

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: P593650

Luminaire Tested: **HC825D010-HM82555950-81WWW**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P593650
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: HC825D010-HM82555950-81WWW
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2396.3 lumens
Efficiency: N/A
Efficacy: 89.4 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

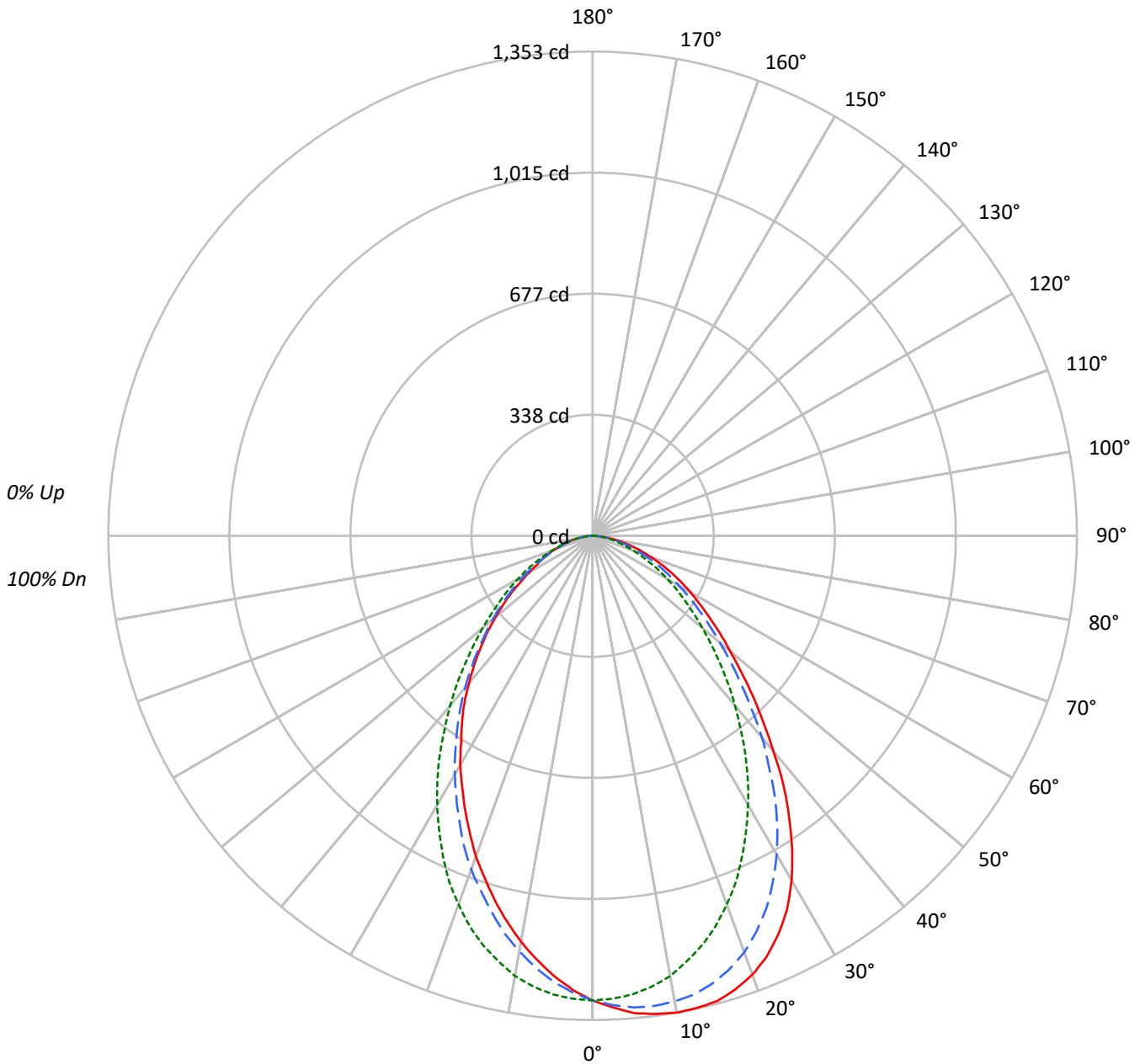
Input Watts (W): 26.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20					
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°	40038	40038	40038
5°	41444	39807	38228
10°	42365	39112	36078
15°	42970	37792	33686
20°	42837	35959	31280
25°	41778	33629	28713
30°	39580	30924	26345
35°	36010	27985	23942
40°	31628	24893	21632
45°	27583	21892	19284
50°	24001	19189	16987
55°	21402	16860	14779
60°	19445	14777	12606
65°	17482	12849	11441
70°	15571	10963	10323
75°	13642	9234	8817
80°	11578	7512	7831
85°	8739	5590	6262



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.6	5.1
10°-20°	335.1	14.0
20°-30°	465.1	19.4
30°-40°	480.9	20.1
40°-50°	402.7	16.8
50°-60°	292.3	12.2
60°-70°	184.5	7.7
70°-80°	91.4	3.8
80°-90°	22.7	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°	921.8	38.5
0°-40°	1402.7	58.5
0°-60°	2097.7	87.5
0°-90°	2396.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2396.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1298	1298	1298	1298	1298	
5°	1339	1323	1286	1251	1235	128
15°	1346	1295	1184	1089	1055	379
25°	1228	1149	988	881	844	563
35°	957	886	743	659	636	596
45°	632	587	502	453	442	489
55°	398	363	314	287	275	359
65°	240	210	176	155	157	239
75°	114	95	78	74	74	123
85°	25	19	16	18	18	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°	1298.4	1298.4	1298.4	1298.4	1298.4	1298.4	1298.4	1298.4	1298.4	1298.4	1298.4
2.5°	1319.5	1319.5	1321.3	1319.5	1319.5	1319.5	1317.8	1317.8	1316.0	1316.0	1312.5
5°	1338.9	1335.4	1338.9	1335.4	1335.4	1335.4	1333.6	1330.1	1328.4	1324.9	1323.1
7.5°	1347.8	1346.0	1346.0	1344.2	1344.2	1342.4	1340.7	1338.9	1331.8	1330.1	1324.9
10°	1353.0	1351.3	1351.3	1349.5	1346.0	1346.0	1342.4	1340.7	1331.8	1328.4	1321.3
12.5°	1351.3	1351.3	1351.3	1349.5	1344.2	1342.4	1338.9	1333.6	1326.6	1319.5	1312.5
15°	1346.0	1346.0	1342.4	1340.7	1335.4	1331.8	1330.1	1321.3	1314.3	1305.4	1294.9
17.5°	1328.4	1328.4	1326.6	1323.1	1317.8	1314.3	1310.8	1302.0	1294.9	1280.8	1270.2
