

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: P585269

Luminaire Tested: **HC880D010-HM86080927-81WWBB**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P585269  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-17)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 10/21/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC880D010-HM86080927-81WWBB  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4519.7 lumens  
Efficiency: N/A  
Efficacy: 64.6 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 1.07 / 1.16  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

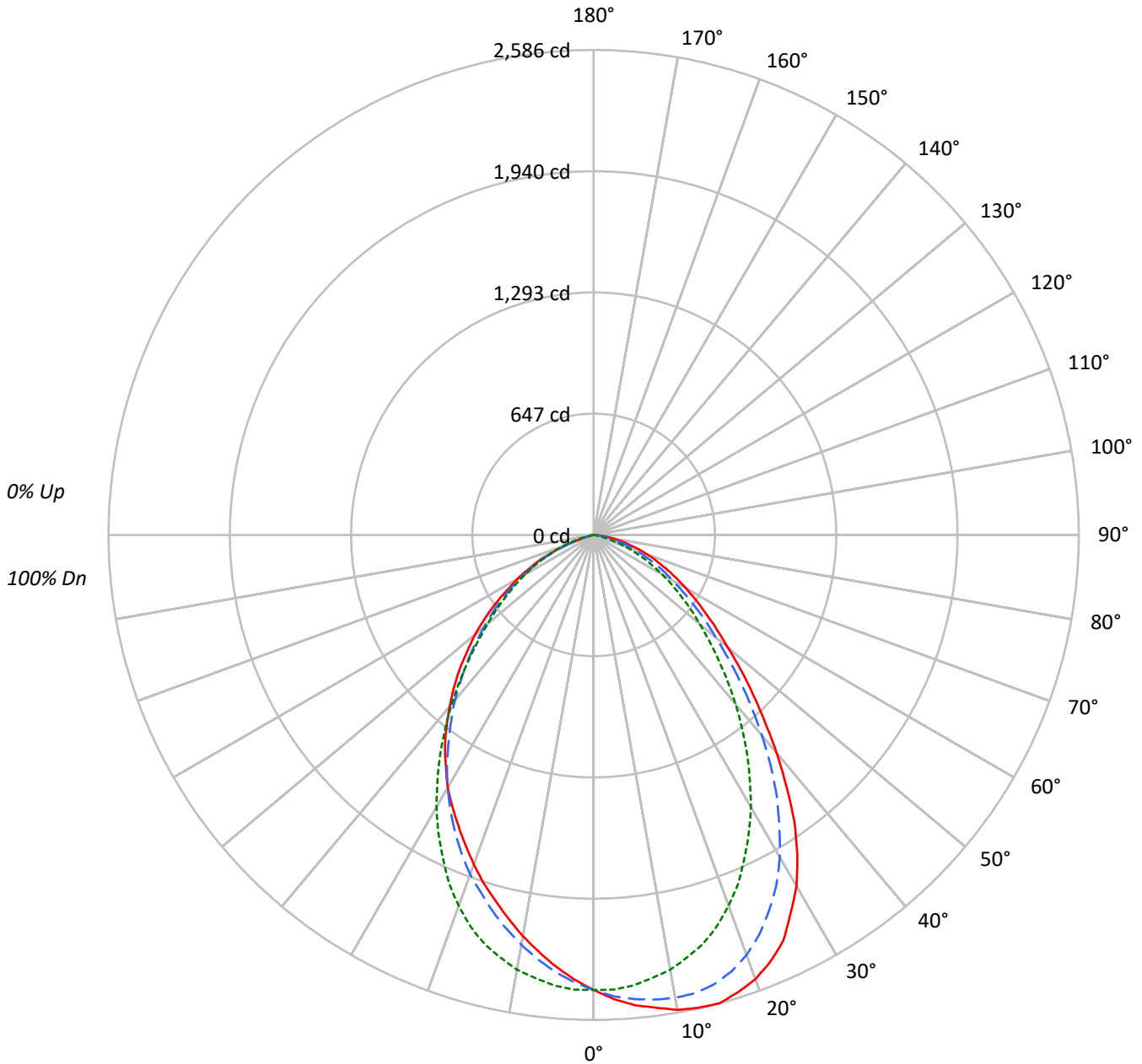
Input Watts (W): 70  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
RC	80									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	86	100	94	89	85	91	86	83	88	84	81	85	82	79	77																			
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	67																			
4	88	78	70	64	86	76	69	64	74	68	63	72	66	62	70	65	61	59																			
5	82	70	63	57	80	69	62	56	67	61	56	65	60	55	64	59	55	53																			
6	76	64	56	51	74	63	56	50	62	55	50	60	54	50	58	53	49	47																			
7	71	59	51	45	69	58	51	45	57	50	45	55	49	45	54	49	44	43																			
8	66	54	46	41	65	53	46	41	52	46	41	51	45	41	50	44	40	39																			
9	62	50	43	37	61	50	42	37	48	42	37	47	41	37	46	41	37	35																			
10	59	47	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32																			

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

	0°	90°	180°
0°	74821	74821	74821
5°	77915	74658	71513
10°	80519	73705	68025
15°	82556	72018	64493
20°	82718	69030	61296
25°	81321	64663	58120
30°	76967	59666	55400
35°	70176	53658	52021
40°	61029	47302	48035
45°	52353	40966	43971
50°	44720	35318	39496
55°	39192	30418	34321
60°	34894	25946	28857
65°	30966	21167	23028
70°	27463	15697	13082
75°	22911	8221	3896
80°	18024	2575	657
85°	12843	1309	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	228.6	5.1
10°-20°	640.8	14.2
20°-30°	907.0	20.1
30°-40°	948.9	21.0
40°-50°	791.5	17.5
50°-60°	561.3	12.4
60°-70°	323.2	7.2
70°-80°	104.0	2.3
80°-90°	14.3	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°	1776.4	39.3
