

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: P584438

Luminaire Tested: **HC835D010-HM82555840-81WWWB**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P584438  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-18)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 10/21/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC835D010-HM82555840-81WWWB  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4238.7 lumens  
Efficiency: N/A  
Efficacy: 125.8 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.09 / 1.18  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

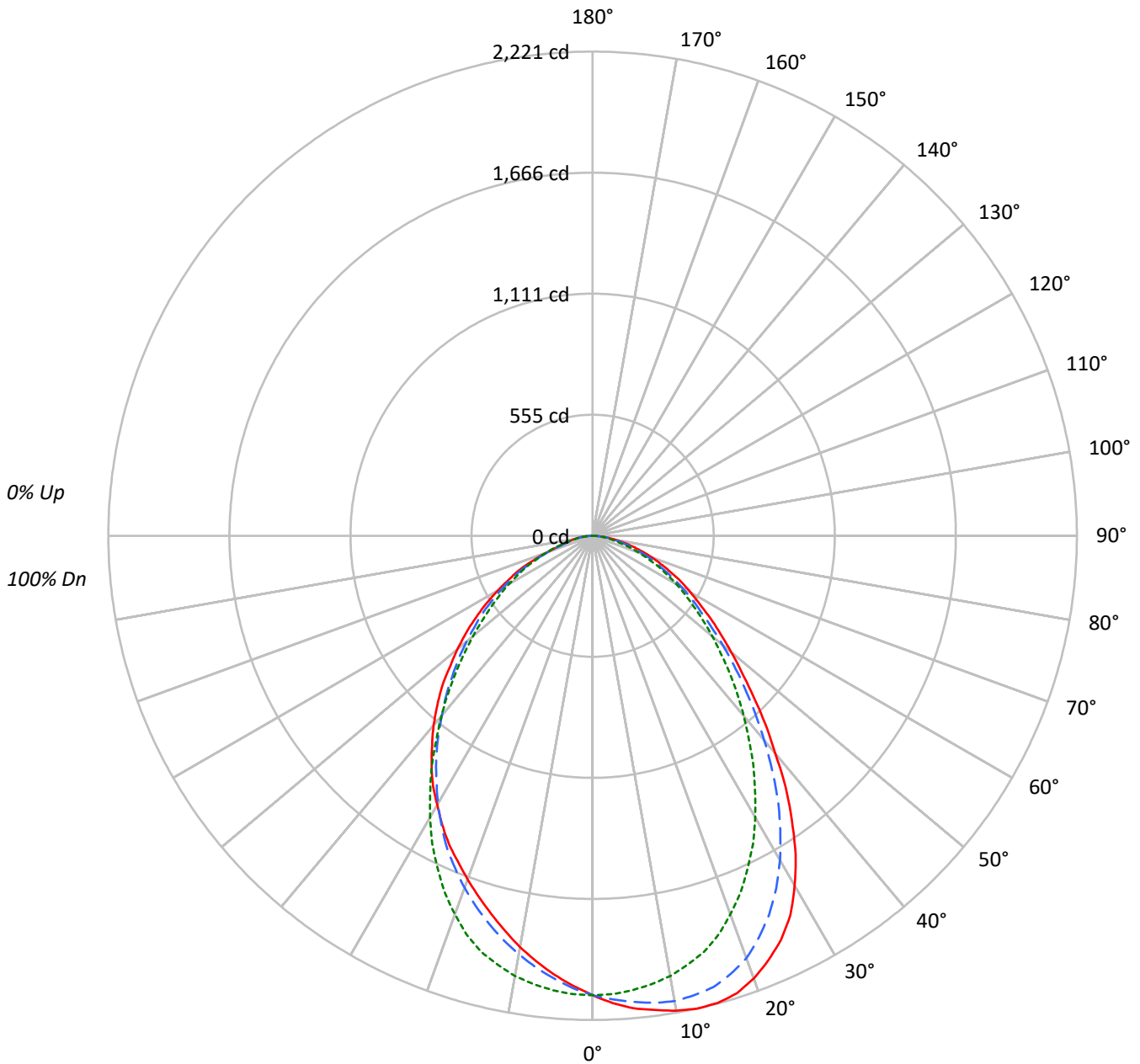
Input Watts (W): 33.7  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P584438

