

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: P584267

Luminaire Tested: **HC830D010-HM82555830-81WWW**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584267
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-16)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 10/21/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC830D010-HM82555830-81WWW
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2950.7 lumens
Efficiency: N/A
Efficacy: 105.4 lumens/watt
Spacing Criteria (0/90/45): 1.09 / 1.04 / 1.13
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

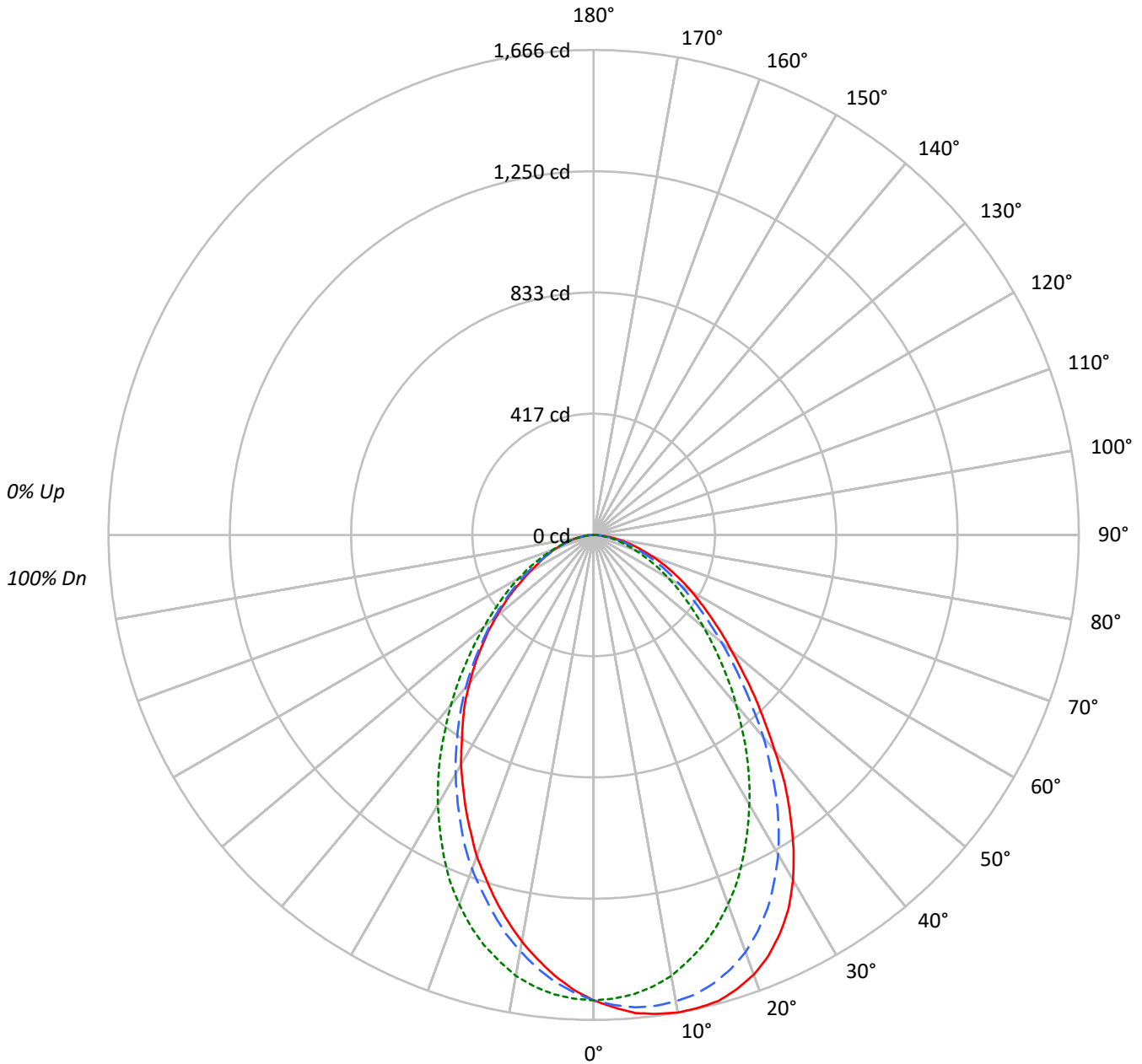
Input Watts (W): 28
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					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	93	91	89	87								
2	102	95	89	84	99	93	88	83	90	85	81	86	83	79	83	80	78	76								
3	94	85	78	72	92	83	77	71	81	75	70	78	73	69	75	71	68	66								
4	87	76	69	63	85	75	68	62	73	67	62	71	65	61	68	64	60	58								
5	81	69	61	55	79	68	61	55	66	60	54	64	59	54	63	57	53	51								
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46								
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	41								
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38								
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34								
10	58	46	39	34	57	45	38	34	44	38	33	44	38	33	43	37	33	32								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	49301	49301	49301
5°	51037	49019	47072
10°	52166	48161	44425
15°	52908	46539	41485
20°	52751	44281	38515
25°	51448	41411	35358
30°	48742	38081	32441
35°	44341	34463	29483
40°	38946	30649	26636
45°	33963	26964	23750
50°	29556	23627	20916
55°	26354	20763	18193
60°	23947	18193	15517
65°	21525	15833	14090
70°	19168	13497	12712
75°	16799	11378	10854
80°	14260	9252	9625
85°	10720	6899	7642



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.8	5.1
10°-20°	412.6	14.0
20°-30°	572.8	19.4
30°-40°	592.2	20.1
40°-50°	495.8	16.8
50°-60°	359.9	12.2
60°-70°	227.2	7.7
70°-80°	112.5	3.8
80°-90°	28.0	0.9
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°	1135.1	38.5
0°-40°	1727.3	58.5
0°-60°	2583.1	87.5
0°-90°	2950.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2950.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1599	1599	1599	1599	1599	
5°	1649	1629	1584	1540	1521	158
15°	1657	1594	1458	1341	1300	466
25°	1512	1414	1217	1085	1039	693
35°	1178	1091	916	811	783	734
45°	779	722	618	558	545	602
55°	490	447	386	354	338	442
65°	295	258	217	191	193	294
75°	141	117	96	91	91	151
85°	30	24	20	22	22	37