0°-40°	2725.4	60.3
0°-60°	4078.1	90.2
0°-90°	4519.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4519.7	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2426	2426	2426	2426	2426	
5°	2517	2484	2412	2339	2310	242
15°	2586	2481	2256	2078	2020	727
25°	2390	2212	1900	1748	1708	1091
35°	1864	1701	1425	1349	1382	1156
45°	1200	1103	939	950	1008	930
55°	729	653	566	595	638	659
65°	424	355	290	290	316	424
75°	192	142	69	33	33	208
85°	36	18	4	0	0	45
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°	2426.4	2426.4	2426.4	2426.4	2426.4	2426.4	2426.4	2426.4	2426.4	2426.4	2426.4
2.5°	2477.2	2473.6	2469.9	2473.6	2469.9	2473.6	2469.9	2469.9	2466.3	2462.7	2462.7
5°	2517.1	2513.4	2513.4	2513.4	2509.9	2506.2	2506.2	2502.6	2495.4	2491.7	2484.4
7.5°	2542.4	2546.1	2546.1	2546.1	2538.9	2538.9	2531.6	2524.4	2517.1	2509.9	2498.9
10°	2571.5	2571.5	2567.9	2564.2	2556.9	2553.4	2549.7	2542.4	2531.6	2517.1	2506.2
12.5°	2582.4	2582.4	2578.7	2571.5	2567.9	2564.2	2560.6	2549.7	2535.2	2517.1	2502.6
15°	2586.0	2578.7	2575.1	2571.5	2564.2	2553.4	2553.4	2538.9	2520.7	2498.9	2480.8
17.5°	2556.9	2560.6	2553.4	2546.1	2535.2	2527.9	2517.1	2506.2	2484.4	2459.1	2440.9
20°	2520.7	2517.1	2513.4	2502.6	2488.1	2484.4	2473.6	2455.4	2437.3	2408.3	2382.9
22.5°	2462.7	2459.1	2451.8	2444.6	2430.1	2422.8	2411.9	2390.1	2364.8	2335.8	2306.7
25°	2390.1	2382.9	2372.1	2357.5	2346.6	2339.4	2324.9	2303.1	2274.1	2241.4	2212.4
27.5°	2274.1	2284.9	2277.6	2255.9	2245.1	2230.6	2226.9	2197.9	2172.5	2139.8	2107.3
30°	2161.6	2161.6	2150.8	2139.8	2121.8	2110.8	2096.3	2074.6	2049.2	2009.3	1984.0
32.5°	2020.2	2016.5	2002.0	1998.5	1984.0	1962.2	1958.5	1929.5	1904.2	1875.2	1842.5
35°	1864.2	1857.0	1842.5	1831.5	1824.3	1813.5	1802.5	1777.2	1751.8	1722.7	1701.0
37.5°	1686.5	1686.5	1682.9	1664.7	1657.5	1650.2	1639.4	1613.9	1599.4	1570.4	1548.7
40°	1516.1	1512.4	1501.6	1497.9	1490.6	1479.8	1472.6	1458.1	1436.3	1414.6	1392.8
42.5°	1349.2	1352.8	1338.3	1341.9	1327.4	1320.1	1316.6	1294.8	1283.9	1262.1	1244.1
45°	1200.5	1196.8	1189.6	1186.0	1178.8	1171.5	1164.3	1153.3	1135.3	1113.5	1102.6
47.5°	1062.7	1051.8	1051.8	1048.2	1044.5	1030.0	1026.5	1015.5	1004.7	982.9	968.4