20°	1305.4	1303.7	1302.0	1296.6	1291.4	1289.6	1284.3	1272.0	1263.1	1252.6	1238.5
22.5°	1272.0	1270.2	1268.5	1265.0	1256.1	1252.6	1249.1	1240.2	1224.4	1213.8	1196.3
25°	1227.9	1227.9	1224.4	1219.2	1210.3	1206.7	1201.5	1192.7	1178.6	1162.8	1148.6
27.5°	1176.9	1175.1	1169.8	1166.3	1159.2	1154.0	1145.1	1134.5	1120.5	1108.1	1090.5
30°	1111.6	1111.6	1108.1	1102.8	1094.1	1090.5	1083.5	1071.2	1057.1	1041.2	1028.8
32.5°	1037.7	1037.7	1032.3	1028.8	1023.6	1014.8	1013.0	999.0	986.5	974.2	960.1
35°	956.6	958.4	954.9	947.8	939.0	939.0	935.5	923.2	909.1	896.8	886.2
37.5°	875.6	870.3	868.5	865.0	859.7	852.7	849.2	843.9	831.5	822.7	806.9
40°	785.7	787.5	784.0	780.5	778.6	773.4	771.7	762.8	754.0	743.4	736.4
42.5°	704.7	704.7	704.7	701.2	697.6	692.4	690.6	685.3	674.7	667.7	657.1
45°	632.5	627.2	627.2	625.4	623.7	620.2	614.8	611.3	604.2	599.0	586.7
47.5°	562.0	563.8	562.0	560.3	554.9	553.2	551.5	544.4	537.4	532.0	523.2
50°	500.3	503.9	500.3	500.3	496.8	495.1	491.6	486.2	481.0	472.2	463.3
52.5°	449.3	449.3	447.5	445.8	440.4	436.9	435.2	433.4	424.6	417.5	410.5
55°	398.1	400.0	400.0	394.6	392.9	389.4	387.6	382.3	378.8	368.2	362.9
57.5°	354.1	352.4	354.1	350.6	347.1	343.6	341.8	338.2	333.0	325.9	318.9
60°	315.3	311.8	311.8	310.1	306.6	304.7	301.2	296.0	290.7	283.7	278.3
62.5°	276.6	274.9	273.1	271.4	267.8	266.0	264.3	258.9	253.7	248.5	243.1
65°	239.6	239.6	237.9	234.3	232.5	230.8	229.0	225.6	218.5	215.0	209.6
67.5°	206.1	204.4	204.4	200.8	197.3	195.6	195.6	192.1	186.7	181.5	177.9
70°	172.7	174.4	172.7	170.9	167.3	167.3	163.8	162.1	155.0	153.2	148.0
72.5°	142.7	142.7	140.9	140.9	137.4	135.7	135.7	132.1	128.6	125.1	121.6
75°	114.5	114.5	114.5	112.8	111.0	107.4	107.4	105.7	102.2	98.7	95.1
77.5°	89.9	88.1	88.1	86.3	84.5	82.8	82.8	81.0	77.5	75.8	72.2
80°	65.2	63.5	63.5	63.5	59.9	61.6	59.9	58.1	56.4	54.6	52.9
82.5°	42.3	44.1	44.1	42.3	40.6	40.6	40.6	38.7	38.7	37.0	35.2
85°	24.7	24.7	24.7	24.7	22.9	22.9	22.9	21.2	21.2	21.2	19.4
87.5°	10.6	10.6	10.6	10.6	10.6	10.6	8.8	8.8	8.8	8.8	8.8
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°	1298.4	1298.4	1298.4	1298.4	1298.4	1298.4	1298.4	1298.4	1298.4	1298.4	1298.4
2.5°	1312.5	1308.9	1307.2	1305.4	1305.4	1303.7	1302.0	1298.4	1298.4	1294.9	1293.1
5°	1319.5	1314.3	1310.8	1307.2	1305.4	1302.0	1298.4	1293.1	1291.4	1286.0	1280.8
7.5°	1321.3	1312.5	1308.9	1302.0	1298.4	1294.9	1287.9	1282.5	1275.5	1270.2	1263.1
