

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: P584521

Luminaire Tested: **HC840D010-HM82555827-81WWBB**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584521
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: HC840D010-HM82555827-81WWBB
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3854.7 lumens
Efficiency: N/A
Efficacy: 94.0 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

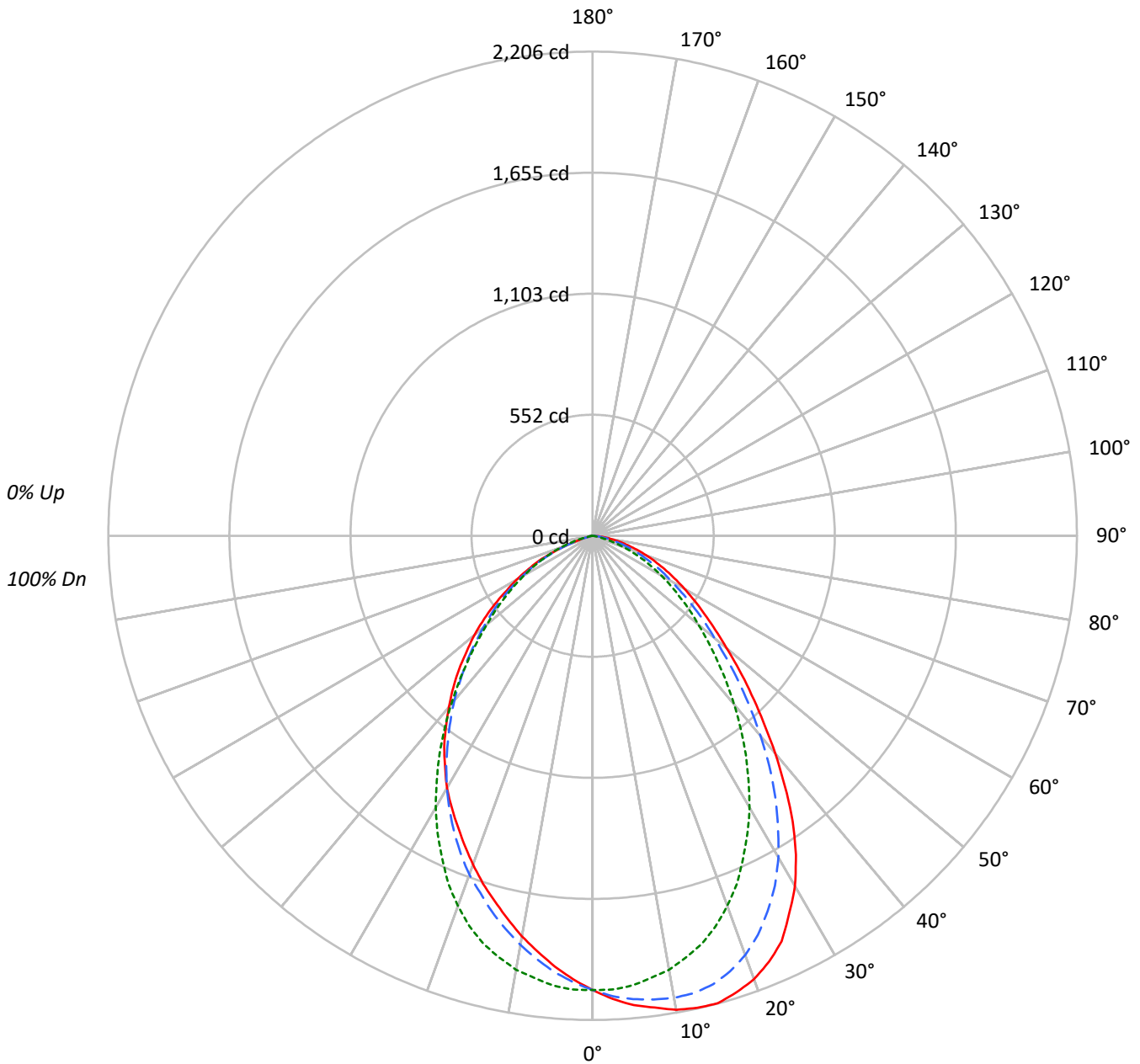
Input Watts (W): 41
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P584521