CATALOG NUMBER: HC835D010-HM82555840-81WWWB

### Luminous Intensity Polar Plot





TEST NUMBER: P584438

CATALOG NUMBER: HC835D010-HM82555840-81WWWB

**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	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87								
2	102	94	88	83	99	93	87	82	89	85	81	86	82	79	83	80	77	75								
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65								
4	87	76	68	62	84	75	67	61	72	66	61	70	64	60	68	63	59	57								
5	80	69	60	54	78	67	60	54	65	59	54	64	58	53	62	57	52	50								
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45								
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42	40								
8	65	52	45	39	64	52	44	39	51	44	39	49	43	39	48	43	38	37								
9	61	48	41	36	60	48	41	36	47	40	35	46	40	35	45	39	35	33								
10	57	45	38	33	56	44	37	33	44	37	32	43	37	32	42	36	32	30								

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

	0°	90°	180°
0°	64988	64988	64988
5°	67369	64771	62549
10°	69268	64208	59994
15°	70814	63072	57342
20°	70927	60613	55015
25°	69566	57242	53067
30°	65983	53082	50736
35°	59952	48346	48459
40°	52419	43382	45672
45°	45432	38646	42558
50°	39784	34320	38776
55°	35402	30418	35085
60°	31940	27321	30830
65°	28828	24027	26873
70°	25912	20241	19970
75°	22828	16048	14988
80°	19143	13301	14366
85°	14825	11640	12702



TEST NUMBER: P584438

CATALOG NUMBER: HC835D010-HM82555840-81WWWB

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	198.8	4.7
10°-20°	560.0	13.2
20°-30°	800.3	18.9
30°-40°	850.4	20.1
40°-50°	732.1	17.3
50°-60°	547.4	12.9
60°-70°	349.1	8.2
70°-80°	158.9	3.7
80°-90°	41.7	1.0
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°	1559.1	36.8
0°-40°	2409.5	56.8
0°-60°	3689.0	87.0
0°-90°	4238.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4238.7	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2108	2108	2108	2108	2108	
5°	2176	2146	2092	2039	2021	209
15°	2218	2144	1976	1841	1796	625
25°	2045	1916	1682	1581	1560	936
35°	1593	1482	1284	1251	1287	992
45°	1042	985	886	910	976	810
55°	658	605	566	614	653	592
65°	395	350	329	344	368	394
75°	192	165	135	123	126	204
85°	42	36	33	36	36	51
90°	0	0	0	0	0	



