

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: P584276

Luminaire Tested: **HC830D010-HM82555835-81RWWC**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584276
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: HC830D010-HM82555835-81RWWC
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3275.0 lumens
Efficiency: N/A
Efficacy: 117.0 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

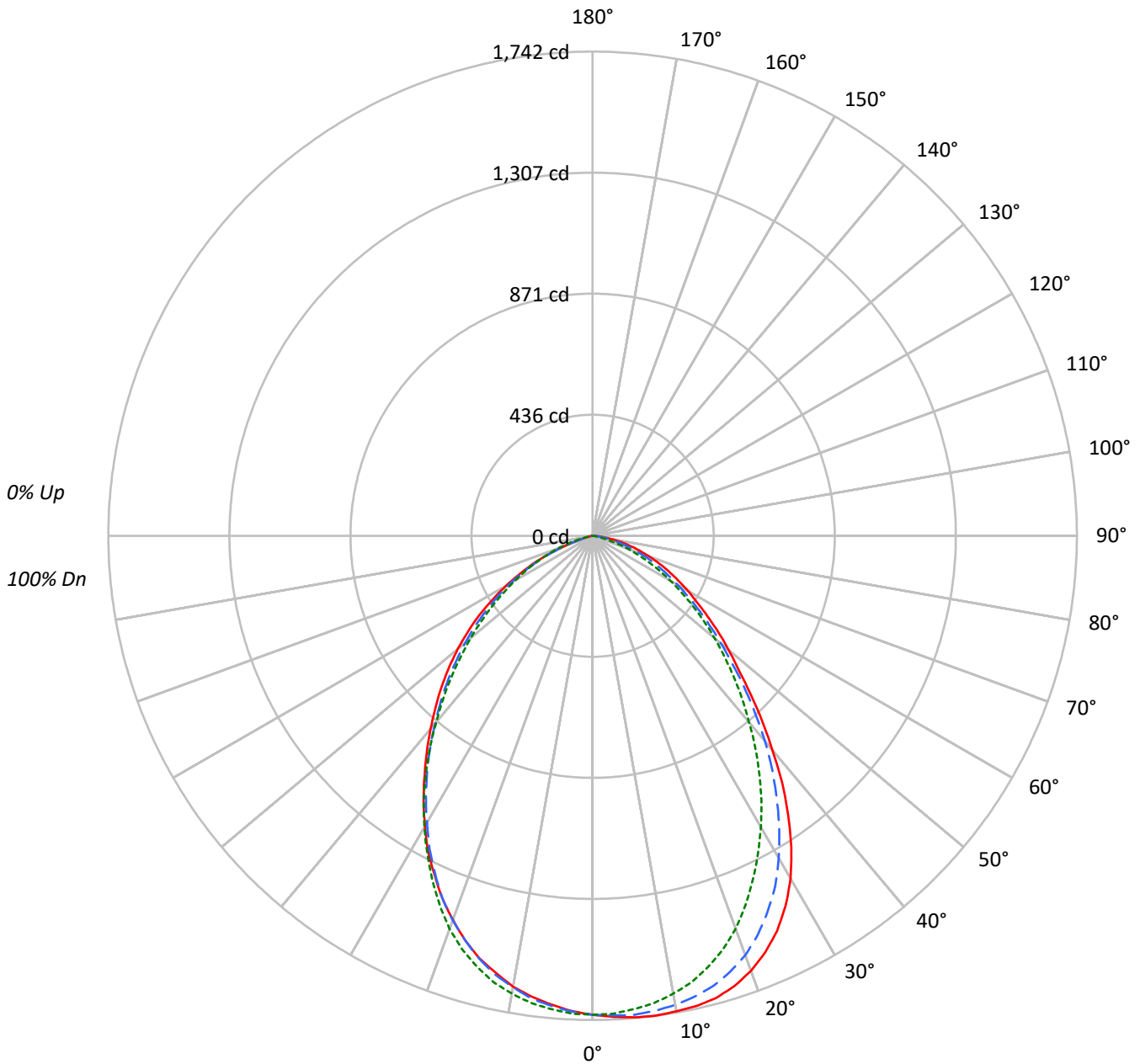
Input Watts (W): 28
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	53137	53137	53137
5°	53838	52913	52415
10°	54389	52372	51577
15°	54935	51267	50236
20°	54660	49374	48242
25°	53384	46419	45790
30°	50708	43091	42924
35°	46159	39319	39666
40°	40471	35194	36490
45°	34918	31303	33514
50°	30573	27484	30352
55°	27085	23628	26714
60°	24404	19865	22128
65°	21992	15943	16950
70°	19285	11622	9341
75°	16442	6041	2466
80°	12661	1634	408
85°	8102	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.6	5.0
10°-20°	457.0	14.0
20°-30°	648.7	19.8
30°-40°	682.9	20.9
40°-50°	580.9	17.7
50°-60°	419.8	12.8
60°-70°	238.8	7.3
70°-80°	75.2	2.3
80°-90°	9.1	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°	1268.3	38.7
0°-40°	1951.2	59.6
0°-60°	2951.9	90.1
0°-90°	3275.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3275.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1723	1723	1723	1723	1723	
5°	1739	1730	1709	1698	1693	166
15°	1721	1677	1606	1576	1574	485
25°	1569	1491	1364	1341	1346	719
35°	1226	1155	1044	1038	1054	763
45°	801	771	718	736	768	622
55°	504	467	440	465	497	454
65°	301	260	218	216	232	299
75°	138	106	51	23	21	149
85°	23	14	0	0	0	30
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°	1723.2	1723.2	1723.2	1723.2	1723.2	1723.2	1723.2	1723.2	1723.2	1723.2	1723.2
2.5°	1732.4	1734.6	1730.1	1730.1	1734.6	1730.1	1732.4	1732.4	1730.1	1730.1	1727.7
5°	1739.3	1737.0	1737.0	1737.0	1739.3	1734.6	1732.4	1734.6	1730.1	1730.1	1730.1
7.5°	1741.5	1741.5	1739.3	1737.0	1737.0	1737.0	1734.6	1732.4	1730.1	1725.5	1723.2
10°	1737.0	1737.0	1739.3	1734.6	1734.6	1730.1	1730.1	1725.5	1725.5	1720.8	1713.9
12.5°	1732.4	1730.1	1730.1	1725.5	1725.5	1720.8	1720.8	1713.9	1711.7	1704.8	1697.9
15°	1720.8	1718.6	1713.9	1711.7	1709.4	1707.0	1702.4	1700.2	1693.3	1684.1	1677.2
17.5°	1697.9	1695.5	1693.3	1688.6	1684.1	1681.7	1679.5	1672.6	1663.4	1656.4	1645.0
