

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: P584268

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

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584268
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: HC830D010-HM82555830-81WWWB
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3072.2 lumens
Efficiency: N/A
Efficacy: 109.7 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

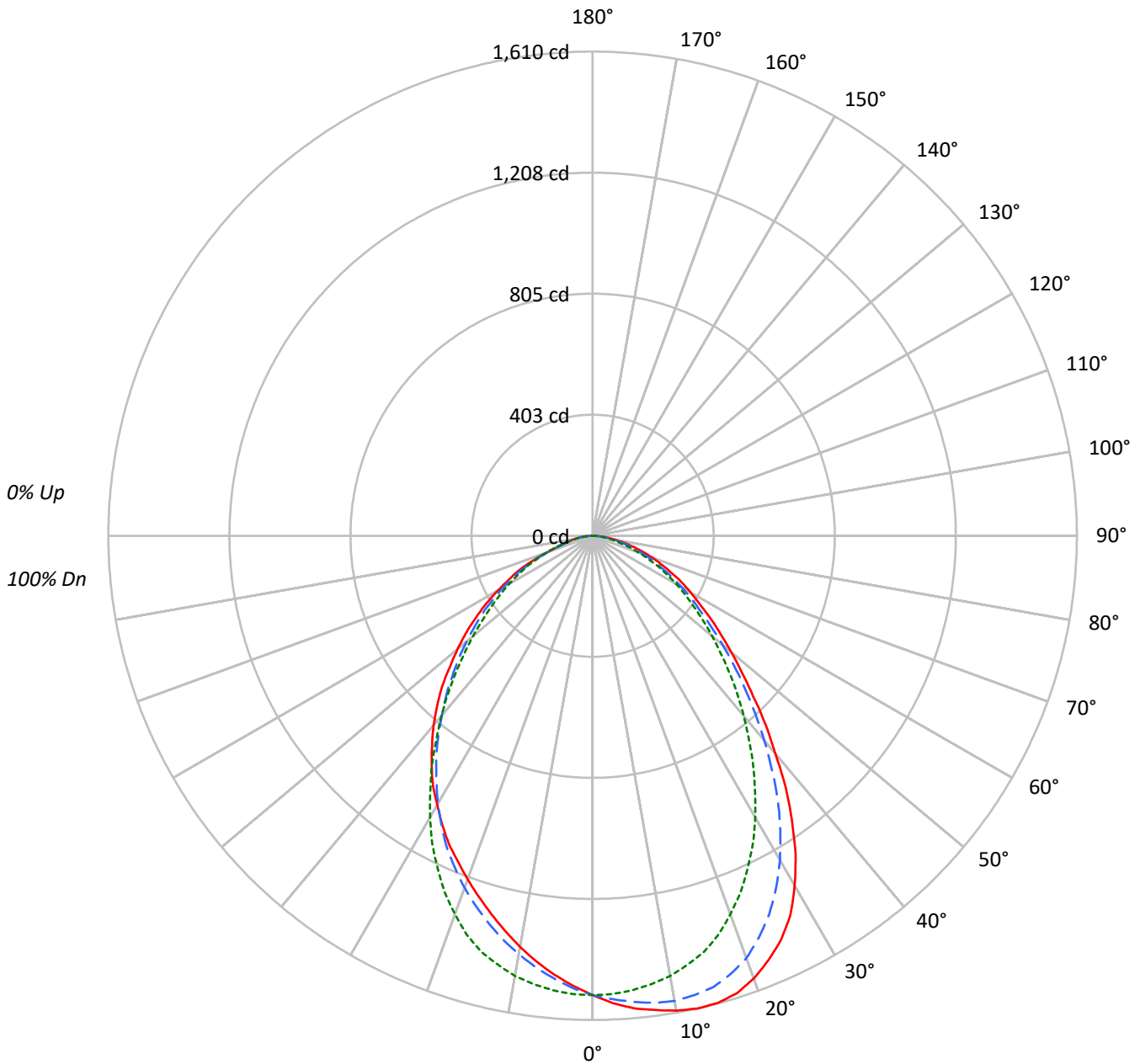
Input Watts (W): 28
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	47102	47102	47102
5°	48827	46948	45335
10°	50209	46536	43480
15°	51328	45715	41559
20°	51408	43930	39871
25°	50424	41489	38464
30°	47823	38477	36775
35°	43453	35043	35122
40°	37992	31446	33101
45°	32929	28010	30845
50°	28832	24874	28102
55°	25666	22048	25429
60°	23152	19803	22350
65°	20897	17409	19474
70°	18780	14678	14471
75°	16549	11628	10854
80°	13869	9625	10406
85°	10720	8456	9199



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.1	4.7
10°-20°	405.9	13.2
20°-30°	580.1	18.9
30°-40°	616.3	20.1
40°-50°	530.7	17.3
50°-60°	396.7	12.9
60°-70°	253.1	8.2
70°-80°	115.2	3.7
80°-90°	30.2	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°	1130.0	36.8
0°-40°	1746.4	56.8
0°-60°	2673.8	87.0
0°-90°	3072.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3072.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1528	1528	1528	1528	1528	
5°	1577	1556	1517	1478	1465	151
15°	1608	1554	1432	1334	1302	453
25°	1482	1389	1219	1146	1130	678
35°	1154	1074	931	907	933	719
45°	755	714	642	660	707	587
55°	477	438	410	445	473	429
65°	286	254	239	250	267	286
75°	139	119	98	89	91	148
85°	30	26	24	26	26	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°	1527.5	1527.5	1527.5	1527.5	1527.5	1527.5	1527.5	1527.5	1527.5	1527.5	1527.5
2.5°	1555.7	1551.4	1553.5	1551.4	1553.5	1553.5	1549.3	1549.3	1549.3	1549.3	1542.7
5°	1577.4	1575.3	1575.3	1573.0	1570.9	1573.0	1570.9	1568.8	1564.4	1562.2	1555.7
7.5°	1590.4	1590.4	1590.4	1590.4	1588.3	1586.1	1584.0	1579.6	1575.3	1570.9	1566.6