TEST NUMBER: P584438

CATALOG NUMBER: HC835D010-HM82555840-81WWWB

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2107.5	2107.5	2107.5	2107.5	2107.5	2107.5	2107.5	2107.5	2107.5	2107.5	2107.5
2.5°	2146.5	2140.5	2143.5	2140.5	2143.5	2143.5	2137.5	2137.5	2137.5	2137.5	2128.5
5°	2176.4	2173.4	2173.4	2170.4	2167.4	2170.4	2167.4	2164.4	2158.4	2155.4	2146.5
7.5°	2194.3	2194.3	2194.3	2194.3	2191.4	2188.4	2185.4	2179.4	2173.4	2167.4	2161.4
10°	2212.2	2215.2	2212.2	2209.2	2206.2	2200.2	2197.3	2191.4	2182.4	2173.4	2167.4
12.5°	2221.2	2221.2	2218.2	2218.2	2212.2	2209.2	2200.2	2191.4	2182.4	2173.4	2158.4
15°	2218.2	2218.2	2215.2	2212.2	2203.2	2200.2	2194.3	2185.4	2170.4	2158.4	2143.5
17.5°	2200.2	2197.3	2191.4	2191.4	2179.4	2176.4	2170.4	2158.4	2143.5	2125.5	2107.5
20°	2161.4	2161.4	2158.4	2155.4	2143.5	2134.5	2128.5	2113.5	2101.5	2080.6	2062.6
22.5°	2107.5	2113.5	2107.5	2101.5	2086.6	2083.6	2074.6	2056.6	2038.6	2014.7	1993.7
25°	2044.6	2041.6	2038.6	2032.6	2020.7	2014.7	2002.7	1984.7	1966.8	1939.8	1916.0
27.5°	1963.8	1951.8	1951.8	1939.8	1930.9	1922.0	1916.0	1898.0	1874.0	1853.1	1823.1
30°	1853.1	1856.1	1841.1	1838.1	1823.1	1817.1	1805.1	1787.2	1766.2	1742.3	1718.3
32.5°	1733.3	1724.3	1724.3	1712.3	1700.3	1691.3	1688.3	1667.5	1649.5	1625.6	1601.6
35°	1592.6	1592.6	1583.6	1580.6	1568.7	1562.7	1553.7	1541.7	1520.7	1499.8	1481.8
37.5°	1454.9	1448.9	1445.9	1439.9	1430.9	1421.9	1421.9	1401.1	1398.1	1374.1	1350.1
40°	1302.2	1308.2	1302.2	1293.2	1290.2	1284.3	1281.3	1269.3	1260.3	1239.3	1224.4
42.5°	1173.4	1167.5	1167.5	1164.5	1152.6	1152.6	1146.6	1140.6	1125.6	1119.7	1101.7
45°	1041.8	1047.8	1038.8	1041.8	1029.8	1029.8	1029.8	1017.8	1005.8	996.9	984.9
47.5°	928.0	931.0	931.0	922.0	919.0	919.0	913.0	907.0	898.1	886.2	877.2
50°	829.3	832.3	826.3	823.3	817.3	814.3	814.3	802.3	796.3	784.3	778.3
52.5°	739.4	739.4	736.4	736.4	727.4	727.4	721.4	712.5	706.5	700.5	685.5
55°	658.5	658.5	655.5	652.6	652.6	643.7	640.7	631.7	625.7	613.7	604.8
57.5°	580.8	583.8	580.8	577.8	574.8	571.8	565.8	556.8	550.8	541.9	535.9
60°	517.9	517.9	514.9	511.9	505.9	502.9	499.9	493.9	485.0	479.0	470.0
62.5°	458.0	455.0	452.0	449.0	443.0	443.0	437.0	431.0	422.1	416.1	410.1
65°	395.1	395.1	392.1	392.1	389.1	383.2	380.2	377.3	365.3	362.3	350.3
67.5°	338.3	341.3	335.3	335.3	329.3	329.3	326.3	317.4	314.4	308.4	302.4
70°	287.4	287.4	287.4	284.4	278.4	275.4	272.4	266.4	263.4	257.5	251.5
72.5°	236.5	236.5	233.5	233.5	230.5	227.5	224.5	218.5	218.5	212.5	206.5
75°	191.6	191.6	188.6	185.6	182.6	182.6	179.6	176.6	170.6	167.6	164.6
77.5°	146.6	146.6	146.6	143.6	140.6	140.6	140.6	134.7	128.8	128.8	125.8
80°	107.8	107.8	104.8	104.8	101.8	101.8	101.8	98.8	95.8	92.8	89.8
82.5°	71.9	71.9	71.9	71.9	68.9	68.9	68.9	65.9	62.9	62.9	62.9
85°	41.9	41.9	41.9	41.9	38.9	38.9	38.9	38.9	38.9	35.9	35.9
87.5°	18.0	15.0	18.0	15.0	18.0	15.0	18.0	15.0	15.0	15.0	15.0
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: P584438