20°	1665.7	1663.4	1663.4	1656.4	1654.1	1647.2	1645.0	1635.7	1628.8	1615.0	1605.9
22.5°	1621.9	1624.3	1619.7	1615.0	1610.4	1603.5	1599.0	1589.7	1578.3	1564.5	1553.0
25°	1569.0	1571.4	1566.7	1562.1	1555.2	1550.6	1546.1	1532.3	1520.7	1504.6	1490.8
27.5°	1502.3	1502.3	1502.3	1497.7	1486.2	1483.9	1479.4	1465.4	1449.4	1435.6	1421.8
30°	1424.1	1421.8	1421.8	1414.9	1410.3	1401.1	1394.2	1382.7	1371.2	1355.1	1338.9
32.5°	1329.8	1332.0	1325.1	1320.5	1313.6	1313.6	1304.5	1295.3	1281.5	1265.3	1249.3
35°	1226.2	1228.6	1224.0	1221.6	1210.2	1207.8	1205.5	1194.0	1184.8	1173.3	1154.9
37.5°	1120.4	1118.1	1115.8	1115.8	1108.9	1104.3	1099.7	1092.8	1079.0	1069.7	1060.6
40°	1005.4	1005.4	1005.4	1003.0	1000.8	996.1	993.9	989.2	980.1	970.8	963.9
42.5°	901.9	901.9	899.6	897.2	892.7	895.0	890.3	885.7	876.5	869.6	865.0
45°	800.7	800.7	800.7	802.9	798.3	791.4	791.4	786.8	782.2	777.6	770.7
47.5°	710.9	717.8	713.2	710.9	713.2	704.0	704.0	699.4	694.7	690.2	680.9
50°	637.3	637.3	637.3	632.7	630.4	630.4	623.5	618.9	616.6	612.0	602.8
52.5°	570.6	566.0	566.0	563.7	561.3	556.8	556.8	552.2	542.9	538.4	531.5
55°	503.8	503.8	501.5	499.3	496.9	494.6	492.4	485.5	480.8	473.9	467.0
57.5°	444.0	448.6	446.4	441.7	437.1	437.1	432.6	427.9	421.0	414.1	407.2
60°	395.7	393.4	393.4	391.1	386.5	384.2	381.9	375.0	368.1	361.2	354.3
62.5°	345.0	345.0	345.0	340.5	335.9	333.6	331.3	326.7	317.5	310.6	305.9
65°	301.4	299.0	296.8	294.5	292.1	287.6	285.2	280.7	273.8	266.9	259.9
67.5°	257.7	255.4	255.4	253.0	246.1	243.9	243.9	237.0	230.1	223.2	216.3
70°	213.9	213.9	213.9	209.4	207.0	204.7	202.5	197.8	191.0	184.1	177.2
72.5°	177.2	174.9	174.9	172.5	165.6	163.4	161.0	156.5	149.6	144.9	140.3
75°	138.0	138.0	135.8	133.4	131.1	128.9	126.5	122.0	115.0	108.1	105.8
77.5°	105.8	103.6	103.6	101.2	96.7	94.3	94.3	89.8	82.9	78.2	73.6
80°	71.3	73.6	71.3	69.0	66.7	64.4	62.1	59.8	55.2	50.7	46.0
82.5°	43.8	46.0	43.8	43.8	41.4	39.1	39.1	34.5	32.2	30.0	27.6
85°	22.9	22.9	22.9	22.9	20.7	20.7	20.7	18.4	16.1	13.8	13.8
87.5°	6.9	9.2	6.9	6.9	6.9	6.9	6.9	6.9	4.6	4.6	4.6
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°	1723.2	1723.2	1723.2	1723.2	1723.2	1723.2	1723.2	1723.2	1723.2	1723.2	1723.2
2.5°	1730.1	1727.7	1725.5	1725.5	1725.5	1725.5	1725.5	1723.2	1720.8	1720.8	1720.8
5°	1725.5	1725.5	1725.5	1723.2	1720.8	1720.8	1716.3	1713.9	1711.7	1709.4	1707.0
7.5°	1720.8	1716.3	1713.9	1711.7	1709.4	1709.4	1704.8	1700.2	1700.2	1695.5	1691.0
