

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: P584157

Luminaire Tested: **HC825D010-HM82555840-81RWWC**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584157
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: HC825D010-HM82555840-81RWWC
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2636.2 lumens
Efficiency: N/A
Efficacy: 98.4 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

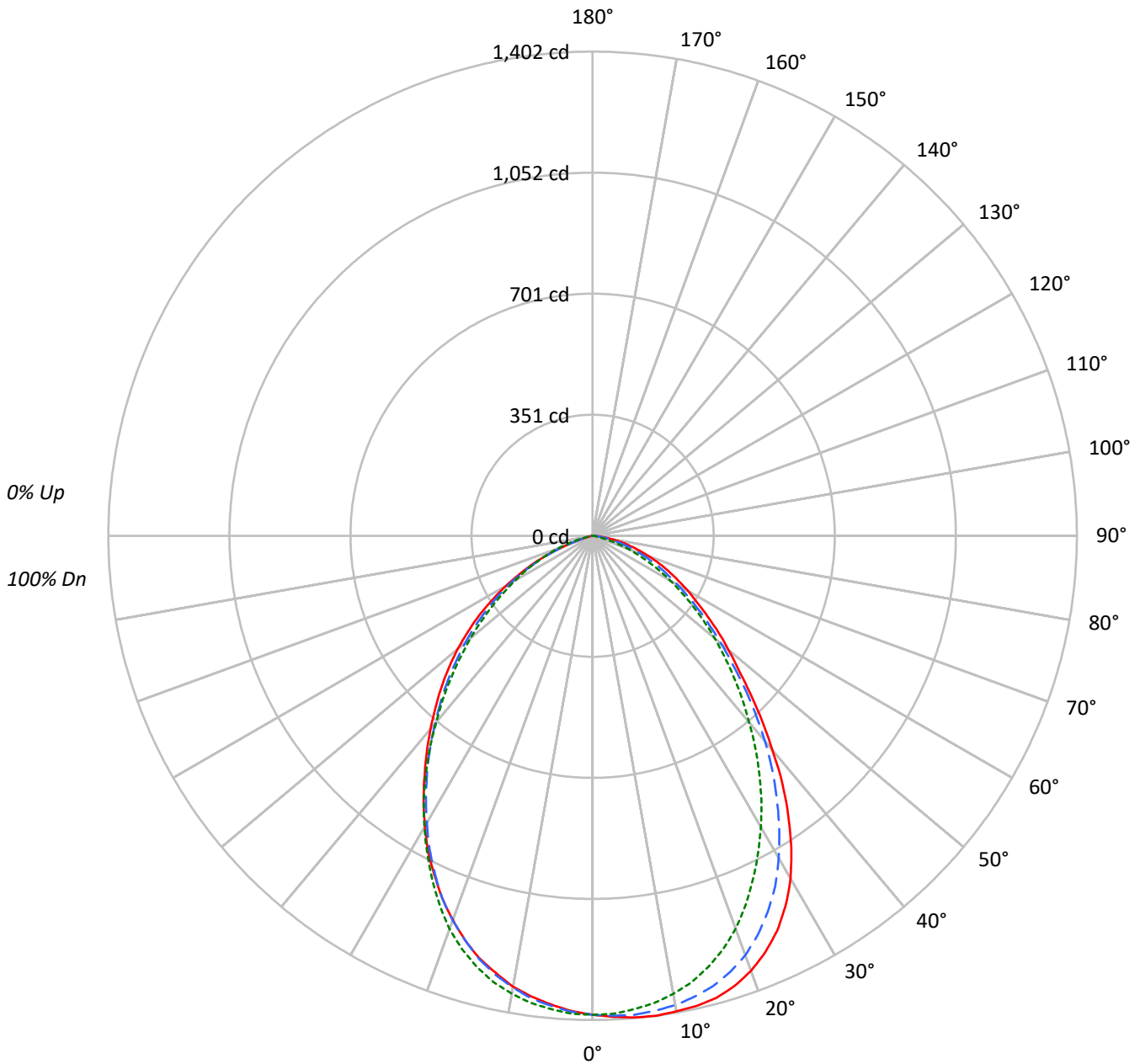
Input Watts (W): 26.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				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				100
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88				88
2	103	96	90	85	100	94	89	84	91	86	82	87	84	81	84	82	79	77				77
3	95	86	79	73	93	84	78	73	82	76	72	79	74	70	76	73	69	67				67
4	88	77	70	64	86	76	69	64	74	68	63	72	66	62	69	65	61	59				59
5	81	70	62	56	80	69	62	56	67	61	56	65	59	55	63	58	54	52				52
6	76	64	56	50	74	63	55	50	61	55	50	60	54	49	58	53	49	47				47
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44	42				42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38				38
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35				35
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32				32

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	42770	42770	42770
5°	43336	42590	42190
10°	43780	42155	41517
15°	44221	41268	40438
20°	43995	39743	38830
25°	42972	37362	36862
30°	40816	34684	34553
35°	37159	31651	31930
40°	32573	28327	29369
45°	28106	25197	26977
50°	24610	22125	24433
55°	21800	19015	21505
60°	19643	15992	17817
65°	17701	12835	13644
70°	15534	9350	7519
75°	13237	4861	1990
80°	10211	1314	320
85°	6545	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.9	5.0
10°-20°	367.9	14.0
20°-30°	522.2	19.8
30°-40°	549.7	20.9
40°-50°	467.6	17.7
50°-60°	337.9	12.8
60°-70°	192.2	7.3
70°-80°	60.6	2.3
80°-90°	7.4	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°	1020.9	38.7
0°-40°	1570.6	59.6
0°-60°	2376.1	90.1
0°-90°	2636.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2636.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1387	1387	1387	1387	1387	
5°	1400	1393	1376	1367	1363	134
15°	1385	1350	1293	1269	1267	390
25°	1263	1200	1098	1080	1083	578
35°	987	930	841	835	848	614
45°	644	620	578	593	619	501
55°	406	376	354	374	400	366
65°	243	209	176	174	187	241
75°	111	85	41	18	17	120
85°	18	11	0	0	0	24
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°	1387.0	1387.0	1387.0	1387.0	1387.0	1387.0	1387.0	1387.0	1387.0	1387.0	1387.0
