

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: P584165

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

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584165
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-HM82555840-81WWW
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2517.7 lumens
Efficiency: N/A
Efficacy: 93.9 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

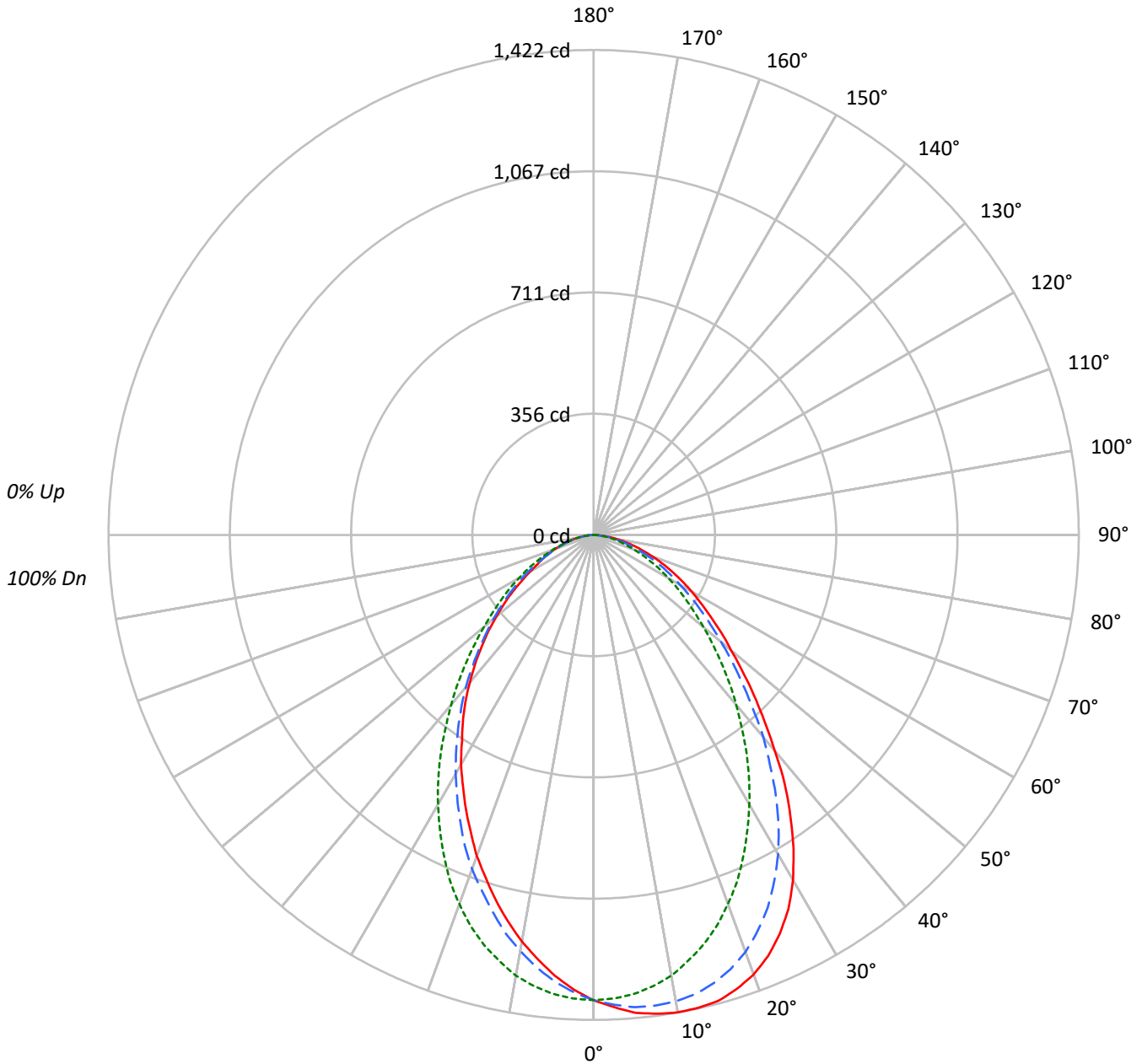
Input Watts (W): 26.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
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	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°	42067	42067	42067
5°	43546	41828	40166
10°	44513	41094	37906
15°	45147	39710	35394
20°	45009	37780	32861
25°	43898	35331	30166
30°	41589	32495	27684
35°	37840	29404	25154
40°	33234	26153	22723
45°	28978	23004	20261
50°	25219	20158	17846
55°	22494	17714	15526
60°	20438	15529	13241
65°	18373	13506	12025
70°	16355	11522	10846
75°	14333	9698	9269
80°	12164	7885	8204
85°	9164	5909	6545



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.8	5.1
10°-20°	352.1	14.0
20°-30°	488.7	19.4
30°-40°	505.3	20.1
40°-50°	423.1	16.8
50°-60°	307.1	12.2
60°-70°	193.8	7.7
70°-80°	96.0	3.8
80°-90°	23.9	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°	968.6	38.5
0°-40°	1473.8	58.5
0°-60°	2204.0	87.5
0°-90°	2517.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2517.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1364	1364	1364	1364	1364	
5°	1407	1390	1351	1314	1298	135
15°	1414	1360	1244	1144	1109	398
25°	1290	1207	1038	926	887	591
35°	1005	931	781	692	668	626
45°	664	616	528	476	465	514
55°	418	381	330	302	289	378
65°	252	220	185	163	165	251
75°	120	100	81	78	78	129
85°	26	20	17	18	18	31
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°	1364.2	1364.2	1364.2	1364.2	1364.2	1364.2	1364.2	1364.2	1364.2	1364.2	1364.2
2.5°	1386.4	1386.4	1388.3	1386.4	1386.4	1386.4	1384.6	1384.6	1382.8	1382.8	1379.0
5°	1406.8	1403.1	1406.8	1403.1	1403.1	1403.1	1401.3	1397.5	1395.7	1392.0	1390.1
7.5°	1416.0	1414.2	1414.2	1412.3	1412.3	1410.5	1408.7	1406.8	1399.3	1397.5	1392.0
10°	1421.6	1419.8	1419.8	1417.9	1414.2	1414.2	1410.5	1408.7	1399.3	1395.7	1388.3
12.5°	1419.8	1419.8	1419.8	1417.9	1412.3	1410.5	1406.8	1401.3	1393.8	1386.4	1379.0
