

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: P584266

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

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584266
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: HC830D010-HM82555830-81WWBB
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2703.3 lumens
Efficiency: N/A
Efficacy: 96.5 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

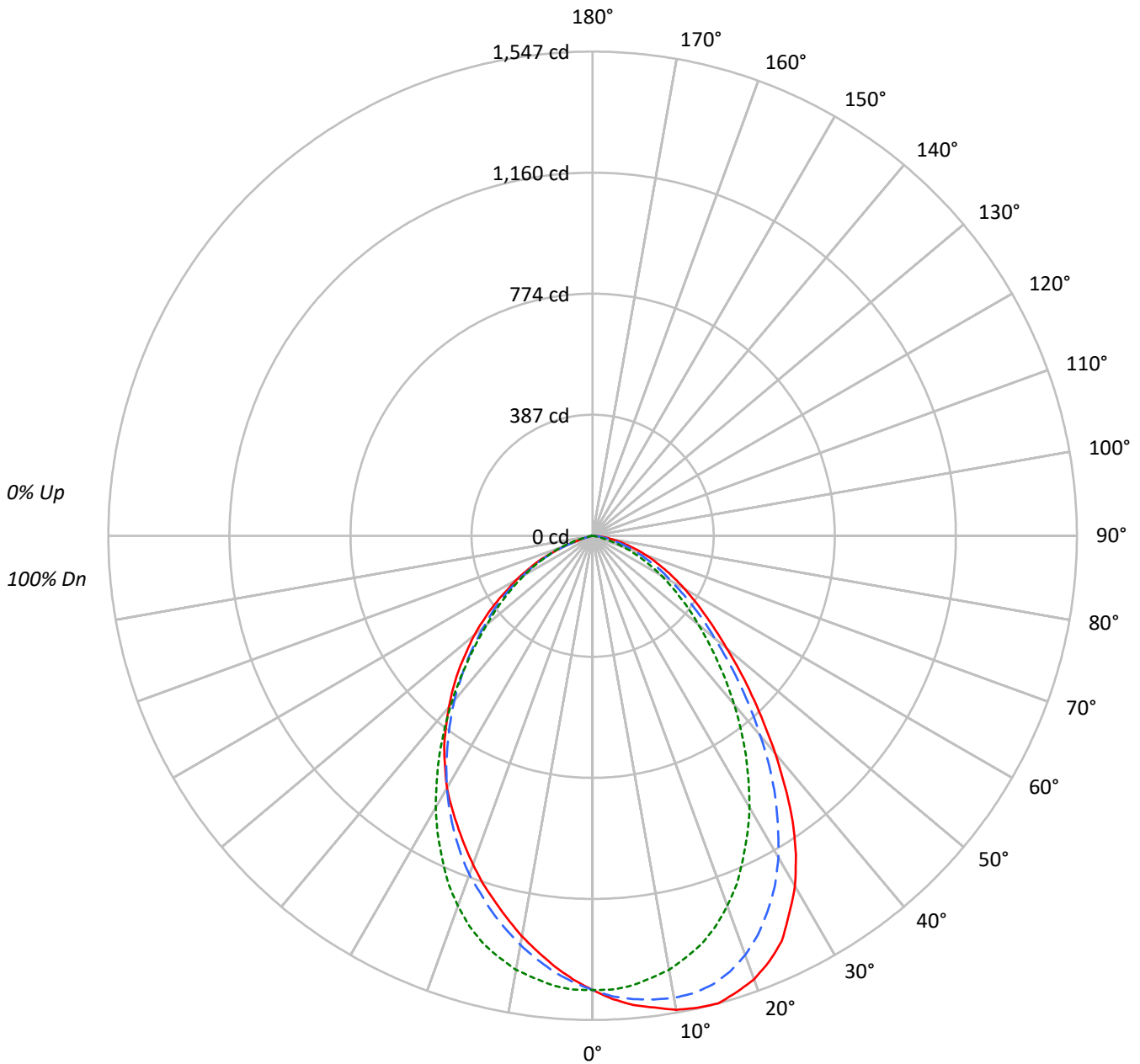
Input Watts (W): 28
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
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°	44753	44753	44753
5°	46601	44654	42775
10°	48161	44084	40690
15°	49380	43078	38577
20°	49479	41288	36661
25°	48644	38679	34766
30°	46036	35685	33136
35°	41973	32095	31117
40°	36506	28295	28733
45°	31311	24504	26301
50°	26745	21127	23627
55°	23440	18193	20526
60°	20870	15517	17262
65°	18526	12667	13768
70°	16436	9395	7826
75°	13701	4921	2323
80°	10797	1545	373
85°	7642	743	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.8	5.1
10°-20°	383.3	14.2
20°-30°	542.5	20.1
30°-40°	567.6	21.0
40°-50°	473.4	17.5
50°-60°	335.7	12.4
60°-70°	193.4	7.2
70°-80°	62.2	2.3
80°-90°	8.5	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°	1062.6	39.3
0°-40°	1630.1	60.3
0°-60°	2439.2	90.2
0°-90°	2703.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2703.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1451	1451	1451	1451	1451	
5°	1506	1486	1443	1399	1382	144
15°	1547	1484	1349	1243	1208	435
25°	1430	1323	1137	1046	1022	652
35°	1115	1017	853	807	827	691
45°	718	660	562	568	603	556
55°	436	390	338	356	382	394
65°	254	213	174	174	189	254
75°	115	85	41	20	20	125
85°	22	11	2	0	0	27
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°	1451.3	1451.3	1451.3	1451.3	1451.3	1451.3	1451.3	1451.3	1451.3	1451.3	1451.3
2.5°	1481.7	1479.5	1477.3	1479.5	1477.3	1479.5	1477.3	1477.3	1475.2	1473.1	1473.1
5°	1505.5	1503.4	1503.4	1503.4	1501.2	1499.1	1499.1	1496.8	1492.6	1490.4	1486.0
7.5°	1520.7	1522.9	1522.9	1522.9	1518.6	1518.6	1514.2	1509.9	1505.5	1501.2	1494.7
10°	1538.1	1538.1	1536.0	1533.8	1529.4	1527.3	1525.1	1520.7	1514.2	1505.5	1499.1
12.5°	1544.6	1544.6	1542.5	1538.1	1536.0	1533.8	1531.6	1525.1	1516.5	1505.5	1496.8
15°	1546.8	1542.5	1540.2	1538.1	1533.8	1527.3	1527.3	1518.6	1507.8	1494.7	1483.9
17.5°	1529.4	1531.6	1527.3	1522.9	1516.5	1512.1	1505.5	1499.1	1486.0	1470.8	1460.0