2.5°	1394.4	1396.4	1392.6	1392.6	1396.4	1392.6	1394.4	1394.4	1392.6	1392.6	1390.8
5°	1400.0	1398.2	1398.2	1398.2	1400.0	1396.4	1394.4	1396.4	1392.6	1392.6	1392.6
7.5°	1401.9	1401.9	1400.0	1398.2	1398.2	1398.2	1396.4	1394.4	1392.6	1388.9	1387.0
10°	1398.2	1398.2	1400.0	1396.4	1396.4	1392.6	1392.6	1388.9	1388.9	1385.2	1379.7
12.5°	1394.4	1392.6	1392.6	1388.9	1388.9	1385.2	1385.2	1379.7	1377.8	1372.3	1366.7
15°	1385.2	1383.4	1379.7	1377.8	1375.9	1374.1	1370.3	1368.5	1363.0	1355.6	1350.0
17.5°	1366.7	1364.8	1363.0	1359.3	1355.6	1353.8	1351.8	1346.3	1338.9	1333.3	1324.1
20°	1340.7	1338.9	1338.9	1333.3	1331.5	1325.9	1324.1	1316.7	1311.2	1300.1	1292.7
22.5°	1305.6	1307.4	1303.7	1300.1	1296.3	1290.7	1287.1	1279.6	1270.4	1259.3	1250.0
25°	1263.0	1264.8	1261.1	1257.5	1251.9	1248.2	1244.5	1233.4	1224.1	1211.1	1200.0
27.5°	1209.3	1209.3	1209.3	1205.6	1196.4	1194.4	1190.8	1179.7	1166.7	1155.6	1144.5
30°	1146.3	1144.5	1144.5	1138.9	1135.2	1127.8	1122.2	1113.0	1103.7	1090.8	1077.8
32.5°	1070.4	1072.2	1066.7	1062.9	1057.4	1057.4	1050.0	1042.6	1031.5	1018.5	1005.6
35°	987.1	988.9	985.1	983.3	974.1	972.2	970.4	961.1	953.7	944.5	929.6
37.5°	901.9	900.0	898.2	898.2	892.6	889.0	885.2	879.6	868.5	861.1	853.8
40°	809.2	809.2	809.2	807.4	805.6	801.9	800.0	796.3	788.9	781.5	776.0
42.5°	725.9	725.9	724.1	722.2	718.5	720.4	716.7	712.9	705.6	700.0	696.4
45°	644.5	644.5	644.5	646.3	642.6	637.1	637.1	633.3	629.6	626.0	620.4
47.5°	572.2	577.8	574.1	572.2	574.1	566.7	566.7	562.9	559.3	555.5	548.2
50°	513.0	513.0	513.0	509.3	507.4	507.4	501.8	498.2	496.3	492.6	485.2
52.5°	459.2	455.6	455.6	453.7	451.9	448.1	448.1	444.5	437.1	433.4	427.8
55°	405.5	405.5	403.7	401.9	400.0	398.1	396.3	390.8	387.0	381.5	375.9
57.5°	357.4	361.1	359.3	355.6	351.8	351.8	348.2	344.4	338.9	333.3	327.7
60°	318.5	316.7	316.7	314.8	311.2	309.2	307.4	301.8	296.3	290.7	285.2
62.5°	277.8	277.8	277.8	274.0	270.4	268.6	266.6	263.0	255.5	250.0	246.3
65°	242.6	240.8	238.9	237.0	235.2	231.4	229.6	225.9	220.4	214.9	209.3
67.5°	207.4	205.5	205.5	203.7	198.2	196.3	196.3	190.8	185.2	179.7	174.1
70°	172.3	172.3	172.3	168.5	166.7	164.8	163.0	159.2	153.8	148.2	142.6
72.5°	142.6	140.7	140.7	138.9	133.3	131.5	129.7	125.9	120.4	116.6	113.0
75°	111.1	111.1	109.2	107.4	105.6	103.7	101.9	98.1	92.6	87.0	85.2
77.5°	85.2	83.4	83.4	81.5	77.8	76.0	76.0	72.2	66.7	62.9	59.3
80°	57.5	59.3	57.5	55.5	53.7	51.9	50.0	48.2	44.4	40.8	37.0