15°	1414.2	1414.2	1410.5	1408.7	1403.1	1399.3	1397.5	1388.3	1380.8	1371.6	1360.5
17.5°	1395.7	1395.7	1393.8	1390.1	1384.6	1380.8	1377.2	1367.9	1360.5	1345.7	1334.6
20°	1371.6	1369.8	1367.9	1362.3	1356.8	1354.9	1349.4	1336.4	1327.2	1316.1	1301.3
22.5°	1336.4	1334.6	1332.8	1329.0	1319.8	1316.1	1312.4	1303.2	1286.5	1275.3	1256.8
25°	1290.2	1290.2	1286.5	1280.9	1271.7	1268.0	1262.4	1253.2	1238.3	1221.7	1206.9
27.5°	1236.5	1234.7	1229.1	1225.4	1218.0	1212.4	1203.2	1192.1	1177.2	1164.3	1145.8
30°	1168.0	1168.0	1164.3	1158.7	1149.5	1145.8	1138.4	1125.4	1110.7	1094.0	1081.0
32.5°	1090.2	1090.2	1084.7	1081.0	1075.5	1066.1	1064.3	1049.6	1036.6	1023.7	1008.8
35°	1005.2	1007.0	1003.2	995.8	986.6	986.6	982.9	970.0	955.2	942.1	931.1
37.5°	920.0	914.4	912.6	908.9	903.3	895.9	892.2	886.6	873.7	864.5	847.8
40°	825.6	827.4	823.7	820.0	818.1	812.6	810.7	801.5	792.2	781.1	773.7
42.5°	740.4	740.4	740.4	736.7	733.1	727.5	725.6	720.0	709.0	701.5	690.5
45°	664.5	659.0	659.0	657.1	655.3	651.5	646.1	642.3	634.9	629.4	616.4
47.5°	590.5	592.4	590.5	588.6	583.0	581.2	579.4	572.0	564.5	559.0	549.8
50°	525.7	529.4	525.7	525.7	521.9	520.1	516.5	510.9	505.4	496.1	486.8
52.5°	472.0	472.0	470.2	468.3	462.8	459.0	457.2	455.4	446.1	438.7	431.3
55°	418.4	420.2	420.2	414.6	412.8	409.1	407.2	401.7	397.9	386.9	381.3
57.5°	372.0	370.2	372.0	368.4	364.7	360.9	359.1	355.3	349.9	342.4	335.0
60°	331.4	327.6	327.6	325.8	322.1	320.3	316.5	310.9	305.4	298.0	292.4
62.5°	290.6	288.8	286.9	285.0	281.4	279.5	277.7	272.1	266.5	261.0	255.4
65°	251.8	251.8	249.8	246.2	244.4	242.5	240.6	236.9	229.5	225.9	220.3
67.5°	216.6	214.7	214.7	211.0	207.4	205.4	205.4	201.8	196.2	190.7	186.9
70°	181.4	183.3	181.4	179.5	175.8	175.8	172.2	170.3	162.9	161.0	155.5
72.5°	149.9	149.9	148.1	148.1	144.3	142.5	142.5	138.8	135.1	131.4	127.8
75°	120.3	120.3	120.3	118.4	116.6	112.9	112.9	111.1	107.3	103.7	99.9
77.5°	94.4	92.6	92.6	90.7	88.8	87.0	87.0	85.2	81.4	79.6	75.9
80°	68.5	66.7	66.7	66.7	62.9	64.7	62.9	61.1	59.3	57.4	55.5
82.5°	44.4	46.2	46.2	44.4	42.6	42.6	42.6	40.8	40.8	38.8	37.0
85°	25.9	25.9	25.9	25.9	24.1	24.1	24.1	22.3	22.3	22.3	20.3
87.5°	11.1	11.1	11.1	11.1	11.1	11.1	9.2	9.2	9.2	9.2	9.2
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°	1364.2	1364.2	1364.2	1364.2	1364.2	1364.2	1364.2	1364.2	1364.2	1364.2	1364.2