10°	1707.0	1704.8	1700.2	1695.5	1693.3	1691.0	1686.4	1679.5	1677.2	1672.6	1667.9
12.5°	1691.0	1686.4	1681.7	1672.6	1670.3	1667.9	1658.8	1651.9	1647.2	1645.0	1633.4
15°	1670.3	1661.0	1654.1	1642.6	1640.3	1635.7	1628.8	1621.9	1612.8	1605.9	1601.2
17.5°	1633.4	1624.3	1612.8	1601.2	1596.6	1596.6	1585.2	1575.9	1564.5	1559.8	1550.6
20°	1589.7	1578.3	1569.0	1555.2	1548.3	1541.4	1534.5	1520.7	1511.5	1504.6	1493.1
22.5°	1539.2	1523.0	1511.5	1497.7	1486.2	1479.4	1467.8	1456.3	1444.8	1437.9	1428.7
25°	1474.7	1460.9	1442.5	1428.7	1421.8	1412.5	1398.7	1387.3	1375.8	1364.3	1359.6
27.5°	1403.4	1384.9	1368.9	1352.7	1345.8	1338.9	1322.9	1309.1	1299.8	1288.4	1283.8
30°	1325.1	1306.7	1288.4	1274.5	1267.6	1256.2	1246.9	1230.9	1219.3	1210.2	1198.6
32.5°	1235.5	1221.6	1205.5	1184.8	1180.2	1171.0	1157.3	1150.4	1136.6	1129.6	1120.4
35°	1138.8	1129.6	1113.5	1097.4	1090.6	1085.9	1074.4	1060.6	1051.4	1044.5	1039.9
37.5°	1046.8	1035.3	1019.2	1007.7	1003.0	996.1	982.4	975.5	966.3	961.7	952.5
40°	947.9	936.3	924.8	917.9	911.0	906.5	897.2	890.3	881.2	874.3	871.9
42.5°	851.2	844.3	835.2	825.9	823.6	816.7	812.1	805.2	798.3	796.0	789.1
45°	763.8	756.9	747.8	738.5	736.2	731.6	729.3	722.4	717.8	717.8	717.8
47.5°	676.4	669.5	660.3	655.7	658.0	648.7	648.7	646.5	641.8	641.8	644.2
50°	598.2	588.9	586.7	582.0	577.5	572.9	575.1	568.2	568.2	572.9	570.6
52.5°	524.6	515.3	513.1	508.4	506.2	506.2	503.8	503.8	501.5	503.8	503.8
55°	457.9	450.9	446.4	441.7	439.5	439.5	439.5	437.1	434.8	439.5	441.7
57.5°	398.0	395.7	391.1	384.2	381.9	379.6	377.3	377.3	377.3	377.3	379.6
60°	345.0	340.5	335.9	329.0	329.0	326.7	324.4	322.1	322.1	322.1	322.1
62.5°	299.0	292.1	285.2	280.7	278.3	276.1	273.8	269.2	269.2	269.2	269.2
65°	253.0	246.1	241.6	237.0	232.3	232.3	227.8	225.4	220.9	218.5	213.9
67.5°	209.4	204.7	200.1	193.2	191.0	188.7	184.1	181.8	174.9	172.5	170.3
70°	170.3	163.4	158.7	154.1	151.8	147.2	142.7	138.0	133.4	128.9	124.3
72.5°	133.4	126.5	122.0	117.4	112.7	112.7	105.8	101.2	94.3	89.8	82.9
75°	98.9	92.0	87.4	80.5	78.2	76.0	69.0	64.4	57.5	50.7	46.0
77.5°	66.7	62.1	57.5	50.7	46.0	46.0	39.1	34.5	30.0	22.9	20.7
80°	41.4	36.9	32.2	27.6	27.6	22.9	20.7	16.1	11.5	9.2	6.9
82.5°	22.9	20.7	18.4	13.8	13.8	11.5	9.2	6.9	4.6	2.3	2.3
85°	11.5	9.2	6.9	6.9	4.6	4.6	4.6	2.3	2.3	0.0	0.0
