

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: P584436

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

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P584436  
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: HC835D010-HM82555840-81WWBB  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3729.9 lumens  
Efficiency: N/A  
Efficacy: 110.7 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

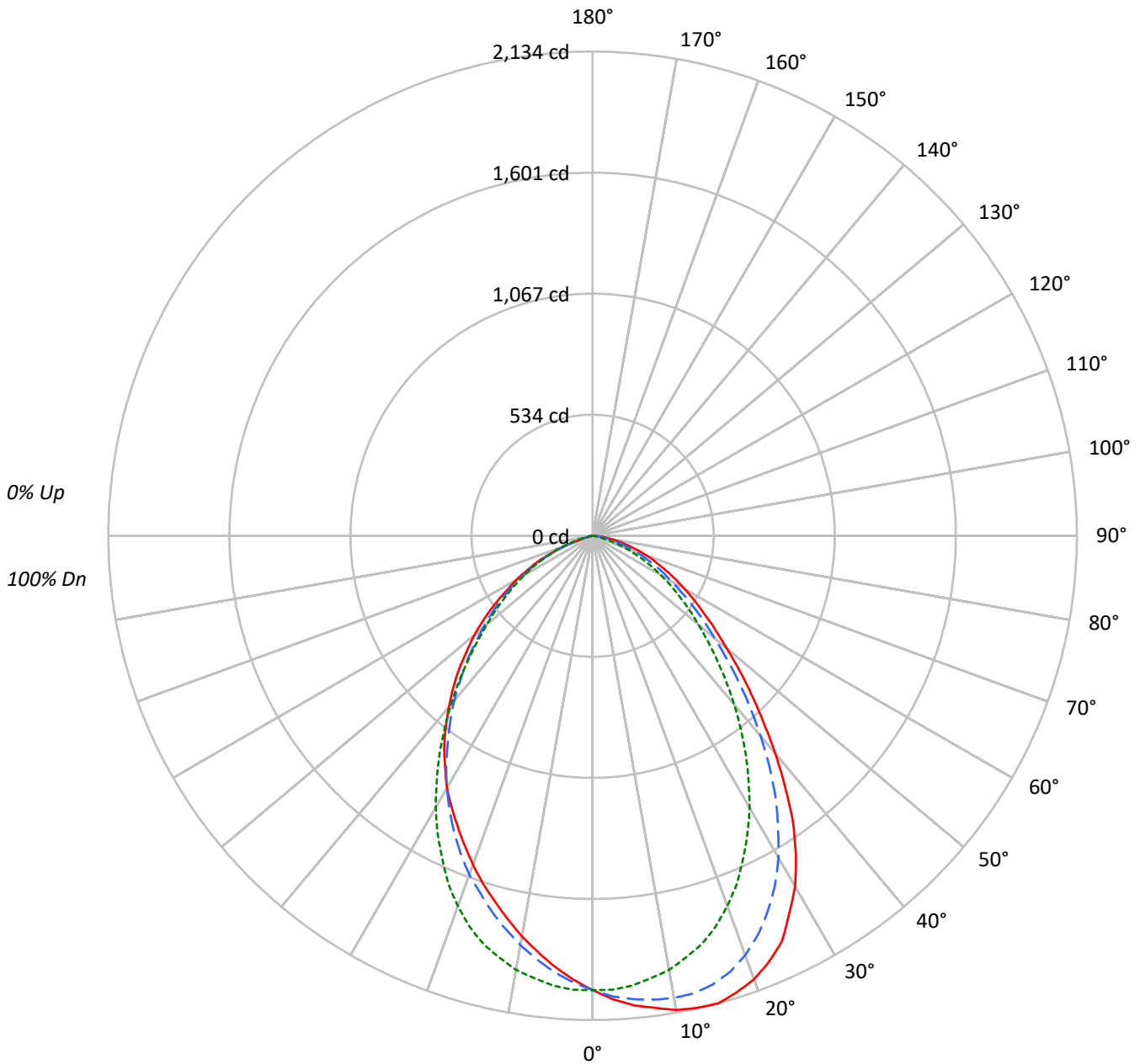
Input Watts (W): 33.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	61744	61744	61744
5°	64298	61611	59017
10°	66447	60827	56139
15°	68129	59433	53221
20°	68262	56967	50585
25°	67113	53363	47967
30°	63519	49241	45719
35°	57916	44281	42929
40°	50362	39038	39642
45°	43204	33806	36287
50°	36901	29148	32593
55°	32343	25107	28322
60°	28801	21413	23812
65°	25552	17475	19000
70°	22675	12947	10792
75°	18896	6779	3217
80°	14899	2131	533
85°	10614	1061	0