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°	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8
2.5°	1624.9	1624.9	1627.0	1624.9	1624.9	1624.9	1622.7	1622.7	1620.5	1620.5	1616.2
5°	1648.8	1644.4	1648.8	1644.4	1644.4	1644.4	1642.2	1637.8	1635.7	1631.4	1629.2
7.5°	1659.6	1657.3	1657.3	1655.2	1655.2	1653.1	1650.9	1648.8	1640.1	1637.8	1631.4
10°	1666.0	1663.9	1663.9	1661.7	1657.3	1657.3	1653.1	1650.9	1640.1	1635.7	1627.0
12.5°	1663.9	1663.9	1663.9	1661.7	1655.2	1653.1	1648.8	1642.2	1633.6	1624.9	1616.2
15°	1657.3	1657.3	1653.1	1650.9	1644.4	1640.1	1637.8	1627.0	1618.3	1607.5	1594.4
17.5°	1635.7	1635.7	1633.6	1629.2	1622.7	1618.3	1614.1	1603.1	1594.4	1577.1	1564.1
20°	1607.5	1605.4	1603.1	1596.7	1590.2	1588.0	1581.5	1566.3	1555.4	1542.4	1525.1
22.5°	1566.3	1564.1	1562.0	1557.6	1546.8	1542.4	1538.1	1527.3	1507.8	1494.7	1473.1
25°	1512.1	1512.1	1507.8	1501.2	1490.4	1486.0	1479.5	1468.7	1451.3	1431.8	1414.4
27.5°	1449.2	1447.0	1440.5	1436.1	1427.4	1421.0	1410.2	1397.1	1379.7	1364.5	1342.9
30°	1368.9	1368.9	1364.5	1358.1	1347.1	1342.9	1334.2	1319.0	1301.6	1282.1	1266.9
32.5°	1277.8	1277.8	1271.3	1266.9	1260.5	1249.5	1247.4	1230.0	1214.8	1199.7	1182.3
35°	1177.9	1180.2	1175.8	1167.1	1156.3	1156.3	1151.9	1136.8	1119.4	1104.2	1091.1
37.5°	1078.2	1071.6	1069.5	1065.1	1058.7	1050.0	1045.6	1039.2	1024.0	1013.1	993.5
40°	967.5	969.7	965.3	961.1	958.8	952.4	950.1	939.3	928.5	915.5	906.9
42.5°	867.7	867.7	867.7	863.5	859.1	852.5	850.4	843.8	830.9	822.2	809.2
45°	778.8	772.3	772.3	770.1	768.0	763.6	757.2	752.8	744.1	737.5	722.4
47.5°	692.0	694.3	692.0	689.9	683.3	681.2	679.0	670.4	661.7	655.1	644.3
50°	616.1	620.4	616.1	616.1	611.7	609.6	605.2	598.8	592.2	581.4	570.6
52.5°	553.2	553.2	551.0	548.8	542.3	538.0	535.9	533.6	522.8	514.1	505.4
55°	490.2	492.5	492.5	485.9	483.8	479.4	477.3	470.7	466.4	453.4	446.9
57.5°	436.0	433.9	436.0	431.7	427.3	423.0	420.9	416.5	410.0	401.3	392.6
60°	388.3	383.9	383.9	381.8	377.5	375.2	371.0	364.4	357.9	349.3	342.8
62.5°	340.6	338.4	336.2	334.1	329.7	327.6	325.4	318.9	312.4	305.9	299.4
65°	295.0	295.0	292.9	288.6	286.3	284.2	282.0	277.6	269.0	264.7	258.1
67.5°	253.9	251.6	251.6	247.3	242.9	240.8	240.8	236.5	230.0	223.4	219.1
70°	212.6	214.7	212.6	210.5	206.1	206.1	201.8	199.6	191.0	188.7	182.3
72.5°	175.7	175.7	173.6	173.6	169.2	167.1	167.1	162.7	158.4	154.0	149.7
75°	141.0	141.0	141.0	138.9	136.6	132.3	132.3	130.2	125.8	121.5	117.1
77.5°	110.7	108.4	108.4	106.3	104.2	102.0	102.0	99.8	95.5	93.3	88.9
80°	80.3	78.1	78.1	78.1	73.7	76.0	73.7	71.6	69.4	67.3	65.0
82.5°	52.1	54.2	54.2	52.1	49.9	49.9	49.9	47.7	47.7	45.5	43.4