82.5°	35.2	37.0	35.2	35.2	33.4	31.5	31.5	27.8	25.9	24.1	22.3
85°	18.5	18.5	18.5	18.5	16.7	16.7	16.7	14.8	12.9	11.1	11.1
87.5°	5.6	7.4	5.6	5.6	5.6	5.6	5.6	5.6	3.7	3.7	3.7
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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1387.0	1387.0	1387.0	1387.0	1387.0	1387.0	1387.0	1387.0	1387.0	1387.0	1387.0
2.5°	1392.6	1390.8	1388.9	1388.9	1388.9	1388.9	1388.9	1387.0	1385.2	1385.2	1385.2
5°	1388.9	1388.9	1388.9	1387.0	1385.2	1385.2	1381.5	1379.7	1377.8	1375.9	1374.1
7.5°	1385.2	1381.5	1379.7	1377.8	1375.9	1375.9	1372.3	1368.5	1368.5	1364.8	1361.1
10°	1374.1	1372.3	1368.5	1364.8	1363.0	1361.1	1357.4	1351.8	1350.0	1346.3	1342.6
12.5°	1361.1	1357.4	1353.8	1346.3	1344.5	1342.6	1335.3	1329.7	1325.9	1324.1	1314.8
15°	1344.5	1337.1	1331.5	1322.2	1320.4	1316.7	1311.2	1305.6	1298.1	1292.7	1288.9
17.5°	1314.8	1307.4	1298.1	1288.9	1285.2	1285.2	1276.0	1268.6	1259.3	1255.5	1248.2
20°	1279.6	1270.4	1263.0	1251.9	1246.3	1240.8	1235.2	1224.1	1216.7	1211.1	1201.8
22.5°	1239.0	1225.9	1216.7	1205.6	1196.4	1190.8	1181.5	1172.3	1163.0	1157.4	1150.0
25°	1187.1	1175.9	1161.2	1150.0	1144.5	1137.1	1126.0	1116.7	1107.4	1098.1	1094.5
27.5°	1129.6	1114.8	1101.9	1088.9	1083.4	1077.8	1064.9	1053.7	1046.4	1037.0	1033.3
30°	1066.7	1051.9	1037.0	1025.9	1020.4	1011.2	1003.8	990.7	981.5	974.1	964.8
32.5°	994.5	983.3	970.4	953.7	950.1	942.6	931.5	926.0	914.8	909.3	901.9
35°	916.7	909.3	896.3	883.4	877.8	874.1	864.9	853.8	846.3	840.8	837.1
37.5°	842.6	833.3	820.4	811.2	807.4	801.9	790.7	785.2	777.8	774.0	766.7
40°	763.0	753.7	744.5	738.9	733.4	729.6	722.2	716.7	709.3	703.7	701.8
42.5°	685.2	679.7	672.3	664.8	663.0	657.4	653.7	648.2	642.6	640.7	635.2
45°	614.8	609.3	601.9	594.5	592.6	588.9	587.0	581.4	577.8	577.8	577.8
47.5°	544.4	538.9	531.5	527.8	529.6	522.3	522.3	520.3	516.7	516.7	518.5
50°	481.5	474.1	472.2	468.6	464.8	461.2	463.0	457.4	457.4	461.2	459.2
52.5°	422.2	414.8	413.0	409.3	407.5	407.5	405.5	405.5	403.7	405.5	405.5
55°	368.5	362.9	359.3	355.6	353.7	353.7	353.7	351.8	350.0	353.7	355.6
57.5°	320.4	318.5	314.8	309.2	307.4	305.6	303.7	303.7	303.7	303.7	305.6
60°	277.8	274.0	270.4	264.8	264.8	263.0	261.1	259.3	259.3	259.3	259.3
62.5°	240.8	235.2	229.6	225.9	224.1	222.2	220.4	216.7	216.7	216.7	216.7
65°	203.7	198.2	194.4	190.8	187.0	187.0	183.3	181.5	177.8	175.9	172.3
67.5°	168.5	164.8	161.1	155.6	153.8	151.8	148.2	146.3	140.7	138.9	137.1
70°	137.1	131.5	127.8	124.1	122.2	118.6	114.8	111.1	107.4	103.7	100.0