10°	1603.5	1605.6	1603.5	1601.3	1599.1	1594.8	1592.7	1588.3	1581.7	1575.3	1570.9
12.5°	1610.0	1610.0	1607.8	1607.8	1603.5	1601.3	1594.8	1588.3	1581.7	1575.3	1564.4
15°	1607.8	1607.8	1605.6	1603.5	1596.9	1594.8	1590.4	1584.0	1573.0	1564.4	1553.5
17.5°	1594.8	1592.7	1588.3	1588.3	1579.6	1577.4	1573.0	1564.4	1553.5	1540.6	1527.5
20°	1566.6	1566.6	1564.4	1562.2	1553.5	1547.0	1542.7	1531.9	1523.2	1508.0	1494.9
22.5°	1527.5	1531.9	1527.5	1523.2	1512.3	1510.1	1503.6	1490.6	1477.6	1460.2	1445.1
25°	1482.0	1479.8	1477.6	1473.3	1464.6	1460.2	1451.5	1438.6	1425.5	1406.0	1388.6
27.5°	1423.4	1414.7	1414.7	1406.0	1399.5	1393.0	1388.6	1375.7	1358.3	1343.1	1321.3
30°	1343.1	1345.2	1334.4	1332.3	1321.3	1317.1	1308.4	1295.3	1280.2	1262.8	1245.5
32.5°	1256.3	1249.8	1249.8	1241.1	1232.4	1225.9	1223.7	1208.6	1195.5	1178.2	1160.8
35°	1154.3	1154.3	1147.9	1145.6	1136.9	1132.6	1126.1	1117.4	1102.2	1087.1	1074.0
37.5°	1054.5	1050.1	1048.0	1043.7	1037.2	1030.6	1030.6	1015.4	1013.3	995.9	978.5
40°	943.8	948.2	943.8	937.3	935.1	930.9	928.6	919.9	913.5	898.3	887.5
42.5°	850.5	846.2	846.2	844.1	835.4	835.4	831.0	826.7	815.8	811.5	798.5
45°	755.1	759.4	752.9	755.1	746.5	746.5	746.5	737.8	729.1	722.6	713.9
47.5°	672.6	674.8	674.8	668.3	666.1	666.1	661.8	657.4	651.0	642.3	635.8
50°	601.0	603.2	598.9	596.6	592.4	590.2	590.2	581.5	577.1	568.5	564.2
52.5°	535.9	535.9	533.7	533.7	527.2	527.2	522.9	516.4	512.1	507.7	496.9
55°	477.4	477.4	475.1	473.0	473.0	466.4	464.3	457.8	453.5	444.8	438.3
57.5°	420.9	423.0	420.9	418.8	416.6	414.4	410.1	403.5	399.3	392.7	388.4
60°	375.4	375.4	373.2	371.1	366.7	364.5	362.4	358.0	351.5	347.2	340.6
62.5°	332.0	329.8	327.7	325.4	321.1	321.1	316.7	312.5	305.9	301.6	297.2
65°	286.4	286.4	284.3	284.3	282.0	277.8	275.6	273.4	264.7	262.5	253.9
67.5°	245.2	247.3	243.0	243.0	238.6	238.6	236.5	230.0	227.8	223.5	219.1
70°	208.3	208.3	208.3	206.2	201.8	199.6	197.5	193.1	191.0	186.6	182.3
72.5°	171.5	171.5	169.2	169.2	167.1	164.9	162.8	158.4	158.4	154.1	149.7