87.5°	4.6	2.3	2.3	2.3	2.3	2.3	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°	1723.2	1723.2	1723.2	1723.2	1723.2	1723.2	1723.2	1723.2	1723.2	1723.2	1723.2
2.5°	1718.6	1718.6	1716.3	1716.3	1716.3	1713.9	1716.3	1713.9	1713.9	1713.9	1716.3
5°	1709.4	1704.8	1704.8	1702.4	1702.4	1700.2	1702.4	1700.2	1697.9	1695.5	1697.9
7.5°	1691.0	1686.4	1684.1	1681.7	1681.7	1681.7	1679.5	1677.2	1679.5	1672.6	1677.2
10°	1665.7	1663.4	1658.8	1656.4	1654.1	1656.4	1654.1	1649.5	1649.5	1649.5	1647.2
12.5°	1633.4	1628.8	1626.6	1624.3	1619.7	1619.7	1621.9	1617.4	1617.4	1612.8	1612.8
15°	1594.3	1589.7	1585.2	1585.2	1580.5	1580.5	1578.3	1578.3	1575.9	1573.6	1573.6
17.5°	1546.1	1539.2	1534.5	1536.8	1534.5	1532.3	1532.3	1527.6	1525.4	1527.6	1527.6
20°	1488.5	1483.9	1479.4	1481.6	1477.0	1474.7	1477.0	1470.1	1472.5	1472.5	1472.5
22.5°	1424.1	1421.8	1414.9	1414.9	1410.3	1408.0	1410.3	1410.3	1412.5	1410.3	1410.3
25°	1352.7	1348.2	1343.6	1343.6	1341.3	1338.9	1341.3	1343.6	1341.3	1343.6	1343.6
27.5°	1276.9	1270.0	1270.0	1265.3	1265.3	1267.6	1265.3	1267.6	1270.0	1270.0	1274.5
30°	1194.0	1191.7	1189.5	1187.1	1187.1	1189.5	1189.5	1189.5	1191.7	1196.4	1196.4
32.5°	1115.8	1111.2	1106.6	1106.6	1111.2	1108.9	1111.2	1111.2	1115.8	1115.8	1120.4
35°	1030.6	1030.6	1026.1	1028.4	1028.4	1028.4	1028.4	1033.0	1037.6	1039.9	1044.5
37.5°	952.5	945.6	947.9	947.9	950.1	947.9	954.8	954.8	959.4	959.4	963.9
40°	867.4	867.4	869.6	867.4	869.6	869.6	874.3	878.8	881.2	885.7	888.1
42.5°	786.8	791.4	786.8	789.1	791.4	793.7	796.0	798.3	807.6	812.1	819.0
45°	713.2	715.5	717.8	720.1	717.8	722.4	724.7	729.3	736.2	738.5	740.7
47.5°	641.8	644.2	646.5	648.7	648.7	653.4	655.7	660.3	664.9	667.1	669.5
50°	572.9	577.5	579.8	579.8	582.0	586.7	591.3	591.3	595.8	602.8	605.1
52.5°	510.8	510.8	515.3	517.7	519.9	519.9	526.8	529.1	531.5	536.0	540.6
55°	441.7	448.6	450.9	450.9	455.5	460.1	462.4	464.8	464.8	473.9	473.9
57.5°	381.9	384.2	388.8	388.8	388.8	395.7	395.7	400.3	402.6	404.9	409.5
60°	322.1	326.7	326.7	329.0	326.7	331.3	333.6	338.2	340.5	342.8	345.0
62.5°	266.9	266.9	269.2	269.2	269.2	269.2	273.8	273.8	278.3	280.7	283.0
65°	213.9	213.9	213.9	213.9	213.9	213.9	213.9	213.9	216.3	216.3	220.9
67.5°	165.6	163.4	158.7	161.0	158.7	158.7	156.5	156.5	158.7	158.7	163.4
70°	119.6	117.4	112.7	112.7	110.5	108.1	105.8	103.6	101.2	101.2	101.2
72.5°	78.2	73.6	66.7	64.4	64.4	59.8	55.2	52.9	52.9	52.9	52.9
75°	39.1	34.5	30.0	27.6	27.6	22.9	25.3	22.9	22.9	22.9	22.9