20°	1507.8	1505.5	1503.4	1496.8	1488.2	1486.0	1479.5	1468.7	1457.8	1440.5	1425.3
22.5°	1473.1	1470.8	1466.5	1462.2	1453.6	1449.2	1442.6	1429.7	1414.4	1397.1	1379.7
25°	1429.7	1425.3	1418.8	1410.2	1403.6	1399.2	1390.5	1377.6	1360.2	1340.7	1323.4
27.5°	1360.2	1366.8	1362.4	1349.4	1342.9	1334.2	1332.0	1314.7	1299.5	1280.0	1260.5
30°	1292.9	1292.9	1286.5	1280.0	1269.1	1262.6	1253.9	1240.8	1225.7	1201.8	1186.6
32.5°	1208.4	1206.2	1197.6	1195.3	1186.6	1173.7	1171.5	1154.2	1138.9	1121.6	1102.1
35°	1115.0	1110.8	1102.1	1095.5	1091.3	1084.7	1078.2	1063.0	1047.9	1030.5	1017.4
37.5°	1008.7	1008.7	1006.6	995.8	991.4	987.1	980.6	965.3	956.7	939.3	926.3
40°	906.9	904.6	898.2	895.9	891.6	885.1	880.8	872.1	859.1	846.1	833.0
42.5°	807.0	809.2	800.6	802.7	794.0	789.6	787.5	774.5	768.0	754.9	744.1
45°	718.0	715.9	711.6	709.4	705.1	700.7	696.4	689.9	679.0	666.0	659.5
47.5°	635.6	629.1	629.1	627.0	624.8	616.1	613.9	607.5	600.9	588.0	579.3
50°	557.5	557.5	557.5	555.4	548.8	546.7	542.3	535.9	529.3	520.7	507.6
52.5°	494.6	494.6	494.6	492.5	483.8	481.7	479.4	470.7	462.0	455.6	446.9
55°	436.0	438.3	436.0	431.7	425.2	425.2	418.6	414.4	405.7	399.1	390.5
57.5°	386.2	386.2	381.8	379.6	375.2	373.1	368.8	364.4	353.6	347.1	336.2
60°	338.4	336.2	336.2	332.0	327.6	323.3	321.0	314.6	310.2	299.4	290.7
62.5°	295.0	295.0	290.7	290.7	282.0	282.0	279.9	273.4	266.8	256.0	251.6
65°	253.9	253.9	251.6	249.5	243.0	240.8	238.6	232.1	225.7	219.1	212.6
67.5°	217.0	217.0	212.6	210.5	206.1	203.9	199.6	195.2	188.7	182.3	175.7
70°	182.3	180.0	177.9	175.7	171.3	169.2	164.9	160.5	154.0	149.7	143.2
72.5°	147.6	147.6	145.3	141.0	138.9	136.6	134.5	130.2	123.7	117.1	112.8
75°	115.0	115.0	115.0	110.7	106.3	104.2	104.2	99.8	95.5	88.9	84.7
77.5°	88.9	86.8	84.7	84.7	80.3	78.1	76.0	73.7	67.3	65.0	60.8
80°	60.8	62.9	60.8	58.6	56.4	54.2	54.2	49.9	47.7	43.4	39.0
82.5°	41.3	39.0	39.0	36.9	36.9	34.7	34.7	30.3	28.2	26.0	23.9
85°	21.6	21.6	19.5	19.5	19.5	17.4	17.4	15.2	15.2	13.0	10.8
87.5°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	4.3	4.3	4.3
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°	1451.3	1451.3	1451.3	1451.3	1451.3	1451.3	1451.3	1451.3	1451.3	1451.3	1451.3
2.5°	1470.8	1466.5	1464.4	1464.4	1462.2	1460.0	1457.8	1455.7	1451.3	1451.3	1447.0
5°	1481.7	1477.3	1475.2	1468.7	1464.4	1464.4	1455.7	1453.6	1447.0	1442.6	1438.3