75°	138.9	138.9	136.7	134.5	132.3	132.3	130.2	128.1	123.7	121.5	119.4
77.5°	106.3	106.3	106.3	104.2	102.0	102.0	102.0	97.6	93.3	93.3	91.1
80°	78.1	78.1	76.0	76.0	73.7	73.7	73.7	71.6	69.4	67.3	65.0
82.5°	52.1	52.1	52.1	52.1	49.9	49.9	49.9	47.7	45.5	45.5	45.5
85°	30.3	30.3	30.3	30.3	28.2	28.2	28.2	28.2	28.2	26.0	26.0
87.5°	13.0	10.8	13.0	10.8	13.0	10.8	13.0	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°	1527.5	1527.5	1527.5	1527.5	1527.5	1527.5	1527.5	1527.5	1527.5	1527.5	1527.5
2.5°	1544.9	1542.7	1540.6	1538.3	1538.3	1536.2	1531.9	1529.6	1527.5	1525.4	1525.4
5°	1553.5	1551.4	1547.0	1542.7	1540.6	1536.2	1531.9	1527.5	1523.2	1516.7	1514.5
7.5°	1560.1	1553.5	1549.3	1540.6	1538.3	1534.0	1527.5	1521.0	1512.3	1503.6	1497.2
10°	1560.1	1551.4	1544.9	1534.0	1529.6	1525.4	1516.7	1505.9	1494.9	1486.2	1475.4
12.5°	1555.7	1544.9	1534.0	1523.2	1516.7	1510.1	1497.2	1486.2	1473.3	1460.2	1451.5
15°	1540.6	1527.5	1514.5	1501.5	1494.9	1486.2	1473.3	1458.1	1445.1	1432.0	1416.8
17.5°	1512.3	1499.3	1484.1	1468.9	1460.2	1453.8	1434.2	1423.4	1403.9	1390.8	1377.8
20°	1475.4	1460.2	1440.7	1425.5	1414.7	1408.1	1393.0	1373.4	1358.3	1338.7	1325.7
22.5°	1427.8	1408.1	1388.6	1373.4	1362.6	1353.9	1334.4	1314.9	1301.8	1284.5	1269.3
25°	1371.3	1351.8	1332.3	1310.5	1299.7	1291.0	1273.7	1256.3	1238.9	1219.4	1206.4
27.5°	1304.0	1282.3	1265.0	1245.5	1234.5	1221.6	1202.1	1184.7	1167.4	1154.3	1136.9
30°	1230.3	1206.4	1189.0	1169.5	1158.7	1147.9	1128.2	1110.9	1095.8	1080.6	1071.9
32.5°	1141.3	1124.0	1106.6	1087.1	1078.4	1071.9	1052.4	1035.0	1017.7	1004.6	998.0
35°	1056.7	1037.2	1021.9	1004.6	993.8	987.2	969.9	954.6	946.0	930.9	922.2
37.5°	967.7	952.5	935.1	917.8	911.2	904.8	891.8	876.5	863.6	852.8	848.4
40°	874.4	861.4	846.2	835.4	828.9	822.3	811.5	800.7	792.0	781.2	776.8
42.5°	785.5	776.8	763.8	750.7	744.2	742.1	729.1	720.4	716.0	711.7	707.3
45°	705.2	692.1	683.4	674.8	668.3	663.9	657.4	651.0	646.6	642.3	637.9
47.5°	627.1	616.3	607.6	601.0	594.5	592.4	588.0	581.5	577.1	577.1	577.1
50°	555.5	546.8	538.1	533.7	531.6	527.2	522.9	520.8	518.5	518.5	518.5