CATALOG NUMBER: HC840D010-HM82555827-81WWBB

Luminous Intensity Polar Plot





TEST NUMBER: P584521

CATALOG NUMBER: HC840D010-HM82555827-81WWBB

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	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°	63813	63813	63813
5°	66452	63673	60992
10°	68674	62859	58018
15°	70409	61422	55005
20°	70550	58877	52278
25°	69358	55150	49570
30°	65648	50886	47254
35°	59854	45764	44367
40°	52052	40343	40966
45°	44651	34940	37499
50°	38138	30127	33686
55°	33429	25940	29268
60°	29757	22128	24607
65°	26406	18059	19635
70°	23432	13389	11162
75°	19539	7006	3312
80°	15378	2202	550
85°	10933	1097	0



TEST NUMBER: P584521

CATALOG NUMBER: HC840D010-HM82555827-81WWBB

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	195.0	5.1
10°-20°	546.5	14.2
20°-30°	773.6	20.1
30°-40°	809.3	21.0
40°-50°	675.0	17.5
50°-60°	478.7	12.4
60°-70°	275.7	7.2
70°-80°	88.7	2.3
80°-90°	12.2	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°	1515.1	39.3
0°-40°	2324.4	60.3
0°-60°	3478.1	90.2
0°-90°	3854.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3854.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2069	2069	2069	2069	2069	
5°	2147	2119	2057	1995	1970	206
15°	2206	2116	1924	1772	1723	620
25°	2038	1887	1621	1491	1457	930
35°	1590	1451	1216	1151	1179	986
45°	1024	940	801	810	860	793
55°	622	557	482	507	544	562
65°	362	303	248	248	269	362
75°	164	121	59	28	28	178
85°	31	16	3	0	0	39
90°	0	0	0	0	0	