7.5°	1490.4	1481.7	1475.2	1468.7	1464.4	1460.0	1451.3	1442.6	1433.9	1425.3	1421.0
10°	1490.4	1481.7	1470.8	1460.0	1455.7	1451.3	1440.5	1427.5	1416.6	1407.9	1397.1
12.5°	1486.0	1473.1	1460.0	1451.3	1442.6	1436.2	1423.1	1410.2	1397.1	1379.7	1371.0
15°	1473.1	1455.7	1442.6	1427.5	1421.0	1410.2	1399.2	1379.7	1364.5	1349.4	1338.6
17.5°	1447.0	1425.3	1410.2	1394.9	1384.1	1377.6	1360.2	1342.9	1325.5	1308.1	1295.2
20°	1407.9	1388.4	1371.0	1351.5	1342.9	1334.2	1312.5	1295.2	1277.8	1258.2	1245.2
22.5°	1360.2	1340.7	1316.8	1301.6	1288.6	1277.8	1258.2	1238.7	1221.3	1204.0	1186.6
25°	1301.6	1282.1	1260.5	1236.6	1227.9	1217.1	1195.3	1175.8	1156.3	1136.8	1121.6
27.5°	1238.7	1212.7	1195.3	1169.3	1160.6	1149.8	1125.9	1104.2	1086.9	1071.6	1054.3
30°	1162.8	1143.2	1119.4	1095.5	1086.9	1076.0	1056.5	1036.9	1019.6	1002.2	984.8
32.5°	1080.3	1060.8	1036.9	1019.6	1006.6	997.9	978.4	961.1	943.7	926.3	911.1
35°	993.5	971.9	954.5	937.2	926.3	915.5	895.9	880.8	867.7	852.6	837.4
37.5°	904.6	889.5	872.1	852.6	841.7	833.0	817.9	800.6	789.6	776.7	765.8
40°	817.9	800.6	785.3	768.0	759.3	752.8	737.5	724.6	713.8	702.9	696.4
42.5°	729.0	713.8	698.5	687.7	681.2	674.6	663.8	648.6	642.2	631.2	624.8
45°	646.5	633.5	622.6	607.5	603.1	598.8	585.7	574.9	568.3	561.9	557.5
47.5°	568.3	559.7	546.7	538.0	531.5	527.2	518.5	509.8	503.3	498.9	494.6
50°	501.2	490.2	481.7	473.0	468.6	462.0	453.4	449.1	444.7	440.4	440.4
52.5°	438.3	427.3	418.6	412.2	407.8	403.5	397.0	394.9	390.5	390.5	388.3
55°	379.6	373.1	364.4	355.7	353.6	351.5	347.1	342.8	340.6	338.4	340.6
57.5°	329.7	323.3	314.6	308.1	305.9	303.7	301.5	297.2	295.0	295.0	295.0
60°	284.2	277.6	271.2	264.7	264.7	260.3	258.1	256.0	253.9	251.6	251.6
62.5°	243.0	236.5	230.0	225.7	223.4	221.3	217.0	214.7	212.6	212.6	210.5
65°	206.1	197.4	195.2	188.7	186.6	184.4	182.3	177.9	175.7	173.6	171.3
67.5°	169.2	164.9	158.4	154.0	151.8	149.7	147.6	143.2	141.0	138.9	134.5
70°	136.6	132.3	127.9	123.7	121.5	119.4	115.0	110.7	108.4	104.2	97.6
72.5°	106.3	102.0	97.6	93.3	91.1	88.9	84.7	80.3	76.0	71.6	67.3
75°	80.3	76.0	69.4	65.0	62.9	62.9	56.4	52.1	47.7	41.3	36.9
77.5°	56.4	49.9	47.7	43.4	41.3	36.9	32.6	28.2	23.9	21.6	17.4
80°	36.9	32.6	28.2	26.0	23.9	21.6	19.5	15.2	10.8	8.7	6.5
82.5°	21.6	19.5	17.4	15.2	13.0	10.8	8.7	8.7	6.5	4.3	2.1
85°	10.8	8.7	6.5	6.5	4.3	4.3	4.3	2.1	2.1	2.1	2.1
87.5°	4.3	2.1	2.1	2.1	2.1	2.1	2.1	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