50°	932.2	932.2	932.2	928.5	917.6	914.0	906.7	895.8	885.0	870.5	848.7
52.5°	826.9	826.9	826.9	823.3	808.8	805.2	801.5	787.0	772.5	761.7	747.2
55°	729.0	732.7	729.0	721.7	710.9	710.9	700.0	692.7	678.2	667.4	652.9
57.5°	645.6	645.6	638.4	634.7	627.4	623.9	616.6	609.4	591.2	580.4	562.2
60°	565.8	562.2	562.2	554.9	547.7	540.4	536.8	525.9	518.6	500.6	486.1
62.5°	493.3	493.3	486.1	486.1	471.6	471.6	467.9	456.9	446.1	427.9	420.7
65°	424.4	424.4	420.7	417.1	406.2	402.6	398.9	388.1	377.2	366.3	355.4
67.5°	362.6	362.6	355.4	351.8	344.6	340.9	333.6	326.4	315.6	304.6	293.8
70°	304.6	301.1	297.4	293.8	286.5	282.9	275.6	268.4	257.5	250.3	239.3
72.5°	246.6	246.6	243.0	235.8	232.1	228.5	224.8	217.6	206.8	195.8	188.6
75°	192.3	192.3	192.3	185.0	177.8	174.1	174.1	166.8	159.6	148.7	141.5
77.5°	148.7	145.1	141.5	141.5	134.2	130.6	127.0	123.3	112.5	108.8	101.5
80°	101.5	105.2	101.5	98.0	94.3	90.7	90.7	83.5	79.8	72.5	65.3
82.5°	69.0	65.3	65.3	61.7	61.7	58.0	58.0	50.8	47.2	43.5	40.0
85°	36.3	36.3	32.7	32.7	32.7	29.0	29.0	25.4	25.4	21.8	18.2
87.5°	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	7.3	7.3	7.3
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°	2426.4	2426.4	2426.4	2426.4	2426.4	2426.4	2426.4	2426.4	2426.4	2426.4	2426.4
2.5°	2459.1	2451.8	2448.2	2448.2	2444.6	2440.9	2437.3	2433.6	2426.4	2426.4	2419.1
5°	2477.2	2469.9	2466.3	2455.4	2448.2	2448.2	2433.6	2430.1	2419.1	2411.9	2404.6
7.5°	2491.7	2477.2	2466.3	2455.4	2448.2	2440.9	2426.4	2411.9	2397.4	2382.9	2375.6
10°	2491.7	2477.2	2459.1	2440.9	2433.6	2426.4	2408.3	2386.6	2368.4	2353.9	2335.8
12.5°	2484.4	2462.7	2440.9	2426.4	2411.9	2401.1	2379.3	2357.5	2335.8	2306.7	2292.2
15°	2462.7	2433.6	2411.9	2386.6	2375.6	2357.5	2339.4	2306.7	2281.3	2255.9	2237.8
17.5°	2419.1	2382.9	2357.5	2332.1	2313.9	2303.1	2274.1	2245.1	2216.1	2187.0	2165.3
20°	2353.9	2321.3	2292.2	2259.6	2245.1	2230.6	2194.3	2165.3	2136.3	2103.6	2081.8
22.5°	2274.1	2241.4	2201.6	2176.1	2154.3	2136.3	2103.6	2071.0	2042.0	2013.0	1984.0
25°	2176.1	2143.5	2107.3	2067.3	2052.8	2034.7	1998.5	1965.8	1933.2	1900.5	1875.2
27.5°	2071.0	2027.5	1998.5	1955.0	1940.4	1922.3	1882.4	1846.0	1817.0	1791.7	1762.7