72.5°	107.4	101.9	98.1	94.5	90.7	90.7	85.2	81.5	76.0	72.2	66.7
75°	79.6	74.0	70.4	64.8	62.9	61.1	55.5	51.9	46.3	40.8	37.0
77.5°	53.7	50.0	46.3	40.8	37.0	37.0	31.5	27.8	24.1	18.5	16.7
80°	33.4	29.6	25.9	22.3	22.3	18.5	16.7	12.9	9.3	7.4	5.6
82.5°	18.5	16.7	14.8	11.1	11.1	9.3	7.4	5.6	3.7	1.8	1.8
85°	9.3	7.4	5.6	5.6	3.7	3.7	3.7	1.8	1.8	0.0	0.0
87.5°	3.7	1.8	1.8	1.8	1.8	1.8	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°	1387.0	1387.0	1387.0	1387.0	1387.0	1387.0	1387.0	1387.0	1387.0	1387.0	1387.0
2.5°	1383.4	1383.4	1381.5	1381.5	1381.5	1379.7	1381.5	1379.7	1379.7	1379.7	1381.5
5°	1375.9	1372.3	1372.3	1370.3	1370.3	1368.5	1370.3	1368.5	1366.7	1364.8	1366.7
7.5°	1361.1	1357.4	1355.6	1353.8	1353.8	1353.8	1351.8	1350.0	1351.8	1346.3	1350.0
10°	1340.7	1338.9	1335.3	1333.3	1331.5	1333.3	1331.5	1327.8	1327.8	1327.8	1325.9
12.5°	1314.8	1311.2	1309.3	1307.4	1303.7	1303.7	1305.6	1301.9	1301.9	1298.1	1298.1
15°	1283.4	1279.6	1276.0	1276.0	1272.2	1272.2	1270.4	1270.4	1268.6	1266.7	1266.7
17.5°	1244.5	1239.0	1235.2	1237.0	1235.2	1233.4	1233.4	1229.6	1227.8	1229.6	1229.6
20°	1198.2	1194.4	1190.8	1192.6	1188.9	1187.1	1188.9	1183.3	1185.2	1185.2	1185.2
22.5°	1146.3	1144.5	1138.9	1138.9	1135.2	1133.3	1135.2	1135.2	1137.1	1135.2	1135.2
25°	1088.9	1085.2	1081.4	1081.4	1079.6	1077.8	1079.6	1081.4	1079.6	1081.4	1081.4
27.5°	1027.8	1022.3	1022.3	1018.5	1018.5	1020.4	1018.5	1020.4	1022.3	1022.3	1025.9
30°	961.1	959.3	957.4	955.6	955.6	957.4	957.4	957.4	959.3	963.0	963.0
32.5°	898.2	894.4	890.8	890.8	894.4	892.6	894.4	894.4	898.2	898.2	901.9
35°	829.7	829.7	825.9	827.8	827.8	827.8	827.8	831.5	835.2	837.1	840.8
37.5°	766.7	761.1	763.0	763.0	764.8	763.0	768.6	768.6	772.2	772.2	776.0
40°	698.2	698.2	700.0	698.2	700.0	700.0	703.7	707.4	709.3	712.9	714.9
42.5°	633.3	637.1	633.3	635.2	637.1	638.9	640.7	642.6	650.0	653.7	659.2
45°	574.1	576.0	577.8	579.6	577.8	581.4	583.4	587.0	592.6	594.5	596.3
47.5°	516.7	518.5	520.3	522.3	522.3	525.9	527.8	531.5	535.2	537.0	538.9
50°	461.2	464.8	466.6	466.6	468.6	472.2	475.9	475.9	479.7	485.2	487.1
52.5°	411.1	411.1	414.8	416.7	418.5	418.5	424.0	426.0	427.8	431.5	435.2
55°	355.6	361.1	362.9	362.9	366.7	370.3	372.3	374.1	374.1	381.5	381.5
57.5°	307.4	309.2	313.0	313.0	313.0	318.5	318.5	322.2	324.1	325.9	329.7
60°	259.3	263.0	263.0	264.8	263.0	266.6	268.6	272.2	274.0	276.0	277.8
62.5°	214.9	214.9	216.7	216.7	216.7	216.7	220.4	220.4	224.1	225.9	227.8
65°	172.3	172.3	172.3	172.3	172.3	172.3	172.3	172.3	174.1	174.1	177.8