85°	30.3	30.3	30.3	30.3	28.2	28.2	28.2	26.0	26.0	26.0	23.9
87.5°	13.0	13.0	13.0	13.0	13.0	13.0	10.8	10.8	10.8	10.8	10.8
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°	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8
2.5°	1616.2	1611.8	1609.7	1607.5	1607.5	1605.4	1603.1	1598.8	1598.8	1594.4	1592.3
5°	1624.9	1618.3	1614.1	1609.7	1607.5	1603.1	1598.8	1592.3	1590.2	1583.6	1577.1
7.5°	1627.0	1616.2	1611.8	1603.1	1598.8	1594.4	1585.8	1579.3	1570.7	1564.1	1555.4
10°	1618.3	1609.7	1598.8	1588.0	1585.8	1579.3	1566.3	1557.6	1546.8	1538.1	1525.1
12.5°	1605.4	1592.3	1581.5	1568.4	1562.0	1555.4	1542.4	1529.4	1514.2	1499.1	1486.0
15°	1583.6	1568.4	1553.3	1538.1	1529.4	1522.9	1507.8	1492.6	1477.3	1457.8	1444.8
17.5°	1551.1	1533.8	1518.6	1499.1	1490.4	1483.9	1464.4	1447.0	1427.4	1407.9	1394.9
20°	1509.9	1488.2	1470.8	1449.2	1442.6	1431.8	1412.3	1392.8	1371.0	1349.4	1334.2
22.5°	1455.7	1433.9	1414.4	1392.8	1381.9	1371.0	1351.5	1327.6	1306.0	1288.6	1273.4
25°	1392.8	1373.2	1349.4	1329.8	1316.8	1303.7	1282.1	1262.6	1243.1	1217.1	1201.8
27.5°	1323.4	1299.5	1282.1	1256.1	1243.1	1234.4	1210.5	1184.5	1167.1	1143.2	1125.9
30°	1245.2	1223.5	1204.0	1177.9	1165.0	1156.3	1134.5	1110.8	1093.4	1069.5	1052.1
32.5°	1162.8	1138.9	1115.0	1097.7	1082.5	1073.8	1050.0	1034.8	1013.1	993.5	974.0
35°	1073.8	1050.0	1032.6	1008.7	1000.1	991.4	971.9	952.4	932.9	915.5	900.3
37.5°	978.4	961.1	941.6	924.2	917.7	909.0	885.1	867.7	852.5	835.2	822.2
40°	885.1	869.9	856.9	839.6	828.7	822.2	804.8	789.6	772.3	761.4	748.5
42.5°	800.6	783.2	770.1	757.2	746.2	739.8	724.6	713.8	700.7	689.9	674.6
45°	711.5	702.9	687.7	676.9	670.4	661.7	650.9	637.8	627.0	618.3	607.5
47.5°	633.5	624.8	613.9	600.9	596.5	590.1	579.3	570.6	561.9	553.2	542.3
50°	561.9	551.0	542.3	533.6	529.3	522.8	512.0	507.6	501.2	492.5	485.9
52.5°	496.8	488.1	479.4	468.6	466.4	462.0	455.6	446.9	440.4	436.0	431.7
55°	438.3	429.6	423.0	414.4	412.2	407.8	399.1	394.9	390.5	386.2	381.8
57.5°	386.2	377.5	368.8	364.4	360.1	355.7	353.6	347.1	342.8	340.6	336.2
60°	338.4	329.7	323.3	316.7	314.6	312.4	308.1	303.7	299.4	295.0	292.9
62.5°	292.9	284.2	279.9	275.5	271.2	271.2	266.8	262.5	258.1	256.0	251.6
65°	251.6	247.3	240.8	234.4	232.1	232.1	225.7	223.4	221.3	217.0	212.6
67.5°	212.6	208.3	201.8	199.6	197.4	195.2	193.1	188.7	184.4	182.3	177.9
70°	177.9	173.6	169.2	167.1	164.9	162.7	158.4	156.2	151.8	149.7	147.6
72.5°	143.2	141.0	136.6	134.5	132.3	130.2	127.9	125.8	121.5	119.3	117.1
75°	115.0	112.8	108.4	106.3	104.2	104.2	102.0	97.6	95.5	95.5	93.3