30°	1944.0	1911.4	1871.5	1831.5	1817.0	1799.0	1766.3	1733.7	1704.7	1675.7	1646.6
32.5°	1806.2	1773.5	1733.7	1704.7	1682.9	1668.4	1635.7	1606.7	1577.7	1548.7	1523.3
35°	1661.2	1624.9	1595.9	1566.9	1548.7	1530.6	1497.9	1472.6	1450.8	1425.4	1400.0
37.5°	1512.4	1487.1	1458.1	1425.4	1407.3	1392.8	1367.4	1338.3	1320.1	1298.4	1280.3
40°	1367.4	1338.3	1312.9	1283.9	1269.4	1258.6	1233.1	1211.4	1193.3	1175.1	1164.3
42.5°	1218.6	1193.3	1167.8	1149.8	1138.8	1128.0	1109.8	1084.5	1073.5	1055.5	1044.5
45°	1080.8	1059.0	1041.0	1015.5	1008.3	1001.0	979.3	961.2	950.2	939.4	932.2
47.5°	950.2	935.7	914.0	899.5	888.5	881.3	866.8	852.3	841.5	834.2	826.9
50°	837.8	819.7	805.2	790.7	783.4	772.5	758.0	750.7	743.5	736.2	736.2
52.5°	732.7	714.5	700.0	689.1	681.9	674.6	663.7	660.1	652.9	652.9	649.2
55°	634.7	623.9	609.4	594.9	591.2	587.6	580.4	573.1	569.4	565.8	569.4
57.5°	551.3	540.4	525.9	515.1	511.4	507.8	504.1	496.9	493.3	493.3	493.3
60°	475.1	464.3	453.4	442.4	442.4	435.2	431.6	427.9	424.4	420.7	420.7
62.5°	406.2	395.3	384.4	377.2	373.6	369.9	362.6	359.1	355.4	355.4	351.8
65°	344.6	330.1	326.4	315.6	311.9	308.3	304.6	297.4	293.8	290.1	286.5
67.5°	282.9	275.6	264.8	257.5	253.9	250.3	246.6	239.3	235.8	232.1	224.8
70°	228.5	221.3	214.0	206.8	203.1	199.5	192.3	185.0	181.3	174.1	163.2
72.5°	177.8	170.5	163.2	156.0	152.3	148.7	141.5	134.2	127.0	119.7	112.5
75°	134.2	127.0	116.0	108.8	105.2	105.2	94.3	87.0	79.8	69.0	61.7
77.5°	94.3	83.5	79.8	72.5	69.0	61.7	54.5	47.2	40.0	36.3	29.0
80°	61.7	54.5	47.2	43.5	40.0	36.3	32.7	25.4	18.2	14.5	10.9
82.5°	36.3	32.7	29.0	25.4	21.8	18.2	14.5	14.5	10.9	7.3	3.7
85°	18.2	14.5	10.9	10.9	7.3	7.3	7.3	3.7	3.7	3.7	3.7
87.5°	7.3	3.7	3.7	3.7	3.7	3.7	3.7	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°	2426.4	2426.4	2426.4	2426.4	2426.4	2426.4	2426.4	2426.4	2426.4	2426.4	2426.4
2.5°	2415.6	2411.9	2408.3	2404.6	2404.6	2397.4	2397.4	2393.8	2386.6	2382.9	2382.9
5°	2393.8	2382.9	2375.6	2372.1	2368.4	2357.5	2353.9	2346.6	2339.4	2332.1	2328.5
7.5°	2361.1	2343.0	2335.8	2332.1	2321.3	2310.3	2303.1	2292.2	2281.3	2270.4	2266.8
10°	2321.3	2303.1	2284.9	2277.6	2266.8	2259.6	2245.1	2230.6	2219.6	2208.8	2197.9