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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1451.3	1451.3	1451.3	1451.3	1451.3	1451.3	1451.3	1451.3	1451.3	1451.3	1451.3
2.5°	1444.9	1442.6	1440.5	1438.3	1438.3	1433.9	1433.9	1431.8	1427.5	1425.3	1425.3
5°	1431.8	1425.3	1421.0	1418.8	1416.6	1410.2	1407.9	1403.6	1399.2	1394.9	1392.8
7.5°	1412.3	1401.5	1397.1	1394.9	1388.4	1381.9	1377.6	1371.0	1364.5	1358.1	1355.8
10°	1388.4	1377.6	1366.8	1362.4	1355.8	1351.5	1342.9	1334.2	1327.6	1321.2	1314.7
12.5°	1358.1	1345.0	1334.2	1329.9	1323.4	1314.7	1301.6	1297.3	1286.5	1282.1	1273.4
15°	1323.4	1308.1	1297.3	1290.8	1284.2	1271.3	1262.6	1253.9	1243.1	1238.7	1230.0
17.5°	1280.0	1262.6	1251.8	1245.2	1240.8	1230.0	1217.1	1206.2	1195.3	1191.0	1184.5
20°	1227.9	1217.1	1201.8	1195.3	1191.0	1177.9	1165.0	1160.6	1151.9	1143.2	1136.8
22.5°	1169.3	1158.4	1143.2	1136.8	1134.5	1123.7	1112.9	1106.4	1099.8	1093.4	1086.9
25°	1108.5	1095.5	1082.6	1078.2	1073.9	1065.2	1056.5	1052.1	1045.6	1041.3	1036.9
27.5°	1043.5	1030.5	1019.6	1013.1	1008.7	1002.2	997.9	993.5	989.2	984.8	982.7
30°	974.0	961.1	952.4	948.0	943.7	941.6	935.0	932.9	930.6	926.3	928.5
32.5°	904.6	893.8	885.1	878.6	878.6	874.3	872.1	872.1	869.9	869.9	869.9
35°	828.7	822.2	815.7	813.5	811.4	809.2	807.0	809.2	807.0	809.2	811.4
37.5°	759.3	752.8	748.5	746.2	744.1	746.2	744.1	744.1	746.2	750.6	752.8
40°	687.7	683.3	679.0	681.2	679.0	679.0	679.0	685.6	687.7	689.9	692.0
42.5°	620.4	616.1	613.9	613.9	616.1	613.9	618.3	620.4	624.8	631.2	635.6
45°	555.4	553.2	553.2	555.4	553.2	557.5	557.5	561.9	568.3	572.7	577.0
47.5°	494.6	494.6	494.6	496.8	496.8	498.9	503.3	505.4	509.8	514.1	518.5
50°	438.3	440.4	442.5	442.5	442.5	446.9	451.2	453.4	455.6	457.8	464.3
52.5°	388.3	390.5	390.5	392.6	394.9	397.0	399.1	403.5	405.7	410.0	412.2
55°	340.6	340.6	344.9	347.1	347.1	347.1	351.5	351.5	355.7	358.0	362.3
57.5°	295.0	297.2	297.2	299.4	299.4	301.5	303.7	305.9	308.1	310.2	312.4
60°	251.6	251.6	251.6	253.9	256.0	258.1	256.0	260.3	260.3	264.7	266.8
62.5°	210.5	212.6	212.6	212.6	212.6	212.6	212.6	214.7	217.0	219.1	221.3
65°	171.3	171.3	171.3	169.2	171.3	169.2	171.3	173.6	173.6	175.7	177.9
67.5°	132.3	132.3	127.9	127.9	130.2	130.2	130.2	130.2	127.9	132.3	132.3
70°	95.5	93.3	91.1	88.9	88.9	86.8	86.8	84.7	84.7	84.7	84.7
72.5°	62.9	58.6	54.2	52.1	49.9	49.9	45.5	43.4	45.5	45.5	45.5