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CATALOG NUMBER: HC835D010-HM82555840-81WWBB

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	188.7	5.1
10°-20°	528.8	14.2
20°-30°	748.5	20.1
30°-40°	783.1	21.0
40°-50°	653.1	17.5
50°-60°	463.2	12.4
60°-70°	266.8	7.2
70°-80°	85.9	2.3
80°-90°	11.8	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°	1466.0	39.3
0°-40°	2249.1	60.3
0°-60°	3365.4	90.2
0°-90°	3729.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3729.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2002	2002	2002	2002	2002	
5°	2077	2050	1990	1931	1907	199
15°	2134	2047	1862	1715	1667	600
25°	1972	1826	1568	1443	1410	900
35°	1538	1404	1176	1113	1140	954
45°	991	910	775	784	832	768
55°	602	539	467	491	527	544
65°	350	293	240	240	260	350
75°	159	117	57	27	27	172
85°	30	15	3	0	0	37
90°	0	0	0	0	0	



TEST NUMBER: P584436

CATALOG NUMBER: HC835D010-HM82555840-81WWBB

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2002.3	2002.3	2002.3	2002.3	2002.3	2002.3	2002.3	2002.3	2002.3	2002.3	2002.3
2.5°	2044.3	2041.3	2038.3	2041.3	2038.3	2041.3	2038.3	2038.3	2035.3	2032.3	2032.3
5°	2077.2	2074.2	2074.2	2074.2	2071.2	2068.2	2068.2	2065.2	2059.2	2056.2	2050.3
7.5°	2098.2	2101.2	2101.2	2101.2	2095.2	2095.2	2089.2	2083.2	2077.2	2071.2	2062.2
10°	2122.1	2122.1	2119.1	2116.1	2110.2	2107.2	2104.2	2098.2	2089.2	2077.2	2068.2
12.5°	2131.1	2131.1	2128.1	2122.1	2119.1	2116.1	2113.2	2104.2	2092.2	2077.2	2065.2
15°	2134.1	2128.1	2125.1	2122.1	2116.1	2107.2	2107.2	2095.2	2080.2	2062.2	2047.3
17.5°	2110.2	2113.2	2107.2	2101.2	2092.2	2086.2	2077.2	2068.2	2050.3	2029.3	2014.3
20°	2080.2	2077.2	2074.2	2065.2	2053.3	2050.3	2041.3	2026.3	2011.3	1987.4	1966.5
22.5°	2032.3	2029.3	2023.3	2017.3	2005.3	1999.3	1990.4	1972.5	1951.5	1927.6	1903.6
25°	1972.5	1966.5	1957.5	1945.6	1936.6	1930.6	1918.6	1900.6	1876.7	1849.7	1825.8
27.5°	1876.7	1885.7	1879.7	1861.7	1852.7	1840.7	1837.7	1813.8	1792.9	1766.0	1739.0
30°	1783.9	1783.9	1775.0	1766.0	1751.0	1742.0	1730.0	1712.1	1691.1	1658.2	1637.2
32.5°	1667.1	1664.1	1652.2	1649.2	1637.2	1619.2	1616.2	1592.4	1571.4	1547.5	1520.5
35°	1538.5	1532.5	1520.5	1511.5	1505.5	1496.5	1487.6	1466.6	1445.6	1421.7	1403.8
37.5°	1391.8	1391.8	1388.8	1373.9	1367.9	1361.9	1352.9	1331.9	1320.0	1296.0	1278.0
40°	1251.1	1248.1	1239.1	1236.1	1230.1	1221.2	1215.3	1203.3	1185.3	1167.3	1149.4
42.5°	1113.4	1116.4	1104.4	1107.4	1095.5	1089.5	1086.5	1068.5	1059.5	1041.5	1026.7
45°	990.7	987.8	981.8	978.8	972.8	966.8	960.8	951.8	936.8	918.9	909.9
47.5°	876.9	868.0	868.0	865.0	862.0	850.0	847.1	838.1	829.1	811.2	799.2
50°	769.2	769.2	769.2	766.2	757.3	754.3	748.3	739.3	730.3	718.3	700.4
52.5°	682.4	682.4	682.4	679.4	667.4	664.4	661.4	649.6	637.6	628.6	616.6
55°	601.6	604.6	601.6	595.6	586.7	586.7	577.7	571.7	559.7	550.7	538.7
57.5°	532.8	532.8	526.8	523.8	517.8	514.8	508.8	502.8	487.8	478.8	464.0
60°	467.0	464.0	464.0	458.0	452.0	446.0	443.0	434.0	428.0	413.1	401.1
62.5°	407.1	407.1	401.1	401.1	389.1	389.1	386.1	377.1	368.1	353.2	347.2
65°	350.2	350.2	347.2	344.2	335.2	332.2	329.2	320.2	311.2	302.3	293.3
67.5°	299.3	299.3	293.3	290.3	284.3	281.4	275.4	269.4	260.4	251.5	242.5
70°	251.5	248.5	245.5	242.5	236.5	233.5	227.5	221.5	212.5	206.5	197.6
72.5°	203.5	203.5	200.5	194.6	191.6	188.6	185.6	179.6	170.6	161.6	155.6
75°	158.6	158.6	158.6	152.6	146.6	143.6	143.6	137.7	131.7	122.7	116.7
77.5°	122.7	119.7	116.7	116.7	110.7	107.7	104.7	101.7	92.8	89.8	83.9
80°	83.9	86.9	83.9	80.9	77.9	74.9	74.9	68.9	65.9	59.9	53.9
82.5°	56.9	53.9	53.9	50.9	50.9	47.9	47.9	41.9	38.9	35.9	32.9
85°	30.0	30.0	27.0	27.0	27.0	24.0	24.0	21.0	21.0	18.0	15.0
87.5°	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	6.0	6.0	6.0
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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CATALOG NUMBER: HC835D010-HM82555840-81WWBB