12.5°	2270.4	2248.6	2230.6	2223.3	2212.4	2197.9	2176.1	2168.9	2150.8	2143.5	2129.0
15°	2212.4	2187.0	2168.9	2158.0	2147.1	2125.3	2110.8	2096.3	2078.3	2071.0	2056.5
17.5°	2139.8	2110.8	2092.8	2081.8	2074.6	2056.5	2034.7	2016.5	1998.5	1991.2	1980.3
20°	2052.8	2034.7	2009.3	1998.5	1991.2	1969.5	1947.7	1940.4	1925.9	1911.4	1900.5
22.5°	1955.0	1936.8	1911.4	1900.5	1896.9	1878.7	1860.7	1849.7	1838.8	1828.0	1817.0
25°	1853.4	1831.5	1809.8	1802.5	1795.3	1780.8	1766.3	1759.0	1748.2	1740.9	1733.7
27.5°	1744.5	1722.7	1704.7	1693.7	1686.5	1675.7	1668.4	1661.2	1653.9	1646.6	1643.0
30°	1628.5	1606.7	1592.2	1584.9	1577.7	1574.1	1563.2	1559.6	1555.9	1548.7	1552.4
32.5°	1512.4	1494.3	1479.8	1468.9	1468.9	1461.6	1458.1	1458.1	1454.4	1454.4	1454.4
35°	1385.4	1374.6	1363.7	1360.1	1356.4	1352.8	1349.2	1352.8	1349.2	1352.8	1356.4
37.5°	1269.4	1258.6	1251.3	1247.6	1244.1	1247.6	1244.1	1244.1	1247.6	1254.9	1258.6
40°	1149.8	1142.5	1135.3	1138.8	1135.3	1135.3	1135.3	1146.1	1149.8	1153.3	1157.0
42.5°	1037.3	1030.0	1026.5	1026.5	1030.0	1026.5	1033.7	1037.3	1044.5	1055.5	1062.7
45°	928.5	924.8	924.8	928.5	924.8	932.2	932.2	939.4	950.2	957.5	964.8
47.5°	826.9	826.9	826.9	830.5	830.5	834.2	841.5	845.0	852.3	859.5	866.8
50°	732.7	736.2	739.9	739.9	739.9	747.2	754.4	758.0	761.7	765.2	776.2
52.5°	649.2	652.9	652.9	656.4	660.1	663.7	667.4	674.6	678.2	685.5	689.1
55°	569.4	569.4	576.7	580.4	580.4	580.4	587.6	587.6	594.9	598.4	605.7
57.5°	493.3	496.9	496.9	500.6	500.6	504.1	507.8	511.4	515.1	518.6	522.3
60°	420.7	420.7	420.7	424.4	427.9	431.6	427.9	435.2	435.2	442.4	446.1
62.5°	351.8	355.4	355.4	355.4	355.4	355.4	355.4	359.1	362.6	366.3	369.9
65°	286.5	286.5	286.5	282.9	286.5	282.9	286.5	290.1	290.1	293.8	297.4
67.5°	221.3	221.3	214.0	214.0	217.6	217.6	217.6	217.6	214.0	221.3	221.3
70°	159.6	156.0	152.3	148.7	148.7	145.1	145.1	141.5	141.5	141.5	141.5
72.5°	105.2	98.0	90.7	87.0	83.5	83.5	76.2	72.5	76.2	76.2	76.2
75°	54.5	47.2	43.5	40.0	36.3	36.3	32.7	32.7	32.7	32.7	32.7
77.5°	21.8	18.2	14.5	14.5	10.9	10.9	10.9	10.9	10.9	10.9	10.9
80°	7.3	7.3	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
82.5°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