2.5°	1379.0	1375.3	1373.5	1371.6	1371.6	1369.8	1367.9	1364.2	1364.2	1360.5	1358.7
5°	1386.4	1380.8	1377.2	1373.5	1371.6	1367.9	1364.2	1358.7	1356.8	1351.3	1345.7
7.5°	1388.3	1379.0	1375.3	1367.9	1364.2	1360.5	1353.1	1347.6	1340.2	1334.6	1327.2
10°	1380.8	1373.5	1364.2	1354.9	1353.1	1347.6	1336.4	1329.0	1319.8	1312.4	1301.3
12.5°	1369.8	1358.7	1349.4	1338.2	1332.8	1327.2	1316.1	1305.0	1292.0	1279.1	1268.0
15°	1351.3	1338.2	1325.3	1312.4	1305.0	1299.4	1286.5	1273.5	1260.6	1243.9	1232.7
17.5°	1323.5	1308.7	1295.8	1279.1	1271.7	1266.1	1249.4	1234.7	1218.0	1201.3	1190.3
20°	1288.3	1269.8	1255.0	1236.5	1230.9	1221.7	1205.0	1188.3	1169.8	1151.3	1138.4
22.5°	1242.1	1223.5	1206.9	1188.3	1179.1	1169.8	1153.2	1132.8	1114.3	1099.5	1086.6
25°	1188.3	1171.8	1151.3	1134.7	1123.6	1112.5	1094.0	1077.3	1060.7	1038.4	1025.5
27.5°	1129.2	1108.7	1094.0	1071.7	1060.7	1053.2	1032.9	1010.6	995.8	975.5	960.6
30°	1062.5	1044.0	1027.3	1005.2	994.0	986.6	968.1	947.7	932.9	912.6	897.7
32.5°	992.2	971.8	951.4	936.7	923.6	916.2	895.9	883.0	864.5	847.8	831.1
35°	916.2	895.9	881.1	860.7	853.3	845.9	829.2	812.6	796.0	781.1	768.2
37.5°	834.8	820.0	803.4	788.6	783.0	775.5	755.2	740.4	727.5	712.6	701.5
40°	755.2	742.3	731.1	716.4	707.1	701.5	686.7	673.8	659.0	649.7	638.6
42.5°	683.0	668.2	657.1	646.1	636.8	631.2	618.2	609.0	597.9	588.6	575.7
45°	607.1	599.7	586.8	577.5	572.0	564.5	555.3	544.2	535.0	527.5	518.3
47.5°	540.5	533.1	523.9	512.7	509.0	503.4	494.2	486.8	479.5	472.0	462.8
50°	479.5	470.2	462.8	455.4	451.6	446.1	436.9	433.1	427.6	420.2	414.6
52.5°	423.9	416.4	409.1	399.9	397.9	394.3	388.7	381.3	375.8	372.0	368.4
55°	373.9	366.5	360.9	353.5	351.7	348.0	340.6	336.8	333.2	329.5	325.8
57.5°	329.5	322.1	314.7	310.9	307.3	303.6	301.7	296.2	292.4	290.6	286.9
60°	288.8	281.4	275.8	270.3	268.4	266.5	262.9	259.2	255.4	251.8	249.8
62.5°	249.8	242.5	238.8	235.1	231.3	231.3	227.7	224.0	220.3	218.4	214.7
65°	214.7	211.0	205.4	199.9	198.1	198.1	192.5	190.7	188.9	185.1	181.4
67.5°	181.4	177.7	172.2	170.3	168.4	166.6	164.8	161.0	157.3	155.5	151.8
70°	151.8	148.1	144.3	142.5	140.7	138.8	135.1	133.3	129.6	127.8	125.8
72.5°	122.2	120.3	116.6	114.8	112.9	111.1	109.2	107.3	103.7	101.8	99.9
75°	98.1	96.3	92.6	90.7	88.8	88.8	87.0	83.2	81.4	81.4	79.6
77.5°	74.0	72.2	70.3	68.5	66.7	66.7	64.7	62.9	61.1	61.1	59.3
80°	53.7	51.8	50.0	50.0	50.0	48.2	46.2	46.2	44.4	44.4	42.6