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2002.3	2002.3	2002.3	2002.3	2002.3	2002.3	2002.3	2002.3	2002.3	2002.3	2002.3
2.5°	2029.3	2023.3	2020.3	2020.3	2017.3	2014.3	2011.3	2008.3	2002.3	2002.3	1996.3
5°	2044.3	2038.3	2035.3	2026.3	2020.3	2020.3	2008.3	2005.3	1996.3	1990.4	1984.4
7.5°	2056.2	2044.3	2035.3	2026.3	2020.3	2014.3	2002.3	1990.4	1978.5	1966.5	1960.5
10°	2056.2	2044.3	2029.3	2014.3	2008.3	2002.3	1987.4	1969.5	1954.5	1942.6	1927.6
12.5°	2050.3	2032.3	2014.3	2002.3	1990.4	1981.5	1963.5	1945.6	1927.6	1903.6	1891.6
15°	2032.3	2008.3	1990.4	1969.5	1960.5	1945.6	1930.6	1903.6	1882.7	1861.7	1846.7
17.5°	1996.3	1966.5	1945.6	1924.6	1909.6	1900.6	1876.7	1852.7	1828.7	1804.8	1786.9
20°	1942.6	1915.6	1891.6	1864.7	1852.7	1840.7	1810.8	1786.9	1763.0	1736.0	1718.1
22.5°	1876.7	1849.7	1816.8	1795.8	1778.0	1763.0	1736.0	1709.1	1685.1	1661.1	1637.2
25°	1795.8	1769.0	1739.0	1706.1	1694.1	1679.1	1649.2	1622.2	1595.4	1568.4	1547.5
27.5°	1709.1	1673.1	1649.2	1613.2	1601.4	1586.4	1553.4	1523.5	1499.5	1478.6	1454.6
30°	1604.4	1577.4	1544.5	1511.5	1499.5	1484.6	1457.6	1430.7	1406.8	1382.9	1358.9
32.5°	1490.6	1463.6	1430.7	1406.8	1388.8	1376.9	1349.9	1325.9	1302.0	1278.0	1257.1
35°	1370.9	1340.9	1317.0	1293.0	1278.0	1263.1	1236.1	1215.3	1197.3	1176.3	1155.4
37.5°	1248.1	1227.2	1203.3	1176.3	1161.3	1149.4	1128.4	1104.4	1089.5	1071.5	1056.5
40°	1128.4	1104.4	1083.5	1059.5	1047.5	1038.5	1017.7	999.7	984.8	969.8	960.8
42.5°	1005.7	984.8	963.8	948.8	939.8	930.8	915.9	894.9	885.9	870.9	862.0
45°	891.9	873.9	859.0	838.1	832.1	826.1	808.2	793.2	784.2	775.2	769.2
47.5°	784.2	772.2	754.3	742.3	733.3	727.3	715.3	703.3	694.4	688.4	682.4
50°	691.4	676.4	664.4	652.6	646.6	637.6	625.6	619.6	613.6	607.6	607.6
52.5°	604.6	589.7	577.7	568.7	562.7	556.7	547.7	544.7	538.7	538.7	535.7
55°	523.8	514.8	502.8	490.8	487.8	484.8	478.8	472.9	470.0	467.0	470.0
57.5°	455.0	446.0	434.0	425.1	422.1	419.1	416.1	410.1	407.1	407.1	407.1
60°	392.1	383.1	374.1	365.2	365.2	359.2	356.2	353.2	350.2	347.2	347.2
62.5°	335.2	326.2	317.2	311.2	308.2	305.3	299.3	296.3	293.3	293.3	290.3
65°	284.3	272.4	269.4	260.4	257.5	254.5	251.5	245.5	242.5	239.5	236.5
67.5°	233.5	227.5	218.5	212.5	209.5	206.5	203.5	197.6	194.6	191.6	185.6
70°	188.6	182.6	176.6	170.6	167.6	164.6	158.6	152.6	149.6	143.6	134.7
72.5°	146.6	140.6	134.7	128.7	125.7	122.7	116.7	110.7	104.7	98.7	92.8
75°	110.7	104.7	95.7	89.8	86.9	86.9	77.9	71.9	65.9	56.9	50.9
77.5°	77.9	68.9	65.9	59.9	56.9	50.9	44.9	38.9	32.9	30.0	24.0
80°	50.9	44.9	38.9	35.9	32.9	30.0	27.0	21.0	15.0	12.0	9.0
82.5°	30.0	27.0	24.0	21.0	18.0	15.0	12.0	12.0	9.0	6.0	3.0
85°	15.0	12.0	9.0	9.0	6.0	6.0	6.0	3.0	3.0	3.0	3.0
87.5°	6.0	3.0	3.0	3.0	3.0	3.0	3.0	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: P584436