77.5°	86.8	84.7	82.4	80.3	78.1	78.1	76.0	73.7	71.6	71.6	69.4
80°	62.9	60.8	58.6	58.6	58.6	56.4	54.2	54.2	52.1	52.1	49.9
82.5°	41.3	41.3	39.0	39.0	39.0	36.9	36.9	34.7	34.7	34.7	34.7
85°	23.9	23.9	23.9	21.6	21.6	21.6	21.6	21.6	21.6	19.5	21.6
87.5°	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	8.7	8.7	8.7
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°	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8
2.5°	1590.2	1588.0	1583.6	1583.6	1579.3	1579.3	1577.1	1574.9	1572.8	1570.7	1568.4
5°	1574.9	1566.3	1562.0	1559.7	1555.4	1553.3	1546.8	1542.4	1540.2	1536.0	1531.6
7.5°	1546.8	1538.1	1529.4	1527.3	1525.1	1516.5	1509.9	1503.4	1499.1	1494.7	1490.4
10°	1514.2	1505.5	1494.7	1490.4	1486.0	1475.2	1466.5	1460.0	1451.3	1442.6	1440.5
12.5°	1475.2	1462.1	1449.2	1444.8	1438.3	1427.4	1418.8	1407.9	1401.5	1390.5	1388.4
15°	1429.7	1414.4	1403.6	1392.8	1388.4	1377.6	1362.4	1353.7	1340.7	1336.3	1325.5
17.5°	1375.4	1360.2	1345.0	1340.7	1334.2	1319.0	1303.7	1292.9	1280.0	1273.4	1266.9
20°	1319.0	1299.5	1284.2	1280.0	1271.3	1258.2	1243.1	1232.2	1221.3	1208.4	1201.8
22.5°	1253.9	1232.2	1219.2	1208.4	1206.1	1191.0	1173.7	1165.0	1156.3	1145.5	1136.8
25°	1182.3	1162.8	1147.6	1138.9	1134.5	1121.6	1108.5	1097.7	1084.7	1078.2	1067.4
27.5°	1108.5	1095.5	1076.0	1067.4	1060.8	1050.0	1034.8	1028.2	1015.3	1006.6	1000.1
30°	1036.9	1017.4	1006.6	995.8	989.2	978.4	965.3	958.8	948.0	939.3	932.9
32.5°	958.8	945.8	930.6	926.3	917.7	906.9	898.2	887.2	878.6	869.9	867.7
35°	887.2	869.9	854.8	850.4	843.8	833.0	828.7	822.2	811.4	809.2	800.6
37.5°	809.2	800.6	783.2	776.7	774.5	765.8	757.2	752.8	746.2	739.8	737.5
40°	735.4	724.6	715.9	709.4	705.1	698.5	689.9	687.7	683.3	674.6	672.5
42.5°	666.0	655.1	646.5	644.3	637.8	631.2	627.0	620.4	618.3	616.1	611.7
45°	598.8	592.2	583.6	581.4	579.3	570.6	566.2	561.9	557.5	555.4	551.0
47.5°	538.0	531.5	524.9	522.8	518.5	516.3	509.8	507.6	501.2	498.9	496.8
50°	479.4	475.1	470.7	468.6	464.3	462.0	457.8	453.4	449.1	446.9	444.7
52.5°	427.3	423.0	418.6	416.5	414.4	410.0	405.7	401.3	399.1	397.0	394.9
55°	377.5	373.1	371.0	368.8	366.6	364.4	357.9	355.7	353.6	351.5	347.1
57.5°	332.0	327.6	323.3	323.3	321.0	318.9	314.6	310.2	310.2	305.9	301.5
60°	290.7	286.3	282.0	279.9	277.6	273.4	271.2	269.0	266.8	264.7	260.3
62.5°	247.3	245.2	240.8	240.8	236.5	234.4	232.1	230.0	227.8	223.4	221.3
65°	210.5	208.3	203.9	201.8	201.8	199.6	195.2	193.1	191.0	191.0	188.7
67.5°	175.7	173.6	169.2	167.1	167.1	164.9	162.7	162.7	160.5	158.4	160.5
70°	145.3	141.0	141.0	138.9	138.9	136.6	134.5	134.5	134.5	136.6	136.6
72.5°	115.0	112.8	110.7	110.7	110.7	110.7	108.4	108.4	110.7	112.8	112.8