85°	3.7	0.0	0.0	3.7	0.0	3.7	3.7	3.7	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: P585269

CATALOG NUMBER: HC880D010-HM86080927-81WWBB

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2426.4	2426.4	2426.4	2426.4	2426.4	2426.4	2426.4	2426.4
2.5°	2379.3	2379.3	2375.6	2379.3	2372.1	2375.6	2372.1	2372.1
5°	2324.9	2317.6	2317.6	2317.6	2313.9	2313.9	2310.3	2310.3
7.5°	2259.6	2255.9	2252.3	2248.6	2245.1	2241.4	2241.4	2241.4
10°	2194.3	2187.0	2187.0	2183.4	2176.1	2172.5	2172.5	2172.5
12.5°	2118.1	2114.5	2110.8	2110.8	2096.3	2100.0	2096.3	2096.3
15°	2045.6	2042.0	2042.0	2031.0	2023.8	2023.8	2023.8	2020.2
17.5°	1969.5	1965.8	1962.2	1955.0	1947.7	1947.7	1944.0	1947.7
20°	1889.7	1886.0	1878.7	1878.7	1875.2	1871.5	1864.2	1867.9
22.5°	1809.8	1802.5	1799.0	1799.0	1795.3	1795.3	1788.0	1788.0
25°	1726.4	1722.7	1719.2	1722.7	1715.5	1715.5	1708.2	1708.2
27.5°	1639.4	1635.7	1635.7	1635.7	1632.1	1635.7	1632.1	1632.1
30°	1552.4	1552.4	1548.7	1548.7	1552.4	1548.7	1552.4	1555.9
32.5°	1458.1	1458.1	1461.6	1461.6	1465.3	1465.3	1465.3	1465.3
35°	1360.1	1367.4	1367.4	1370.9	1374.6	1378.2	1378.2	1381.9
37.5°	1269.4	1273.1	1276.6	1280.3	1287.6	1287.6	1287.6	1287.6
40°	1171.5	1175.1	1182.3	1178.8	1193.3	1196.8	1193.3	1193.3
42.5°	1070.0	1077.2	1080.8	1088.1	1091.7	1099.0	1102.6	1102.6
45°	975.7	979.3	986.5	993.8	997.5	1008.3	1008.3	1008.3
47.5°	877.7	885.0	888.5	895.8	899.5	910.3	914.0	910.3
50°	783.4	790.7	797.9	797.9	808.8	812.4	819.7	823.3
52.5°	692.7	696.4	703.7	707.2	714.5	721.7	725.4	729.0
55°	605.7	609.4	616.6	616.6	627.4	631.1	638.4	638.4
57.5°	525.9	529.6	536.8	533.1	540.4	547.7	547.7	544.1
60°	449.7	449.7	449.7	456.9	460.6	464.3	467.9	467.9
62.5°	369.9	377.2	380.8	380.8	384.4	388.1	388.1	384.4
65°	297.4	304.6	308.3	308.3	311.9	311.9	311.9	315.6
67.5°	224.8	224.8	224.8	228.5	224.8	224.8	224.8	224.8
70°	141.5	141.5	141.5	141.5	137.8	141.5	141.5	145.1
72.5°	76.2	76.2	76.2	76.2	76.2	76.2	76.2	76.2
75°	32.7	32.7	32.7	36.3	32.7	32.7	32.7	32.7
77.5°	14.5	10.9	14.5	14.5	10.9	10.9	10.9	10.9
80°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
82.5°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
85°	0.0	3.7	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)