10°	1314.3	1307.2	1298.4	1289.6	1287.9	1282.5	1272.0	1265.0	1256.1	1249.1	1238.5
12.5°	1303.7	1293.1	1284.3	1273.7	1268.5	1263.1	1252.6	1242.1	1229.6	1217.3	1206.7
15°	1286.0	1273.7	1261.4	1249.1	1242.1	1236.7	1224.4	1212.1	1199.8	1183.8	1173.4
17.5°	1259.6	1245.6	1233.2	1217.3	1210.3	1205.0	1189.2	1175.1	1159.2	1143.4	1132.8
20°	1226.2	1208.6	1194.4	1176.9	1171.5	1162.8	1146.9	1131.0	1113.4	1095.8	1083.5
22.5°	1182.1	1164.5	1148.6	1131.0	1122.2	1113.4	1097.6	1078.2	1060.6	1046.5	1034.2
25°	1131.0	1115.2	1095.8	1080.0	1069.4	1058.8	1041.2	1025.4	1009.4	988.4	976.1
27.5°	1074.7	1055.2	1041.2	1020.0	1009.4	1002.5	983.0	961.9	947.8	928.4	914.3
30°	1011.3	993.6	977.8	956.6	946.1	939.0	921.4	902.0	887.9	868.5	854.4
32.5°	944.3	924.9	905.5	891.4	879.1	872.0	852.7	840.4	822.7	806.9	791.1
35°	872.0	852.7	838.6	819.2	812.1	805.1	789.2	773.4	757.6	743.4	731.1
37.5°	794.6	780.5	764.6	750.5	745.3	738.2	718.8	704.7	692.4	678.3	667.7
40°	718.8	706.4	695.9	681.8	673.0	667.7	653.6	641.3	627.2	618.4	607.8
42.5°	650.1	636.0	625.4	614.8	606.0	600.8	588.4	579.6	569.0	560.3	547.9
45°	577.8	570.8	558.4	549.7	544.4	537.4	528.5	518.0	509.1	502.0	493.3
47.5°	514.5	507.4	498.6	488.0	484.5	479.1	470.4	463.3	456.2	449.3	440.4
50°	456.2	447.5	440.4	433.4	429.8	424.6	415.8	412.3	406.9	400.0	394.6
52.5°	403.4	396.4	389.4	380.5	378.8	375.2	370.0	362.9	357.6	354.1	350.6
55°	355.9	348.8	343.6	336.5	334.7	331.2	324.2	320.7	317.1	313.6	310.1
57.5°	313.6	306.6	299.5	296.0	292.4	288.9	287.2	281.8	278.3	276.6	273.1
60°	274.9	267.8	262.5	257.2	255.4	253.7	250.2	246.6	243.1	239.6	237.9
62.5°	237.9	230.8	227.3	223.7	220.2	220.2	216.7	213.1	209.6	207.9	204.4
65°	204.4	200.8	195.6	190.2	188.5	188.5	183.2	181.5	179.7	176.1	172.7
67.5°	172.7	169.2	163.8	162.1	160.3	158.6	156.8	153.2	149.8	148.0	144.5
70°	144.5	140.9	137.4	135.7	133.9	132.1	128.6	126.8	123.4	121.6	119.8
72.5°	116.3	114.5	111.0	109.2	107.4	105.7	103.9	102.2	98.7	96.9	95.1
75°	93.4	91.6	88.1	86.3	84.5	84.5	82.8	79.3	77.5	77.5	75.8
77.5°	70.5	68.7	67.0	65.2	63.5	63.5	61.6	59.9	58.1	58.1	56.4
80°	51.0	49.3	47.6	47.6	47.6	45.8	44.1	44.1	42.3	42.3	40.6
82.5°	33.5	33.5	31.7	31.7	31.7	30.0	30.0	28.1	28.1	28.1	28.1
85°	19.4	19.4	19.4	17.7	17.7	17.7	17.7	17.7	17.7	15.8	17.7
87.5°	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	7.1	7.1	7.1