CATALOG NUMBER: HC835D010-HM82555840-81WWWB

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2107.5	2107.5	2107.5	2107.5	2107.5	2107.5	2107.5	2107.5	2107.5	2107.5	2107.5
2.5°	2131.5	2128.5	2125.5	2122.5	2122.5	2119.5	2113.5	2110.5	2107.5	2104.5	2104.5
5°	2143.5	2140.5	2134.5	2128.5	2125.5	2119.5	2113.5	2107.5	2101.5	2092.5	2089.6
7.5°	2152.4	2143.5	2137.5	2125.5	2122.5	2116.5	2107.5	2098.5	2086.6	2074.6	2065.6
10°	2152.4	2140.5	2131.5	2116.5	2110.5	2104.5	2092.5	2077.6	2062.6	2050.6	2035.6
12.5°	2146.5	2131.5	2116.5	2101.5	2092.5	2083.6	2065.6	2050.6	2032.6	2014.7	2002.7
15°	2125.5	2107.5	2089.6	2071.6	2062.6	2050.6	2032.6	2011.7	1993.7	1975.7	1954.8
17.5°	2086.6	2068.6	2047.6	2026.7	2014.7	2005.7	1978.7	1963.8	1936.8	1919.0	1901.0
20°	2035.6	2014.7	1987.7	1966.8	1951.8	1942.8	1922.0	1895.0	1874.0	1847.1	1829.1
22.5°	1969.8	1942.8	1916.0	1895.0	1880.0	1868.0	1841.1	1814.1	1796.2	1772.2	1751.2
25°	1892.0	1865.0	1838.1	1808.1	1793.2	1781.2	1757.2	1733.3	1709.3	1682.4	1664.5
27.5°	1799.2	1769.2	1745.2	1718.3	1703.3	1685.3	1658.5	1634.6	1610.6	1592.6	1568.7
30°	1697.3	1664.5	1640.5	1613.6	1598.6	1583.6	1556.7	1532.7	1511.8	1490.8	1478.8
32.5°	1574.7	1550.7	1526.7	1499.8	1487.8	1478.8	1451.9	1427.9	1404.1	1386.1	1377.1
35°	1457.8	1430.9	1410.0	1386.1	1371.1	1362.1	1338.2	1317.2	1305.2	1284.3	1272.3
37.5°	1335.2	1314.2	1290.2	1266.3	1257.3	1248.3	1230.3	1209.4	1191.4	1176.4	1170.4
40°	1206.4	1188.4	1167.5	1152.6	1143.6	1134.6	1119.7	1104.7	1092.7	1077.7	1071.7
42.5°	1083.7	1071.7	1053.8	1035.8	1026.8	1023.8	1005.8	993.9	987.9	981.9	975.9
45°	972.9	954.9	942.9	931.0	922.0	916.0	907.0	898.1	892.2	886.2	880.2
47.5°	865.2	850.2	838.2	829.3	820.3	817.3	811.3	802.3	796.3	796.3	796.3
50°	766.4	754.4	742.4	736.4	733.4	727.4	721.4	718.4	715.4	715.4	715.4
52.5°	679.5	667.5	658.5	652.6	652.6	646.6	640.7	637.7	637.7	637.7	637.7
55°	598.8	589.8	583.8	577.8	571.8	568.8	568.8	568.8	565.8	565.8	568.8
57.5°	526.9	520.9	511.9	505.9	502.9	502.9	499.9	496.9	499.9	502.9	505.9
60°	461.0	455.0	452.0	443.0	443.0	443.0	440.0	440.0	440.0	443.0	446.0
62.5°	401.1	398.1	392.1	389.1	386.2	386.2	383.2	383.2	383.2	383.2	386.2
65°	347.3	341.3	335.3	335.3	335.3	332.3	332.3	326.3	329.3	329.3	326.3
67.5°	296.4	290.4	287.4	284.4	281.4	281.4	278.4	275.4	272.4	272.4	272.4
70°	248.5	242.5	242.5	236.5	236.5	233.5	230.5	230.5	227.5	224.5	221.5
72.5°	200.5	197.6	194.6	191.6	191.6	191.6	188.6	185.6	182.6	179.6	173.6
75°	158.6	158.6	152.6	149.6	149.6	146.6	143.6	140.6	137.7	134.7	131.7
77.5°	122.8	119.8	113.8	110.8	110.8	110.8	107.8	104.8	101.8	98.8	95.8
80°	89.8	86.9	83.9	80.9	80.9	80.9	77.9	77.9	74.9	74.9	74.9
82.5°	59.9	59.9	56.9	56.9	56.9	56.9	53.9	53.9	53.9	53.9	53.9
85°	35.9	35.9	32.9	32.9	32.9	32.9	32.9	32.9	32.9	32.9	32.9
87.5°	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
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: P584438