77.5°	16.1	11.5	9.2	9.2	9.2	6.9	6.9	6.9	6.9	6.9	6.9
80°	4.6	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
82.5°	2.3	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: P584276

CATALOG NUMBER: HC830D010-HM82555835-81RWWC

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1723.2	1723.2	1723.2	1723.2	1723.2	1723.2	1723.2	1723.2
2.5°	1713.9	1713.9	1709.4	1711.7	1711.7	1711.7	1711.7	1711.7
5°	1693.3	1695.5	1693.3	1695.5	1695.5	1693.3	1693.3	1693.3
7.5°	1672.6	1674.8	1672.6	1674.8	1674.8	1674.8	1672.6	1672.6
10°	1647.2	1647.2	1647.2	1647.2	1647.2	1645.0	1647.2	1647.2
12.5°	1612.8	1612.8	1612.8	1615.0	1615.0	1612.8	1612.8	1610.4
15°	1575.9	1571.4	1573.6	1575.9	1573.6	1573.6	1573.6	1573.6
17.5°	1525.4	1527.6	1525.4	1525.4	1525.4	1525.4	1527.6	1525.4
20°	1472.5	1472.5	1474.7	1472.5	1472.5	1472.5	1472.5	1470.1
22.5°	1412.5	1410.3	1410.3	1412.5	1412.5	1410.3	1412.5	1412.5
25°	1345.8	1348.2	1345.8	1345.8	1348.2	1348.2	1348.2	1345.8
27.5°	1274.5	1276.9	1279.1	1276.9	1276.9	1276.9	1279.1	1281.5
30°	1200.9	1205.5	1200.9	1200.9	1205.5	1203.3	1205.5	1205.5
32.5°	1122.7	1129.6	1125.0	1129.6	1129.6	1131.9	1129.6	1131.9
35°	1044.5	1051.4	1051.4	1051.4	1053.7	1056.0	1056.0	1053.7
37.5°	970.8	973.2	973.2	977.7	980.1	982.4	982.4	980.1
40°	895.0	899.6	901.9	901.9	901.9	906.5	911.0	906.5
42.5°	821.4	823.6	825.9	825.9	830.5	832.8	835.2	835.2
45°	750.0	754.7	756.9	759.2	761.6	766.1	763.8	768.5
47.5°	676.4	683.3	685.6	687.8	692.5	694.7	697.1	699.4
50°	609.7	614.2	614.2	618.9	625.8	625.8	630.4	632.7
52.5°	542.9	545.3	547.5	549.8	554.4	559.1	559.1	563.7
55°	478.6	480.8	480.8	483.1	485.5	494.6	496.9	496.9
57.5°	411.9	411.9	416.4	418.8	421.0	425.7	425.7	425.7
60°	347.4	349.7	349.7	351.9	354.3	358.8	361.2	358.8
62.5°	283.0	285.2	285.2	287.6	292.1	294.5	292.1	292.1
65°	223.2	225.4	225.4	227.8	232.3	232.3	230.1	232.3
67.5°	163.4	163.4	163.4	163.4	163.4	163.4	163.4	163.4
70°	103.6	101.2	98.9	101.2	101.2	101.2	98.9	103.6
72.5°	50.7	52.9	52.9	52.9	52.9	52.9	52.9	50.7
75°	22.9	22.9	20.7	20.7	20.7	22.9	22.9	20.7
77.5°	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
80°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
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



Report Generated By 670245859 / DESKTOP-HRDQ47P





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













(END OF REPORT)