TEST NUMBER: P584521

CATALOG NUMBER: HC840D010-HM82555827-81WWBB

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2069.4	2069.4	2069.4	2069.4	2069.4	2069.4	2069.4	2069.4	2069.4	2069.4	2069.4
2.5°	2112.7	2109.6	2106.5	2109.6	2106.5	2109.6	2106.5	2106.5	2103.4	2100.4	2100.4
5°	2146.8	2143.7	2143.7	2143.7	2140.6	2137.5	2137.5	2134.4	2128.2	2125.1	2118.9
7.5°	2168.4	2171.5	2171.5	2171.5	2165.3	2165.3	2159.1	2152.9	2146.8	2140.6	2131.3
10°	2193.2	2193.2	2190.1	2187.0	2180.8	2177.7	2174.6	2168.4	2159.1	2146.8	2137.5
12.5°	2202.5	2202.5	2199.4	2193.2	2190.1	2187.0	2183.9	2174.6	2162.2	2146.8	2134.4
15°	2205.5	2199.4	2196.3	2193.2	2187.0	2177.7	2177.7	2165.3	2149.9	2131.3	2115.8
17.5°	2180.8	2183.9	2177.7	2171.5	2162.2	2156.0	2146.8	2137.5	2118.9	2097.3	2081.8
20°	2149.9	2146.8	2143.7	2134.4	2122.0	2118.9	2109.6	2094.2	2078.7	2053.9	2032.3
22.5°	2100.4	2097.3	2091.1	2084.9	2072.5	2066.3	2057.0	2038.5	2016.8	1992.1	1967.3
25°	2038.5	2032.3	2023.0	2010.6	2001.3	1995.2	1982.8	1964.2	1939.5	1911.6	1886.9
27.5°	1939.5	1948.7	1942.6	1924.0	1914.7	1902.3	1899.2	1874.5	1852.9	1825.1	1797.3
30°	1843.7	1843.7	1834.4	1825.1	1809.6	1800.4	1788.0	1769.4	1747.8	1713.7	1692.1
32.5°	1723.0	1719.9	1707.5	1704.4	1692.1	1673.5	1670.4	1645.7	1624.0	1599.2	1571.4
35°	1590.0	1583.8	1571.4	1562.1	1555.9	1546.6	1537.4	1515.7	1494.0	1469.3	1450.7
37.5°	1438.4	1438.4	1435.3	1419.8	1413.6	1407.4	1398.1	1376.5	1364.1	1339.3	1320.9
40°	1293.1	1290.0	1280.7	1277.6	1271.4	1262.1	1255.9	1243.6	1225.0	1206.4	1187.9
42.5°	1150.7	1153.8	1141.4	1144.5	1132.2	1126.0	1122.9	1104.3	1095.0	1076.5	1061.0
45°	1023.9	1020.8	1014.6	1011.5	1005.3	999.1	992.9	983.7	968.2	949.6	940.3
47.5°	906.3	897.0	897.0	893.9	890.8	878.5	875.4	866.1	856.8	838.2	825.9
50°	795.0	795.0	795.0	791.9	782.7	779.6	773.4	764.1	754.8	742.4	723.9
52.5°	705.3	705.3	705.3	702.2	689.8	686.7	683.7	671.3	658.9	649.6	637.2
55°	621.8	624.9	621.8	615.6	606.3	606.3	597.0	590.8	578.5	569.2	556.8
57.5°	550.6	550.6	544.4	541.3	535.1	532.0	525.9	519.7	504.2	494.9	479.5
60°	482.5	479.5	479.5	473.3	467.1	460.9	457.8	448.5	442.3	426.9	414.5
62.5°	420.7	420.7	414.5	414.5	402.1	402.1	399.0	389.7	380.4	365.0	358.8
65°	361.9	361.9	358.8	355.7	346.4	343.3	340.2	330.9	321.7	312.4	303.1
67.5°	309.3	309.3	303.1	300.0	293.8	290.7	284.5	278.3	269.1	259.9	250.6
70°	259.9	256.8	253.7	250.6	244.4	241.3	235.1	229.0	219.7	213.5	204.2
72.5°	210.4	210.4	207.3	201.1	198.0	194.9	191.8	185.6	176.4	167.1	160.9
75°	164.0	164.0	164.0	157.8	151.6	148.5	148.5	142.3	136.1	126.9	120.7
77.5°	126.9	123.8	120.7	120.7	114.5	111.4	108.3	105.2	95.9	92.8	86.6
80°	86.6	89.7	86.6	83.5	80.4	77.4	77.4	71.2	68.1	61.9	55.7
82.5°	58.8	55.7	55.7	52.6	52.6	49.5	49.5	43.3	40.2	37.1	34.0
85°	30.9	30.9	27.8	27.8	27.8	24.8	24.8	21.7	21.7	18.6	15.5
87.5°	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	6.2	6.2	6.2
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: P584521