67.5°	133.3	131.5	127.8	129.7	127.8	127.8	125.9	125.9	127.8	127.8	131.5
70°	96.3	94.5	90.7	90.7	88.9	87.0	85.2	83.4	81.5	81.5	81.5
72.5°	62.9	59.3	53.7	51.9	51.9	48.2	44.4	42.6	42.6	42.6	42.6
75°	31.5	27.8	24.1	22.3	22.3	18.5	20.3	18.5	18.5	18.5	18.5
77.5°	12.9	9.3	7.4	7.4	7.4	5.6	5.6	5.6	5.6	5.6	5.6
80°	3.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
82.5°	1.8	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: P584157

CATALOG NUMBER: HC825D010-HM82555840-81RWWC

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1387.0	1387.0	1387.0	1387.0	1387.0	1387.0	1387.0	1387.0
2.5°	1379.7	1379.7	1375.9	1377.8	1377.8	1377.8	1377.8	1377.8
5°	1363.0	1364.8	1363.0	1364.8	1364.8	1363.0	1363.0	1363.0
7.5°	1346.3	1348.2	1346.3	1348.2	1348.2	1348.2	1346.3	1346.3
10°	1325.9	1325.9	1325.9	1325.9	1325.9	1324.1	1325.9	1325.9
12.5°	1298.1	1298.1	1298.1	1300.1	1300.1	1298.1	1298.1	1296.3
15°	1268.6	1264.8	1266.7	1268.6	1266.7	1266.7	1266.7	1266.7
17.5°	1227.8	1229.6	1227.8	1227.8	1227.8	1227.8	1229.6	1227.8
20°	1185.2	1185.2	1187.1	1185.2	1185.2	1185.2	1185.2	1183.3
22.5°	1137.1	1135.2	1135.2	1137.1	1137.1	1135.2	1137.1	1137.1
25°	1083.4	1085.2	1083.4	1083.4	1085.2	1085.2	1085.2	1083.4
27.5°	1025.9	1027.8	1029.7	1027.8	1027.8	1027.8	1029.7	1031.5
30°	966.6	970.4	966.6	966.6	970.4	968.6	970.4	970.4
32.5°	903.7	909.3	905.5	909.3	909.3	911.1	909.3	911.1
35°	840.8	846.3	846.3	846.3	848.2	850.0	850.0	848.2
37.5°	781.5	783.3	783.3	787.1	788.9	790.7	790.7	788.9
40°	720.4	724.1	725.9	725.9	725.9	729.6	733.4	729.6
42.5°	661.2	663.0	664.8	664.8	668.5	670.4	672.3	672.3
45°	603.7	607.4	609.3	611.1	613.0	616.6	614.8	618.6
47.5°	544.4	550.0	551.9	553.7	557.5	559.3	561.1	562.9
50°	490.7	494.4	494.4	498.2	503.8	503.8	507.4	509.3
52.5°	437.1	438.9	440.7	442.6	446.3	450.0	450.0	453.7
55°	385.2	387.0	387.0	388.9	390.8	398.1	400.0	400.0
57.5°	331.5	331.5	335.2	337.0	338.9	342.6	342.6	342.6
60°	279.6	281.5	281.5	283.3	285.2	288.9	290.7	288.9
62.5°	227.8	229.6	229.6	231.4	235.2	237.0	235.2	235.2
65°	179.7	181.5	181.5	183.3	187.0	187.0	185.2	187.0
67.5°	131.5	131.5	131.5	131.5	131.5	131.5	131.5	131.5
70°	83.4	81.5	79.6	81.5	81.5	81.5	79.6	83.4
72.5°	40.8	42.6	42.6	42.6	42.6	42.6	42.6	40.8
75°	18.5	18.5	16.7	16.7	16.7	18.5	18.5	16.7
77.5°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
80°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
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)