CATALOG NUMBER: HC835D010-HM82555840-81WWBB

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2002.3	2002.3	2002.3	2002.3	2002.3	2002.3	2002.3	2002.3	2002.3	2002.3	2002.3
2.5°	1993.4	1990.4	1987.4	1984.4	1984.4	1978.5	1978.5	1975.5	1969.5	1966.5	1966.5
5°	1975.5	1966.5	1960.5	1957.5	1954.5	1945.6	1942.6	1936.6	1930.6	1924.6	1921.6
7.5°	1948.5	1933.6	1927.6	1924.6	1915.6	1906.6	1900.6	1891.6	1882.7	1873.7	1870.7
10°	1915.6	1900.6	1885.7	1879.7	1870.7	1864.7	1852.7	1840.7	1831.7	1822.8	1813.8
12.5°	1873.7	1855.7	1840.7	1834.7	1825.8	1813.8	1795.8	1789.9	1775.0	1769.0	1757.0
15°	1825.8	1804.8	1789.9	1780.9	1772.0	1754.0	1742.0	1730.0	1715.1	1709.1	1697.1
17.5°	1766.0	1742.0	1727.0	1718.1	1712.1	1697.1	1679.1	1664.1	1649.2	1643.2	1634.2
20°	1694.1	1679.1	1658.2	1649.2	1643.2	1625.2	1607.2	1601.4	1589.4	1577.4	1568.4
22.5°	1613.2	1598.4	1577.4	1568.4	1565.4	1550.5	1535.5	1526.5	1517.5	1508.5	1499.5
25°	1529.5	1511.5	1493.5	1487.6	1481.6	1469.6	1457.6	1451.6	1442.6	1436.6	1430.7
27.5°	1439.6	1421.7	1406.8	1397.8	1391.8	1382.9	1376.9	1370.9	1364.9	1358.9	1355.9
30°	1343.9	1325.9	1314.0	1308.0	1302.0	1299.0	1290.0	1287.0	1284.0	1278.0	1281.0
32.5°	1248.1	1233.1	1221.2	1212.3	1212.3	1206.3	1203.3	1203.3	1200.3	1200.3	1200.3
35°	1143.4	1134.4	1125.4	1122.4	1119.4	1116.4	1113.4	1116.4	1113.4	1116.4	1119.4
37.5°	1047.5	1038.5	1032.7	1029.7	1026.7	1029.7	1026.7	1026.7	1029.7	1035.7	1038.5
40°	948.8	942.8	936.8	939.8	936.8	936.8	936.8	945.8	948.8	951.8	954.8
42.5°	856.0	850.0	847.1	847.1	850.0	847.1	853.0	856.0	862.0	870.9	876.9
45°	766.2	763.2	763.2	766.2	763.2	769.2	769.2	775.2	784.2	790.2	796.2
47.5°	682.4	682.4	682.4	685.4	685.4	688.4	694.4	697.4	703.3	709.3	715.3
50°	604.6	607.6	610.6	610.6	610.6	616.6	622.6	625.6	628.6	631.6	640.6
52.5°	535.7	538.7	538.7	541.7	544.7	547.7	550.7	556.7	559.7	565.7	568.7
55°	470.0	470.0	475.8	478.8	478.8	478.8	484.8	484.8	490.8	493.8	499.8
57.5°	407.1	410.1	410.1	413.1	413.1	416.1	419.1	422.1	425.1	428.0	431.0
60°	347.2	347.2	347.2	350.2	353.2	356.2	353.2	359.2	359.2	365.2	368.1
62.5°	290.3	293.3	293.3	293.3	293.3	293.3	293.3	296.3	299.3	302.3	305.3
65°	236.5	236.5	236.5	233.5	236.5	233.5	236.5	239.5	239.5	242.5	245.5
67.5°	182.6	182.6	176.6	176.6	179.6	179.6	179.6	179.6	176.6	182.6	182.6
70°	131.7	128.7	125.7	122.7	122.7	119.7	119.7	116.7	116.7	116.7	116.7
72.5°	86.9	80.9	74.9	71.9	68.9	68.9	62.9	59.9	62.9	62.9	62.9
75°	44.9	38.9	35.9	32.9	30.0	30.0	27.0	27.0	27.0	27.0	27.0
77.5°	18.0	15.0	12.0	12.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
80°	6.0	6.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
82.5°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
85°	3.0	0.0	0.0	3.0	0.0	3.0	3.0	3.0	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: P584436