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°	1298.4	1298.4	1298.4	1298.4	1298.4	1298.4	1298.4	1298.4	1298.4	1298.4	1298.4
2.5°	1291.4	1289.6	1286.0	1286.0	1282.5	1282.5	1280.8	1279.1	1277.3	1275.5	1273.7
5°	1279.1	1272.0	1268.5	1266.7	1263.1	1261.4	1256.1	1252.6	1250.8	1247.3	1243.8
7.5°	1256.1	1249.1	1242.1	1240.2	1238.5	1231.5	1226.2	1220.9	1217.3	1213.8	1210.3
10°	1229.6	1222.7	1213.8	1210.3	1206.7	1198.0	1190.9	1185.7	1178.6	1171.5	1169.8
12.5°	1198.0	1187.4	1176.9	1173.4	1168.0	1159.2	1152.2	1143.4	1138.1	1129.3	1127.6
15°	1161.0	1148.6	1139.9	1131.0	1127.6	1118.7	1106.4	1099.3	1088.7	1085.2	1076.4
17.5°	1117.0	1104.6	1092.3	1088.7	1083.5	1071.2	1058.8	1050.0	1039.4	1034.2	1028.8
20°	1071.2	1055.2	1042.9	1039.4	1032.3	1021.8	1009.4	1000.7	991.9	981.3	976.1
22.5°	1018.3	1000.7	990.1	981.3	979.5	967.2	953.2	946.1	939.0	930.2	923.2
25°	960.1	944.3	932.0	924.9	921.4	910.8	900.3	891.4	880.8	875.6	866.8
27.5°	900.3	889.7	873.9	866.8	861.5	852.7	840.4	835.0	824.5	817.5	812.1
30°	842.1	826.3	817.5	808.6	803.4	794.6	784.0	778.6	769.9	762.8	757.6
32.5°	778.6	768.2	755.7	752.3	745.3	736.4	729.3	720.5	713.5	706.4	704.7
35°	720.5	706.4	694.1	690.6	685.3	676.6	673.0	667.7	658.9	657.1	650.1
37.5°	657.1	650.1	636.0	630.7	628.9	621.9	614.8	611.3	606.0	600.8	599.0
40°	597.3	588.4	581.3	576.1	572.6	567.3	560.3	558.4	554.9	547.9	546.1
42.5°	540.9	532.0	525.0	523.2	518.0	512.6	509.1	503.9	502.0	500.3	496.8
45°	486.2	481.0	473.9	472.2	470.4	463.3	459.8	456.2	452.7	451.0	447.5
47.5°	436.9	431.6	426.4	424.6	421.0	419.3	414.0	412.3	406.9	405.2	403.4
50°	389.4	385.8	382.3	380.5	377.0	375.2	371.7	368.2	364.7	362.9	361.1
52.5°	347.1	343.6	340.0	338.2	336.5	333.0	329.5	325.9	324.2	322.4	320.7
55°	306.6	303.0	301.2	299.5	297.8	296.0	290.7	288.9	287.2	285.4	281.8
57.5°	269.5	266.0	262.5	262.5	260.8	258.9	255.4	251.9	251.9	248.5	244.9
60°	236.0	232.5	229.0	227.3	225.6	222.0	220.2	218.5	216.7	215.0	211.4
62.5°	200.8	199.1	195.6	195.6	192.1	190.2	188.5	186.7	185.0	181.5	179.7
65°	170.9	169.2	165.6	163.8	163.8	162.1	158.6	156.8	155.0	155.0	153.2
67.5°	142.7	140.9	137.4	135.7	135.7	133.9	132.1	132.1	130.3	128.6	130.3
70°	118.0	114.5	114.5	112.8	112.8	111.0	109.2	109.2	109.2	111.0	111.0
72.5°	93.4	91.6	89.9	89.9	89.9	89.9	88.1	88.1	89.9	91.6	91.6
75°	74.0	72.2	72.2	72.2	70.5	70.5	72.2	72.2	74.0	74.0	74.0
77.5°	54.6	54.6	54.6	54.6	54.6	54.6	56.4	56.4	58.1	58.1	58.1
80°	40.6	40.6	40.6	40.6	40.6	42.3	42.3	42.3	42.3	42.3	44.1