CATALOG NUMBER: HC835D010-HM82555840-81WWWB

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2107.5	2107.5	2107.5	2107.5	2107.5	2107.5	2107.5	2107.5	2107.5	2107.5	2107.5
2.5°	2098.5	2098.5	2092.5	2089.6	2086.6	2089.6	2083.6	2080.6	2077.6	2077.6	2074.6
5°	2080.6	2077.6	2065.6	2062.6	2059.6	2056.6	2050.6	2044.6	2038.6	2035.6	2032.6
7.5°	2056.6	2047.6	2035.6	2032.6	2029.7	2020.7	2011.7	2005.7	1996.7	1993.7	1987.7
10°	2023.7	2011.7	2002.7	1993.7	1987.7	1978.7	1969.8	1960.8	1948.8	1945.8	1936.8
12.5°	1984.7	1969.8	1951.8	1948.8	1939.8	1927.9	1916.0	1907.0	1898.0	1892.0	1883.0
15°	1936.8	1922.0	1904.0	1895.0	1886.0	1877.0	1862.1	1850.1	1841.1	1832.1	1823.1
17.5°	1880.0	1862.1	1847.1	1838.1	1832.1	1817.1	1805.1	1790.2	1781.2	1772.2	1763.2
20°	1811.1	1796.2	1775.2	1766.2	1763.2	1751.2	1736.3	1730.3	1718.3	1709.3	1703.3
22.5°	1733.3	1718.3	1700.3	1694.3	1682.4	1676.5	1661.5	1655.5	1649.5	1640.5	1637.5
25°	1646.5	1631.6	1616.6	1613.6	1604.6	1598.6	1589.6	1580.6	1580.6	1571.7	1571.7
27.5°	1556.7	1541.7	1529.7	1523.7	1520.7	1514.8	1505.8	1502.8	1499.8	1496.8	1496.8
30°	1460.8	1442.9	1436.9	1433.9	1430.9	1424.9	1421.9	1416.0	1419.0	1421.9	1419.0
32.5°	1359.1	1353.1	1341.2	1335.2	1338.2	1335.2	1329.2	1335.2	1332.2	1338.2	1341.2
35°	1260.3	1254.3	1248.3	1248.3	1242.3	1242.3	1242.3	1245.3	1251.3	1254.3	1260.3
37.5°	1164.5	1155.6	1152.6	1149.6	1152.6	1152.6	1152.6	1158.6	1164.5	1170.4	1179.4
40°	1062.7	1056.8	1056.8	1056.8	1056.8	1065.7	1062.7	1068.7	1074.7	1083.7	1092.7
42.5°	966.9	966.9	969.9	969.9	969.9	969.9	975.9	984.9	993.9	1002.8	1011.8
45°	877.2	877.2	877.2	883.2	883.2	886.2	898.1	904.0	910.0	919.0	928.0
47.5°	793.3	793.3	796.3	799.3	802.3	808.3	814.3	823.3	832.3	838.2	847.2
50°	715.4	718.4	724.4	730.4	730.4	733.4	742.4	748.4	754.4	763.4	766.4
52.5°	640.7	646.6	652.6	655.5	658.5	664.5	667.5	676.5	679.5	688.5	691.5
55°	571.8	574.8	583.8	586.8	586.8	592.8	598.8	604.8	613.7	613.7	619.7
57.5°	508.9	511.9	517.9	520.9	517.9	526.9	529.9	535.9	538.9	544.9	547.8
60°	446.0	452.0	455.0	455.0	458.0	461.0	467.0	467.0	473.0	479.0	479.0
62.5°	386.2	389.1	392.1	395.1	398.1	395.1	404.1	404.1	410.1	413.1	419.1
65°	329.3	332.3	332.3	335.3	335.3	338.3	338.3	341.3	344.3	350.3	353.3
67.5°	272.4	272.4	272.4	275.4	272.4	275.4	275.4	278.4	278.4	284.4	287.4
70°	221.5	218.5	215.5	215.5	215.5	215.5	212.5	215.5	215.5	218.5	218.5
72.5°	170.6	167.6	164.6	161.6	161.6	158.6	155.6	158.6	158.6	161.6	161.6
75°	128.8	122.8	122.8	122.8	119.8	119.8	119.8	122.8	122.8	122.8	125.8
77.5°	95.8	95.8	92.8	92.8	92.8	95.8	95.8	98.8	98.8	98.8	98.8
80°	71.9	74.9	74.9	74.9	74.9	77.9	77.9	77.9	77.9	80.9	80.9
82.5°	53.9	53.9	53.9	53.9	56.9	56.9	56.9	56.9	56.9	56.9	56.9
85°	32.9	35.9	35.9	32.9	35.9	35.9	35.9	35.9	35.9	35.9	35.9
87.5°	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
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: P584438