75°	32.6	28.2	26.0	23.9	21.6	21.6	19.5	19.5	19.5	19.5	19.5
77.5°	13.0	10.8	8.7	8.7	6.5	6.5	6.5	6.5	6.5	6.5	6.5
80°	4.3	4.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
82.5°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
85°	2.1	0.0	0.0	2.1	0.0	2.1	2.1	2.1	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: P584266

CATALOG NUMBER: HC830D010-HM82555830-81WWBB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1451.3	1451.3	1451.3	1451.3	1451.3	1451.3	1451.3	1451.3
2.5°	1423.1	1423.1	1421.0	1423.1	1418.8	1421.0	1418.8	1418.8
5°	1390.5	1386.3	1386.3	1386.3	1384.1	1384.1	1381.9	1381.9
7.5°	1351.5	1349.4	1347.1	1345.0	1342.9	1340.7	1340.7	1340.7
10°	1312.5	1308.1	1308.1	1306.0	1301.6	1299.5	1299.5	1299.5
12.5°	1266.9	1264.7	1262.6	1262.6	1253.9	1256.1	1253.9	1253.9
15°	1223.5	1221.3	1221.3	1214.9	1210.5	1210.5	1210.5	1208.4
17.5°	1177.9	1175.8	1173.7	1169.3	1165.0	1165.0	1162.8	1165.0
20°	1130.3	1128.1	1123.7	1123.7	1121.6	1119.4	1115.0	1117.2
22.5°	1082.6	1078.2	1076.0	1076.0	1073.9	1073.9	1069.5	1069.5
25°	1032.6	1030.5	1028.2	1030.5	1026.1	1026.1	1021.8	1021.8
27.5°	980.6	978.4	978.4	978.4	976.3	978.4	976.3	976.3
30°	928.5	928.5	926.3	926.3	928.5	926.3	928.5	930.6
32.5°	872.1	872.1	874.3	874.3	876.4	876.4	876.4	876.4
35°	813.5	817.9	817.9	820.1	822.2	824.3	824.3	826.6
37.5°	759.3	761.4	763.6	765.8	770.1	770.1	770.1	770.1
40°	700.7	702.9	707.2	705.1	713.8	715.9	713.8	713.8
42.5°	639.9	644.3	646.5	650.9	653.0	657.3	659.5	659.5
45°	583.6	585.7	590.1	594.4	596.6	603.1	603.1	603.1
47.5°	524.9	529.3	531.5	535.9	538.0	544.6	546.7	544.6
50°	468.6	473.0	477.3	477.3	483.8	485.9	490.2	492.5
52.5°	414.4	416.5	420.9	423.0	427.3	431.7	433.9	436.0
55°	362.3	364.4	368.8	368.8	375.2	377.5	381.8	381.8
57.5°	314.6	316.7	321.0	318.9	323.3	327.6	327.6	325.4
60°	269.0	269.0	269.0	273.4	275.5	277.6	279.9	279.9
62.5°	221.3	225.7	227.8	227.8	230.0	232.1	232.1	230.0
65°	177.9	182.3	184.4	184.4	186.6	186.6	186.6	188.7
67.5°	134.5	134.5	134.5	136.6	134.5	134.5	134.5	134.5
70°	84.7	84.7	84.7	84.7	82.4	84.7	84.7	86.8
72.5°	45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5
75°	19.5	19.5	19.5	21.6	19.5	19.5	19.5	19.5
77.5°	8.7	6.5	8.7	8.7	6.5	6.5	6.5	6.5
80°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
82.5°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
85°	0.0	2.1	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)