82.5°	35.2	35.2	33.3	33.3	33.3	31.5	31.5	29.6	29.6	29.6	29.6
85°	20.3	20.3	20.3	18.5	18.5	18.5	18.5	18.5	18.5	16.7	18.5
87.5°	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	7.4	7.4	7.4
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°	1364.2	1364.2	1364.2	1364.2	1364.2	1364.2	1364.2	1364.2	1364.2	1364.2	1364.2
2.5°	1356.8	1354.9	1351.3	1351.3	1347.6	1347.6	1345.7	1343.8	1342.0	1340.2	1338.2
5°	1343.8	1336.4	1332.8	1330.9	1327.2	1325.3	1319.8	1316.1	1314.3	1310.5	1306.8
7.5°	1319.8	1312.4	1305.0	1303.2	1301.3	1293.8	1288.3	1282.8	1279.1	1275.3	1271.7
10°	1292.0	1284.6	1275.3	1271.7	1268.0	1258.7	1251.3	1245.8	1238.3	1230.9	1229.1
12.5°	1258.7	1247.6	1236.5	1232.7	1227.3	1218.0	1210.6	1201.3	1195.7	1186.5	1184.7
15°	1219.8	1206.9	1197.7	1188.3	1184.7	1175.4	1162.4	1155.1	1143.9	1140.2	1131.0
17.5°	1173.6	1160.6	1147.7	1143.9	1138.4	1125.4	1112.5	1103.2	1092.1	1086.6	1081.0
20°	1125.4	1108.7	1095.8	1092.1	1084.7	1073.6	1060.7	1051.4	1042.2	1031.1	1025.5
22.5°	1069.9	1051.4	1040.3	1031.1	1029.1	1016.2	1001.4	994.0	986.6	977.3	970.0
25°	1008.8	992.2	979.2	971.8	968.1	957.0	945.9	936.7	925.6	920.0	910.7
27.5°	945.9	934.8	918.2	910.7	905.1	895.9	883.0	877.4	866.3	858.9	853.3
30°	884.8	868.1	858.9	849.6	844.1	834.8	823.7	818.1	808.9	801.5	796.0
32.5°	818.1	807.1	794.0	790.4	783.0	773.7	766.3	757.0	749.6	742.3	740.4
35°	757.0	742.3	729.3	725.6	720.0	710.8	707.1	701.5	692.3	690.5	683.0
37.5°	690.5	683.0	668.2	662.7	660.8	653.4	646.1	642.3	636.8	631.2	629.4
40°	627.6	618.2	610.9	605.3	601.6	596.0	588.6	586.8	583.0	575.7	573.8
42.5°	568.3	559.0	551.6	549.8	544.2	538.6	535.0	529.4	527.5	525.7	521.9
45°	510.9	505.4	498.0	496.1	494.2	486.8	483.1	479.5	475.7	473.9	470.2
47.5°	459.0	453.5	447.9	446.1	442.4	440.5	435.0	433.1	427.6	425.8	423.9
50°	409.1	405.4	401.7	399.9	396.1	394.3	390.6	386.9	383.2	381.3	379.4
52.5°	364.7	360.9	357.3	355.3	353.5	349.9	346.1	342.4	340.6	338.8	336.8
55°	322.1	318.4	316.5	314.7	312.9	310.9	305.4	303.6	301.7	299.9	296.2
57.5°	283.2	279.5	275.8	275.8	273.9	272.1	268.4	264.7	264.7	261.0	257.3
60°	248.0	244.4	240.6	238.8	236.9	233.3	231.3	229.5	227.7	225.9	222.1
62.5°	211.0	209.2	205.4	205.4	201.8	199.9	198.1	196.2	194.3	190.7	188.9
65°	179.5	177.7	174.0	172.2	172.2	170.3	166.6	164.8	162.9	162.9	161.0