82.5°	28.1	28.1	28.1	28.1	28.1	28.1	28.1	30.0	30.0	30.0	30.0
85°	15.8	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7
87.5°	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
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: P593650

CATALOG NUMBER: HC825D010-HM82555950-81WWW

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1298.4	1298.4	1298.4	1298.4	1298.4	1298.4	1298.4	1298.4
2.5°	1272.0	1272.0	1272.0	1273.7	1270.2	1270.2	1270.2	1270.2
5°	1242.1	1240.2	1238.5	1240.2	1236.7	1236.7	1235.0	1235.0
7.5°	1205.0	1203.3	1201.5	1201.5	1198.0	1198.0	1196.3	1194.4
10°	1164.5	1161.0	1162.8	1159.2	1157.4	1155.7	1154.0	1152.2
12.5°	1120.5	1117.0	1115.2	1111.6	1108.1	1106.4	1108.1	1104.6
15°	1072.9	1067.6	1065.8	1062.3	1058.8	1057.1	1057.1	1055.2
17.5°	1020.0	1016.5	1014.8	1011.3	1009.4	1005.9	1004.2	1002.5
20°	970.7	961.9	963.6	960.1	958.4	951.3	951.3	953.2
22.5°	916.1	910.8	907.3	903.7	902.0	898.5	898.5	896.8
25°	861.5	856.2	854.4	851.0	849.2	845.6	843.9	843.9
27.5°	808.6	801.6	801.6	798.1	794.6	792.8	791.1	789.2
30°	752.3	747.0	745.3	745.3	743.4	743.4	738.2	739.9
32.5°	699.5	695.9	694.1	690.6	690.6	688.9	688.9	683.5
35°	646.6	641.3	643.1	639.5	637.7	636.0	637.7	636.0
37.5°	595.5	591.9	591.9	588.4	588.4	586.7	584.9	588.4
40°	544.4	542.6	540.9	539.1	540.9	539.1	535.5	537.4
42.5°	493.3	493.3	491.6	491.6	489.7	489.7	489.7	489.7
45°	447.5	445.8	445.8	443.9	443.9	443.9	443.9	442.2
47.5°	401.7	400.0	400.0	400.0	398.1	398.1	396.4	398.1
50°	357.6	357.6	355.9	355.9	357.6	355.9	354.1	354.1
52.5°	317.1	317.1	315.3	315.3	313.6	311.8	313.6	313.6
55°	280.1	278.3	276.6	276.6	274.9	273.1	273.1	274.9
57.5°	244.9	243.1	241.4	241.4	237.9	236.0	236.0	236.0
60°	211.4	207.9	207.9	206.1	206.1	204.4	204.4	204.4
62.5°	179.7	177.9	177.9	177.9	177.9	176.1	176.1	176.1
65°	153.2	153.2	153.2	155.0	155.0	156.8	156.8	156.8
67.5°	132.1	133.9	133.9	133.9	135.7	135.7	135.7	133.9
70°	112.8	112.8	112.8	114.5	114.5	114.5	114.5	114.5
72.5°	93.4	93.4	93.4	93.4	93.4	93.4	93.4	93.4
75°	74.0	75.8	75.8	75.8	74.0	75.8	75.8	74.0
77.5°	58.1	58.1	58.1	58.1	58.1	58.1	58.1	58.1
80°	44.1	44.1	44.1	44.1	44.1	44.1	44.1	44.1
82.5°	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
85°	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7
87.5°	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
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)