52.5°	492.5	483.8	477.4	473.0	473.0	468.7	464.3	462.2	462.2	462.2	462.2
55°	434.0	427.4	423.0	418.8	414.4	412.2	412.2	412.2	410.1	410.1	412.2
57.5°	381.9	377.5	371.1	366.7	364.5	364.5	362.4	360.1	362.4	364.5	366.7
60°	334.1	329.8	327.7	321.1	321.1	321.1	319.0	319.0	319.0	321.1	323.3
62.5°	290.7	288.6	284.3	282.0	279.9	279.9	277.8	277.8	277.8	277.8	279.9
65°	251.7	247.3	243.0	243.0	243.0	240.9	240.9	236.5	238.6	238.6	236.5
67.5°	214.9	210.5	208.3	206.2	203.9	203.9	201.8	199.6	197.5	197.5	197.5
70°	180.1	175.7	175.7	171.5	171.5	169.2	167.1	167.1	164.9	162.8	160.5
72.5°	145.4	143.2	141.0	138.9	138.9	138.9	136.7	134.5	132.3	130.2	125.8
75°	115.0	115.0	110.7	108.4	108.4	106.3	104.2	102.0	99.8	97.6	95.5
77.5°	88.9	86.8	82.4	80.3	80.3	80.3	78.1	76.0	73.7	71.6	69.4
80°	65.0	62.9	60.8	58.6	58.6	58.6	56.4	56.4	54.2	54.2	54.2
82.5°	43.4	43.4	41.3	41.3	41.3	41.3	39.0	39.0	39.0	39.0	39.0
85°	26.0	26.0	23.9	23.9	23.9	23.9	23.9	23.9	23.9	23.9	23.9
87.5°	10.8	10.8	10.8	10.8	10.8	10.8	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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1527.5	1527.5	1527.5	1527.5	1527.5	1527.5	1527.5	1527.5	1527.5	1527.5	1527.5
2.5°	1521.0	1521.0	1516.7	1514.5	1512.3	1514.5	1510.1	1508.0	1505.9	1505.9	1503.6
5°	1508.0	1505.9	1497.2	1494.9	1492.8	1490.6	1486.2	1482.0	1477.6	1475.4	1473.3
7.5°	1490.6	1484.1	1475.4	1473.3	1471.1	1464.6	1458.1	1453.8	1447.3	1445.1	1440.7
10°	1466.8	1458.1	1451.5	1445.1	1440.7	1434.2	1427.8	1421.2	1412.5	1410.4	1403.9
12.5°	1438.6	1427.8	1414.7	1412.5	1406.0	1397.3	1388.6	1382.1	1375.7	1371.3	1364.7
15°	1403.9	1393.0	1380.0	1373.4	1367.0	1360.5	1349.6	1341.0	1334.4	1327.9	1321.3
17.5°	1362.6	1349.6	1338.7	1332.3	1327.9	1317.1	1308.4	1297.6	1291.0	1284.5	1277.9
20°	1312.7	1301.8	1286.6	1280.2	1277.9	1269.3	1258.4	1254.2	1245.5	1238.9	1234.5
22.5°	1256.3	1245.5	1232.4	1228.1	1219.4	1215.0	1204.2	1199.9	1195.5	1189.0	1186.9
25°	1193.4	1182.6	1171.6	1169.5	1163.0	1158.7	1152.1	1145.6	1145.6	1139.2	1139.2