75°	91.1	88.9	88.9	88.9	86.8	86.8	88.9	88.9	91.1	91.1	91.1
77.5°	67.3	67.3	67.3	67.3	67.3	67.3	69.4	69.4	71.6	71.6	71.6
80°	49.9	49.9	49.9	49.9	49.9	52.1	52.1	52.1	52.1	52.1	54.2
82.5°	34.7	34.7	34.7	34.7	34.7	34.7	34.7	36.9	36.9	36.9	36.9
85°	19.5	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6
87.5°	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
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: P584267

CATALOG NUMBER: HC830D010-HM82555830-81WWW

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8	1598.8
2.5°	1566.3	1566.3	1566.3	1568.4	1564.1	1564.1	1564.1	1564.1
5°	1529.4	1527.3	1525.1	1527.3	1522.9	1522.9	1520.7	1520.7
7.5°	1483.9	1481.7	1479.5	1479.5	1475.2	1475.2	1473.1	1470.8
10°	1433.9	1429.7	1431.8	1427.4	1425.3	1423.1	1421.0	1418.8
12.5°	1379.7	1375.4	1373.2	1368.9	1364.5	1362.4	1364.5	1360.2
15°	1321.1	1314.7	1312.4	1308.1	1303.7	1301.6	1301.6	1299.5
17.5°	1256.1	1251.8	1249.5	1245.2	1243.1	1238.7	1236.6	1234.4
20°	1195.3	1184.5	1186.6	1182.3	1180.2	1171.5	1171.5	1173.7
22.5°	1128.1	1121.6	1117.2	1112.9	1110.8	1106.4	1106.4	1104.2
25°	1060.8	1054.3	1052.1	1047.9	1045.6	1041.3	1039.2	1039.2
27.5°	995.8	987.1	987.1	982.7	978.4	976.2	974.0	971.9
30°	926.3	919.8	917.7	917.7	915.5	915.5	909.0	911.1
32.5°	861.2	856.9	854.8	850.4	850.4	848.2	848.2	841.7
35°	796.2	789.6	791.9	787.5	785.3	783.2	785.3	783.2
37.5°	733.3	728.9	728.9	724.6	724.6	722.4	720.2	724.6
40°	670.4	668.2	666.0	663.8	666.0	663.8	659.5	661.7
42.5°	607.5	607.5	605.2	605.2	603.1	603.1	603.1	603.1
45°	551.0	548.8	548.8	546.7	546.7	546.7	546.7	544.6
47.5°	494.6	492.5	492.5	492.5	490.2	490.2	488.1	490.2
50°	440.4	440.4	438.3	438.3	440.4	438.3	436.0	436.0
52.5°	390.5	390.5	388.3	388.3	386.2	383.9	386.2	386.2
55°	344.9	342.8	340.6	340.6	338.4	336.2	336.2	338.4
57.5°	301.5	299.4	297.2	297.2	292.9	290.7	290.7	290.7
60°	260.3	256.0	256.0	253.9	253.9	251.6	251.6	251.6
62.5°	221.3	219.1	219.1	219.1	219.1	217.0	217.0	217.0
65°	188.7	188.7	188.7	191.0	191.0	193.1	193.1	193.1
67.5°	162.7	164.9	164.9	164.9	167.1	167.1	167.1	164.9
70°	138.9	138.9	138.9	141.0	141.0	141.0	141.0	141.0
72.5°	115.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0
75°	91.1	93.3	93.3	93.3	91.1	93.3	93.3	91.1
77.5°	71.6	71.6	71.6	71.6	71.6	71.6	71.6	71.6
80°	54.2	54.2	54.2	54.2	54.2	54.2	54.2	54.2
82.5°	36.9	36.9	36.9	36.9	36.9	36.9	36.9	36.9
85°	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6
87.5°	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
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)