CATALOG NUMBER: HC840D010-HM82555827-81WWBB

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2069.4	2069.4	2069.4	2069.4	2069.4	2069.4	2069.4	2069.4	2069.4	2069.4	2069.4
2.5°	2097.3	2091.1	2088.0	2088.0	2084.9	2081.8	2078.7	2075.6	2069.4	2069.4	2063.2
5°	2112.7	2106.5	2103.4	2094.2	2088.0	2088.0	2075.6	2072.5	2063.2	2057.0	2050.8
7.5°	2125.1	2112.7	2103.4	2094.2	2088.0	2081.8	2069.4	2057.0	2044.7	2032.3	2026.1
10°	2125.1	2112.7	2097.3	2081.8	2075.6	2069.4	2053.9	2035.4	2019.9	2007.5	1992.1
12.5°	2118.9	2100.4	2081.8	2069.4	2057.0	2047.8	2029.2	2010.6	1992.1	1967.3	1954.9
15°	2100.4	2075.6	2057.0	2035.4	2026.1	2010.6	1995.2	1967.3	1945.6	1924.0	1908.5
17.5°	2063.2	2032.3	2010.6	1989.0	1973.5	1964.2	1939.5	1914.7	1890.0	1865.3	1846.8
20°	2007.5	1979.7	1954.9	1927.1	1914.7	1902.3	1871.5	1846.8	1822.0	1794.2	1775.6
22.5°	1939.5	1911.6	1877.6	1856.0	1837.5	1822.0	1794.2	1766.3	1741.6	1716.8	1692.1
25°	1856.0	1828.2	1797.3	1763.2	1750.8	1735.4	1704.4	1676.6	1648.7	1620.9	1599.2
27.5°	1766.3	1729.2	1704.4	1667.3	1654.9	1639.5	1605.4	1574.5	1549.7	1528.1	1503.3
30°	1658.0	1630.2	1596.1	1562.1	1549.7	1534.3	1506.4	1478.6	1453.8	1429.1	1404.3
32.5°	1540.5	1512.6	1478.6	1453.8	1435.3	1422.9	1395.0	1370.3	1345.5	1320.9	1299.2
35°	1416.7	1385.8	1361.0	1336.4	1320.9	1305.4	1277.6	1255.9	1237.4	1215.7	1194.0
37.5°	1290.0	1268.3	1243.6	1215.7	1200.2	1187.9	1166.2	1141.4	1126.0	1107.4	1091.9
40°	1166.2	1141.4	1119.8	1095.0	1082.7	1073.4	1051.7	1033.2	1017.7	1002.2	992.9
42.5°	1039.3	1017.7	996.0	980.6	971.3	962.0	946.5	924.9	915.6	900.1	890.8
45°	921.8	903.2	887.7	866.1	859.9	853.7	835.1	819.7	810.4	801.2	795.0
47.5°	810.4	798.1	779.6	767.2	757.9	751.7	739.3	727.0	717.7	711.5	705.3
50°	714.6	699.1	686.7	674.4	668.2	658.9	646.5	640.3	634.2	628.0	628.0
52.5°	624.9	609.4	597.0	587.7	581.6	575.4	566.1	563.0	556.8	556.8	553.7
55°	541.3	532.0	519.7	507.3	504.2	501.1	494.9	488.7	485.6	482.5	485.6
57.5°	470.2	460.9	448.5	439.2	436.1	433.0	429.9	423.8	420.7	420.7	420.7
60°	405.2	395.9	386.6	377.3	377.3	371.2	368.1	365.0	361.9	358.8	358.8
62.5°	346.4	337.1	327.8	321.7	318.6	315.5	309.3	306.2	303.1	303.1	300.0
65°	293.8	281.4	278.3	269.1	266.1	263.0	259.9	253.7	250.6	247.5	244.4
67.5°	241.3	235.1	225.9	219.7	216.6	213.5	210.4	204.2	201.1	198.0	191.8
70°	194.9	188.7	182.5	176.4	173.3	170.2	164.0	157.8	154.7	148.5	139.2
72.5°	151.6	145.4	139.2	133.0	129.9	126.9	120.7	114.5	108.3	102.1	95.9
75°	114.5	108.3	99.0	92.8	89.7	89.7	80.4	74.3	68.1	58.8	52.6
77.5°	80.4	71.2	68.1	61.9	58.8	52.6	46.4	40.2	34.0	30.9	24.8
80°	52.6	46.4	40.2	37.1	34.0	30.9	27.8	21.7	15.5	12.4	9.3
82.5°	30.9	27.8	24.8	21.7	18.6	15.5	12.4	12.4	9.3	6.2	3.1
85°	15.5	12.4	9.3	9.3	6.2	6.2	6.2	3.1	3.1	3.1	3.1
87.5°	6.2	3.1	3.1	3.1	3.1	3.1	3.1	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: P584521