27.5°	1128.2	1117.4	1108.7	1104.5	1102.2	1097.9	1091.4	1089.2	1087.1	1084.8	1084.8
30°	1058.8	1045.8	1041.4	1039.3	1037.2	1032.8	1030.6	1026.3	1028.5	1030.6	1028.5
32.5°	985.1	980.7	972.0	967.7	969.9	967.7	963.3	967.7	965.6	969.9	972.0
35°	913.5	909.1	904.8	904.8	900.4	900.4	900.4	902.6	907.0	909.1	913.5
37.5°	844.1	837.5	835.4	833.1	835.4	835.4	835.4	839.7	844.1	848.4	854.9
40°	770.2	766.0	766.0	766.0	766.0	772.5	770.2	774.6	778.9	785.5	792.0
42.5°	700.8	700.8	703.1	703.1	703.1	703.1	707.3	713.9	720.4	726.8	733.4
45°	635.8	635.8	635.8	640.0	640.0	642.3	651.0	655.3	659.7	666.1	672.6
47.5°	575.0	575.0	577.1	579.3	581.5	585.8	590.2	596.6	603.2	607.6	614.0
50°	518.5	520.8	525.1	529.5	529.5	531.6	538.1	542.4	546.8	553.2	555.5
52.5°	464.3	468.7	473.0	475.1	477.4	481.7	483.8	490.3	492.5	499.0	501.2
55°	414.4	416.6	423.0	425.3	425.3	429.6	434.0	438.3	444.8	444.8	449.1
57.5°	368.8	371.1	375.4	377.5	375.4	381.9	384.0	388.4	390.6	394.9	397.1
60°	323.3	327.7	329.8	329.8	332.0	334.1	338.5	338.5	342.8	347.2	347.2
62.5°	279.9	282.0	284.3	286.4	288.6	286.4	293.0	293.0	297.2	299.4	303.8
65°	238.6	240.9	240.9	243.0	243.0	245.2	245.2	247.3	249.6	253.9	256.0
67.5°	197.5	197.5	197.5	199.6	197.5	199.6	199.6	201.8	201.8	206.2	208.3
70°	160.5	158.4	156.2	156.2	156.2	156.2	154.1	156.2	156.2	158.4	158.4
72.5°	123.7	121.5	119.4	117.1	117.1	115.0	112.8	115.0	115.0	117.1	117.1
75°	93.3	88.9	88.9	88.9	86.8	86.8	86.8	88.9	88.9	88.9	91.1
77.5°	69.4	69.4	67.3	67.3	67.3	69.4	69.4	71.6	71.6	71.6	71.6
80°	52.1	54.2	54.2	54.2	54.2	56.4	56.4	56.4	56.4	58.6	58.6
82.5°	39.0	39.0	39.0	39.0	41.3	41.3	41.3	41.3	41.3	41.3	41.3
85°	23.9	26.0	26.0	23.9	26.0	26.0	26.0	26.0	26.0	26.0	26.0
87.5°	10.8	10.8	10.8	10.8	10.8	10.8	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



TEST NUMBER: P584268

CATALOG NUMBER: HC830D010-HM82555830-81WWWB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1527.5	1527.5	1527.5	1527.5	1527.5	1527.5	1527.5	1527.5
2.5°	1501.5	1501.5	1501.5	1501.5	1499.3	1499.3	1499.3	1497.2