CATALOG NUMBER: HC835D010-HM82555840-81WWWB

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2107.5	2107.5	2107.5	2107.5	2107.5	2107.5	2107.5	2107.5
2.5°	2071.6	2071.6	2071.6	2071.6	2068.6	2068.6	2068.6	2065.6
5°	2026.7	2026.7	2026.7	2020.7	2023.7	2023.7	2017.7	2020.7
7.5°	1981.7	1978.7	1975.7	1975.7	1972.7	1969.8	1966.8	1969.8
10°	1930.9	1922.0	1922.0	1919.0	1919.0	1913.0	1913.0	1916.0
12.5°	1874.0	1868.0	1868.0	1865.0	1862.1	1859.1	1856.1	1856.1
15°	1817.1	1811.1	1808.1	1805.1	1802.2	1796.2	1799.2	1796.2
17.5°	1760.2	1751.2	1751.2	1748.2	1745.2	1739.3	1739.3	1736.3
20°	1694.3	1691.3	1685.3	1688.3	1685.3	1679.4	1676.5	1676.5
22.5°	1628.6	1628.6	1625.6	1625.6	1622.6	1619.6	1616.6	1616.6
25°	1565.7	1562.7	1565.7	1565.7	1556.7	1556.7	1556.7	1559.7
27.5°	1493.8	1496.8	1493.8	1493.8	1493.8	1493.8	1496.8	1493.8
30°	1421.9	1421.9	1421.9	1424.9	1430.9	1427.9	1427.9	1424.9
32.5°	1344.2	1347.2	1347.2	1350.1	1353.1	1359.1	1359.1	1362.1
35°	1266.3	1272.3	1275.3	1272.3	1281.3	1281.3	1287.3	1287.3
37.5°	1185.4	1188.4	1194.4	1197.4	1203.4	1206.4	1209.4	1209.4
40°	1098.7	1110.7	1113.7	1116.7	1125.6	1125.6	1128.6	1134.6
42.5°	1017.8	1029.8	1032.8	1035.8	1041.8	1050.8	1047.8	1053.8
45°	940.0	948.9	951.9	954.9	963.9	966.9	966.9	975.9
47.5°	856.2	862.2	865.2	871.2	877.2	883.2	889.2	886.2
50°	772.4	781.3	787.3	790.3	799.3	802.3	805.3	808.3
52.5°	697.5	703.5	706.5	709.5	718.4	721.4	724.4	730.4
55°	625.7	628.7	634.7	631.7	640.7	643.7	646.6	652.6
57.5°	553.8	556.8	559.8	559.8	565.8	571.8	574.8	577.8
60°	485.0	490.9	493.9	493.9	493.9	499.9	499.9	499.9
62.5°	422.1	422.1	425.1	425.1	431.0	431.0	431.0	431.0
65°	356.3	359.3	362.3	362.3	368.3	365.3	371.3	368.3
67.5°	287.4	287.4	293.4	293.4	290.4	293.4	293.4	293.4
70°	218.5	218.5	221.5	221.5	221.5	221.5	221.5	221.5
72.5°	161.6	161.6	161.6	164.6	161.6	161.6	164.6	161.6
75°	125.8	125.8	125.8	125.8	125.8	125.8	125.8	125.8
77.5°	98.8	98.8	101.8	101.8	101.8	101.8	101.8	101.8
80°	80.9	80.9	80.9	80.9	83.9	80.9	80.9	80.9
82.5°	59.9	56.9	59.9	56.9	59.9	59.9	59.9	59.9
85°	35.9	35.9	35.9	35.9	35.9	35.9	35.9	35.9
87.5°	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
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)