CATALOG NUMBER: HC840D010-HM82555827-81WWBB

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2069.4	2069.4	2069.4	2069.4	2069.4	2069.4	2069.4	2069.4	2069.4	2069.4	2069.4
2.5°	2060.1	2057.0	2053.9	2050.8	2050.8	2044.7	2044.7	2041.6	2035.4	2032.3	2032.3
5°	2041.6	2032.3	2026.1	2023.0	2019.9	2010.6	2007.5	2001.3	1995.2	1989.0	1985.9
7.5°	2013.7	1998.2	1992.1	1989.0	1979.7	1970.4	1964.2	1954.9	1945.6	1936.4	1933.3
10°	1979.7	1964.2	1948.7	1942.6	1933.3	1927.1	1914.7	1902.3	1893.1	1883.8	1874.5
12.5°	1936.4	1917.8	1902.3	1896.1	1886.9	1874.5	1856.0	1849.9	1834.4	1828.2	1815.8
15°	1886.9	1865.3	1849.9	1840.6	1831.3	1812.7	1800.4	1788.0	1772.5	1766.3	1753.9
17.5°	1825.1	1800.4	1784.9	1775.6	1769.4	1753.9	1735.4	1719.9	1704.4	1698.2	1689.0
20°	1750.8	1735.4	1713.7	1704.4	1698.2	1679.7	1661.1	1654.9	1642.6	1630.2	1620.9
22.5°	1667.3	1651.8	1630.2	1620.9	1617.8	1602.3	1586.9	1577.6	1568.3	1559.0	1549.7
25°	1580.7	1562.1	1543.5	1537.4	1531.2	1518.8	1506.4	1500.2	1491.0	1484.8	1478.6
27.5°	1487.9	1469.3	1453.8	1444.5	1438.4	1429.1	1422.9	1416.7	1410.5	1404.3	1401.2
30°	1388.8	1370.3	1357.9	1351.7	1345.5	1342.4	1333.3	1330.2	1327.1	1320.9	1324.0
32.5°	1290.0	1274.5	1262.1	1252.8	1252.8	1246.6	1243.6	1243.6	1240.5	1240.5	1240.5
35°	1181.7	1172.4	1163.1	1160.0	1156.9	1153.8	1150.7	1153.8	1150.7	1153.8	1156.9
37.5°	1082.7	1073.4	1067.2	1064.1	1061.0	1064.1	1061.0	1061.0	1064.1	1070.3	1073.4
40°	980.6	974.4	968.2	971.3	968.2	968.2	968.2	977.5	980.6	983.7	986.7
42.5°	884.6	878.5	875.4	875.4	878.5	875.4	881.6	884.6	890.8	900.1	906.3
45°	791.9	788.9	788.9	791.9	788.9	795.0	795.0	801.2	810.4	816.6	822.8
47.5°	705.3	705.3	705.3	708.4	708.4	711.5	717.7	720.8	727.0	733.2	739.3
50°	624.9	628.0	631.1	631.1	631.1	637.2	643.4	646.5	649.6	652.7	662.0
52.5°	553.7	556.8	556.8	559.9	563.0	566.1	569.2	575.4	578.5	584.6	587.7
55°	485.6	485.6	491.8	494.9	494.9	494.9	501.1	501.1	507.3	510.4	516.6
57.5°	420.7	423.8	423.8	426.9	426.9	429.9	433.0	436.1	439.2	442.3	445.4
60°	358.8	358.8	358.8	361.9	365.0	368.1	365.0	371.2	371.2	377.3	380.4
62.5°	300.0	303.1	303.1	303.1	303.1	303.1	303.1	306.2	309.3	312.4	315.5
65°	244.4	244.4	244.4	241.3	244.4	241.3	244.4	247.5	247.5	250.6	253.7
67.5°	188.7	188.7	182.5	182.5	185.6	185.6	185.6	185.6	182.5	188.7	188.7
70°	136.1	133.0	129.9	126.9	126.9	123.8	123.8	120.7	120.7	120.7	120.7
72.5°	89.7	83.5	77.4	74.3	71.2	71.2	65.0	61.9	65.0	65.0	65.0
75°	46.4	40.2	37.1	34.0	30.9	30.9	27.8	27.8	27.8	27.8	27.8
77.5°	18.6	15.5	12.4	12.4	9.3	9.3	9.3	9.3	9.3	9.3	9.3
80°	6.2	6.2	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
82.5°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
85°	3.1	0.0	0.0	3.1	0.0	3.1	3.1	3.1	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: P584521

