	1709.6	1713.1	1713.1	1720.3	1720.3	1727.3
35°	1589.0	1589.0	1582.0	1585.5	1585.5	1585.5	1585.5	1592.5	1599.7	1603.2	1610.3
37.5°	1468.4	1457.7	1461.4	1461.4	1464.9	1461.4	1471.9	1471.9	1479.1	1479.1	1486.2
40°	1337.1	1337.1	1340.8	1337.1	1340.8	1340.8	1347.8	1354.9	1358.5	1365.6	1369.1
42.5°	1213.0	1220.2	1213.0	1216.5	1220.2	1223.7	1227.2	1230.8	1245.0	1252.0	1262.7
45°	1099.6	1103.1	1106.6	1110.2	1106.6	1113.8	1117.3	1124.4	1135.0	1138.6	1142.1
47.5°	989.6	993.2	996.7	1000.2	1000.2	1007.3	1010.8	1018.0	1025.0	1028.7	1032.2
50°	883.2	890.3	893.8	893.8	897.4	904.4	911.6	911.6	918.6	929.3	932.8
52.5°	787.5	787.5	794.5	798.0	801.6	801.6	812.2	815.8	819.3	826.4	833.5
55°	681.0	691.6	695.2	695.2	702.3	709.4	712.9	716.4	716.4	730.6	730.6
57.5°	588.8	592.3	599.5	599.5	599.5	610.0	610.0	617.2	620.7	624.2	631.4
60°	496.6	503.6	503.6	507.2	503.6	510.8	514.3	521.4	524.9	528.5	532.1
62.5°	411.5	411.5	415.0	415.0	415.0	415.0	422.0	422.0	429.2	432.7	436.2
65°	329.9	329.9	329.9	329.9	329.9	329.9	329.9	329.9	333.4	333.4	340.5
67.5°	255.4	251.9	244.7	248.2	244.7	244.7	241.2	241.2	244.7	244.7	251.9
70°	184.5	180.8	173.8	173.8	170.3	166.7	163.1	159.6	156.1	156.1	156.1
72.5°	120.6	113.4	102.9	99.3	99.3	92.2	85.1	81.6	81.6	81.6	81.6
75°	60.2	53.2	46.1	42.5	42.5	35.5	39.0	35.5	35.5	35.5	35.5
77.5°	24.8	17.7	14.2	14.2	14.2	10.7	10.7	10.7	10.7	10.7	10.7
80°	7.1	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
82.5°	3.5	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: P584939

CATALOG NUMBER: HC855D010-HM82555830-81RWWC

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2656.7	2656.7	2656.7	2656.7	2656.7	2656.7	2656.7	2656.7
2.5°	2642.5	2642.5	2635.4	2638.9	2638.9	2638.9	2638.9	2638.9
5°	2610.5	2614.0	2610.5	2614.0	2614.0	2610.5	2610.5	2610.5
7.5°	2578.6	2582.2	2578.6	2582.2	2582.2	2582.2	2578.6	2578.6
10°	2539.6	2539.6	2539.6	2539.6	2539.6	2536.1	2539.6	2539.6
12.5°	2486.4	2486.4	2486.4	2489.9	2489.9	2486.4	2486.4	2482.9
15°	2429.7	2422.5	2426.0	2429.7	2426.0	2426.0	2426.0	2426.0
17.5°	2351.6	2355.1	2351.6	2351.6	2351.6	2351.6	2355.1	2351.6
20°	2270.0	2270.0	2273.6	2270.0	2270.0	2270.0	2270.0	2266.5
22.5°	2177.8	2174.3	2174.3	2177.8	2177.8	2174.3	2177.8	2177.8
25°	2074.9	2078.5	2074.9	2074.9	2078.5	2078.5	2078.5	2074.9
27.5°	1965.0	1968.5	1972.1	1968.5	1968.5	1968.5	1972.1	1975.6
30°	1851.5	1858.6	1851.5	1851.5	1858.6	1855.0	1858.6	1858.6
32.5°	1730.9	1741.6	1734.4	1741.6	1741.6	1745.1	1741.6	1745.1
35°	1610.3	1621.0	1621.0	1621.0	1624.5	1628.0	1628.0	1624.5
37.5°	1496.8	1500.4	1500.4	1507.4	1510.9	1514.6	1514.6	1510.9
40°	1379.8	1386.8	1390.3	1390.3	1390.3	1397.5	1404.5	1397.5
42.5°	1266.2	1269.7	1273.4	1273.4	1280.4	1284.0	1287.6	1287.6
45°	1156.3	1163.4	1167.0	1170.5	1174.0	1181.1	1177.6	1184.7
47.5°	1042.8	1053.4	1057.0	1060.5	1067.6	1071.2	1074.7	1078.2
50°	939.9	947.0	947.0	954.1	964.8	964.8	971.8	975.5
52.5°	837.0	840.7	844.2	847.7	854.9	861.9	861.9	869.0
55°	737.8	741.3	741.3	744.8	748.4	762.6	766.1	766.1
57.5°	634.9	634.9	642.0	645.5	649.1	656.2	656.2	656.2
60°	535.6	539.1	539.1	542.6	546.3	553.3	556.8	553.3
62.5°	436.2	439.9	439.9	443.4	450.5	454.0	450.5	450.5
65°	344.1	347.6	347.6	351.1	358.3	358.3	354.6	358.3
67.5°	251.9	251.9	251.9	251.9	251.9	251.9	251.9	251.9
70°	159.6	156.1	152.5	156.1	156.1	156.1	152.5	159.6
72.5°	78.1	81.6	81.6	81.6	81.6	81.6	81.6	78.1
75°	35.5	35.5	31.9	31.9	31.9	35.5	35.5	31.9
77.5°	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7
80°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
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



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













(END OF REPORT)