5°	1468.9	1468.9	1468.9	1464.6	1466.8	1466.8	1462.5	1464.6
7.5°	1436.4	1434.2	1432.0	1432.0	1429.9	1427.8	1425.5	1427.8
10°	1399.5	1393.0	1393.0	1390.8	1390.8	1386.5	1386.5	1388.6
12.5°	1358.3	1353.9	1353.9	1351.8	1349.6	1347.4	1345.2	1345.2
15°	1317.1	1312.7	1310.5	1308.4	1306.2	1301.8	1304.0	1301.8
17.5°	1275.8	1269.3	1269.3	1267.1	1265.0	1260.6	1260.6	1258.4
20°	1228.1	1225.9	1221.6	1223.7	1221.6	1217.2	1215.0	1215.0
22.5°	1180.3	1180.3	1178.2	1178.2	1176.0	1173.9	1171.6	1171.6
25°	1134.8	1132.6	1134.8	1134.8	1128.2	1128.2	1128.2	1130.5
27.5°	1082.7	1084.8	1082.7	1082.7	1082.7	1082.7	1084.8	1082.7
30°	1030.6	1030.6	1030.6	1032.8	1037.2	1035.0	1035.0	1032.8
32.5°	974.3	976.4	976.4	978.5	980.7	985.1	985.1	987.2
35°	917.8	922.2	924.3	922.2	928.6	928.6	933.0	933.0
37.5°	859.2	861.4	865.7	867.9	872.3	874.4	876.5	876.5
40°	796.3	805.0	807.2	809.4	815.8	815.8	818.0	822.3
42.5°	737.8	746.5	748.6	750.7	755.1	761.6	759.4	763.8
45°	681.3	687.8	690.0	692.1	698.7	700.8	700.8	707.3
47.5°	620.5	624.9	627.1	631.4	635.8	640.0	644.4	642.3
50°	559.8	566.3	570.6	572.9	579.3	581.5	583.7	585.8
52.5°	505.6	509.8	512.1	514.2	520.8	522.9	525.1	529.5
55°	453.5	455.6	460.0	457.8	464.3	466.4	468.7	473.0
57.5°	401.4	403.5	405.7	405.7	410.1	414.4	416.6	418.8
60°	351.5	355.9	358.0	358.0	358.0	362.4	362.4	362.4
62.5°	305.9	305.9	308.1	308.1	312.5	312.5	312.5	312.5
65°	258.3	260.4	262.5	262.5	266.9	264.7	269.1	266.9
67.5°	208.3	208.3	212.6	212.6	210.5	212.6	212.6	212.6
70°	158.4	158.4	160.5	160.5	160.5	160.5	160.5	160.5
72.5°	117.1	117.1	117.1	119.4	117.1	117.1	119.4	117.1
75°	91.1	91.1	91.1	91.1	91.1	91.1	91.1	91.1
77.5°	71.6	71.6	73.7	73.7	73.7	73.7	73.7	73.7
80°	58.6	58.6	58.6	58.6	60.8	58.6	58.6	58.6
82.5°	43.4	41.3	43.4	41.3	43.4	43.4	43.4	43.4
85°	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0
87.5°	10.8	10.8	10.8	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



Report Generated By 670245859 / DESKTOP-HRDQ47P





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













(END OF REPORT)