CATALOG NUMBER: HC840D010-HM82555827-81WWBB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2069.4	2069.4	2069.4	2069.4	2069.4	2069.4	2069.4	2069.4
2.5°	2029.2	2029.2	2026.1	2029.2	2023.0	2026.1	2023.0	2023.0
5°	1982.8	1976.6	1976.6	1976.6	1973.5	1973.5	1970.4	1970.4
7.5°	1927.1	1924.0	1920.9	1917.8	1914.7	1911.6	1911.6	1911.6
10°	1871.5	1865.3	1865.3	1862.2	1856.0	1852.9	1852.9	1852.9
12.5°	1806.5	1803.4	1800.4	1800.4	1788.0	1791.1	1788.0	1788.0
15°	1744.7	1741.6	1741.6	1732.3	1726.1	1726.1	1726.1	1723.0
17.5°	1679.7	1676.6	1673.5	1667.3	1661.1	1661.1	1658.0	1661.1
20°	1611.6	1608.5	1602.3	1602.3	1599.2	1596.1	1590.0	1593.1
22.5°	1543.5	1537.4	1534.3	1534.3	1531.2	1531.2	1525.0	1525.0
25°	1472.4	1469.3	1466.2	1469.3	1463.1	1463.1	1456.9	1456.9
27.5°	1398.1	1395.0	1395.0	1395.0	1391.9	1395.0	1391.9	1391.9
30°	1324.0	1324.0	1320.9	1320.9	1324.0	1320.9	1324.0	1327.1
32.5°	1243.6	1243.6	1246.6	1246.6	1249.7	1249.7	1249.7	1249.7
35°	1160.0	1166.2	1166.2	1169.3	1172.4	1175.5	1175.5	1178.6
37.5°	1082.7	1085.8	1088.8	1091.9	1098.1	1098.1	1098.1	1098.1
40°	999.1	1002.2	1008.4	1005.3	1017.7	1020.8	1017.7	1017.7
42.5°	912.5	918.7	921.8	928.0	931.1	937.2	940.3	940.3
45°	832.0	835.1	841.3	847.5	850.6	859.9	859.9	859.9
47.5°	748.6	754.8	757.9	764.1	767.2	776.5	779.6	776.5
50°	668.2	674.4	680.6	680.6	689.8	692.9	699.1	702.2
52.5°	590.8	593.9	600.1	603.2	609.4	615.6	618.7	621.8
55°	516.6	519.7	525.9	525.9	535.1	538.2	544.4	544.4
57.5°	448.5	451.6	457.8	454.7	460.9	467.1	467.1	464.0
60°	383.5	383.5	383.5	389.7	392.8	395.9	399.0	399.0
62.5°	315.5	321.7	324.8	324.8	327.8	330.9	330.9	327.8
65°	253.7	259.9	263.0	263.0	266.1	266.1	266.1	269.1
67.5°	191.8	191.8	191.8	194.9	191.8	191.8	191.8	191.8
70°	120.7	120.7	120.7	120.7	117.6	120.7	120.7	123.8
72.5°	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
75°	27.8	27.8	27.8	30.9	27.8	27.8	27.8	27.8
77.5°	12.4	9.3	12.4	12.4	9.3	9.3	9.3	9.3
80°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
82.5°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
85°	0.0	3.1	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)