CATALOG NUMBER: HC835D010-HM82555840-81WWBB

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2002.3	2002.3	2002.3	2002.3	2002.3	2002.3	2002.3	2002.3
2.5°	1963.5	1963.5	1960.5	1963.5	1957.5	1960.5	1957.5	1957.5
5°	1918.6	1912.6	1912.6	1912.6	1909.6	1909.6	1906.6	1906.6
7.5°	1864.7	1861.7	1858.7	1855.7	1852.7	1849.7	1849.7	1849.7
10°	1810.8	1804.8	1804.8	1801.8	1795.8	1792.9	1792.9	1792.9
12.5°	1748.0	1745.0	1742.0	1742.0	1730.0	1733.0	1730.0	1730.0
15°	1688.1	1685.1	1685.1	1676.1	1670.1	1670.1	1670.1	1667.1
17.5°	1625.2	1622.2	1619.2	1613.2	1607.2	1607.2	1604.4	1607.2
20°	1559.4	1556.4	1550.5	1550.5	1547.5	1544.5	1538.5	1541.5
22.5°	1493.5	1487.6	1484.6	1484.6	1481.6	1481.6	1475.6	1475.6
25°	1424.7	1421.7	1418.7	1421.7	1415.8	1415.8	1409.8	1409.8
27.5°	1352.9	1349.9	1349.9	1349.9	1346.9	1349.9	1346.9	1346.9
30°	1281.0	1281.0	1278.0	1278.0	1281.0	1278.0	1281.0	1284.0
32.5°	1203.3	1203.3	1206.3	1206.3	1209.3	1209.3	1209.3	1209.3
35°	1122.4	1128.4	1128.4	1131.4	1134.4	1137.4	1137.4	1140.4
37.5°	1047.5	1050.5	1053.5	1056.5	1062.5	1062.5	1062.5	1062.5
40°	966.8	969.8	975.8	972.8	984.8	987.8	984.8	984.8
42.5°	882.9	888.9	891.9	897.9	900.9	906.9	909.9	909.9
45°	805.2	808.2	814.2	820.2	823.1	832.1	832.1	832.1
47.5°	724.3	730.3	733.3	739.3	742.3	751.3	754.3	751.3
50°	646.6	652.6	658.5	658.5	667.4	670.4	676.4	679.4
52.5°	571.7	574.7	580.7	583.7	589.7	595.6	598.6	601.6
55°	499.8	502.8	508.8	508.8	517.8	520.8	526.8	526.8
57.5°	434.0	437.0	443.0	440.0	446.0	452.0	452.0	449.0
60°	371.1	371.1	371.1	377.1	380.1	383.1	386.1	386.1
62.5°	305.3	311.2	314.2	314.2	317.2	320.2	320.2	317.2
65°	245.5	251.5	254.5	254.5	257.5	257.5	257.5	260.4
67.5°	185.6	185.6	185.6	188.6	185.6	185.6	185.6	185.6
70°	116.7	116.7	116.7	116.7	113.7	116.7	116.7	119.7
72.5°	62.9	62.9	62.9	62.9	62.9	62.9	62.9	62.9
75°	27.0	27.0	27.0	30.0	27.0	27.0	27.0	27.0
77.5°	12.0	9.0	12.0	12.0	9.0	9.0	9.0	9.0
80°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
82.5°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
85°	0.0	3.0	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)