67.5°	149.9	148.1	144.3	142.5	142.5	140.7	138.8	138.8	137.0	135.1	137.0
70°	124.0	120.3	120.3	118.4	118.4	116.6	114.8	114.8	114.8	116.6	116.6
72.5°	98.1	96.3	94.4	94.4	94.4	94.4	92.6	92.6	94.4	96.3	96.3
75°	77.8	75.9	75.9	75.9	74.0	74.0	75.9	75.9	77.8	77.8	77.8
77.5°	57.4	57.4	57.4	57.4	57.4	57.4	59.3	59.3	61.1	61.1	61.1
80°	42.6	42.6	42.6	42.6	42.6	44.4	44.4	44.4	44.4	44.4	46.2
82.5°	29.6	29.6	29.6	29.6	29.6	29.6	29.6	31.5	31.5	31.5	31.5
85°	16.7	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
87.5°	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
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: P584165

CATALOG NUMBER: HC825D010-HM82555840-81WWW

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1364.2	1364.2	1364.2	1364.2	1364.2	1364.2	1364.2	1364.2
2.5°	1336.4	1336.4	1336.4	1338.2	1334.6	1334.6	1334.6	1334.6
5°	1305.0	1303.2	1301.3	1303.2	1299.4	1299.4	1297.6	1297.6
7.5°	1266.1	1264.3	1262.4	1262.4	1258.7	1258.7	1256.8	1255.0
10°	1223.5	1219.8	1221.7	1218.0	1216.2	1214.2	1212.4	1210.6
12.5°	1177.2	1173.6	1171.8	1168.0	1164.3	1162.4	1164.3	1160.6
15°	1127.2	1121.7	1119.9	1116.2	1112.5	1110.7	1110.7	1108.7
17.5°	1071.7	1068.1	1066.1	1062.5	1060.7	1056.9	1055.1	1053.2
20°	1019.9	1010.6	1012.5	1008.8	1007.0	999.6	999.6	1001.4
22.5°	962.6	957.0	953.3	949.6	947.7	944.1	944.1	942.1
25°	905.1	899.7	897.7	894.1	892.2	888.5	886.6	886.6
27.5°	849.6	842.2	842.2	838.6	834.8	833.0	831.1	829.2
30°	790.4	784.8	783.0	783.0	781.1	781.1	775.5	777.5
32.5°	734.9	731.1	729.3	725.6	725.6	723.7	723.7	718.2
35°	679.3	673.8	675.6	672.0	670.0	668.2	670.0	668.2
37.5°	625.6	622.0	622.0	618.2	618.2	616.4	614.5	618.2
40°	572.0	570.1	568.3	566.5	568.3	566.5	562.7	564.5
42.5°	518.3	518.3	516.5	516.5	514.6	514.6	514.6	514.6
45°	470.2	468.3	468.3	466.4	466.4	466.4	466.4	464.6
47.5°	422.0	420.2	420.2	420.2	418.4	418.4	416.4	418.4
50°	375.8	375.8	373.9	373.9	375.8	373.9	372.0	372.0
52.5°	333.2	333.2	331.4	331.4	329.5	327.6	329.5	329.5
55°	294.4	292.4	290.6	290.6	288.8	286.9	286.9	288.8
57.5°	257.3	255.4	253.6	253.6	249.8	248.0	248.0	248.0
60°	222.1	218.4	218.4	216.6	216.6	214.7	214.7	214.7
62.5°	188.9	186.9	186.9	186.9	186.9	185.1	185.1	185.1
65°	161.0	161.0	161.0	162.9	162.9	164.8	164.8	164.8
67.5°	138.8	140.7	140.7	140.7	142.5	142.5	142.5	140.7
70°	118.4	118.4	118.4	120.3	120.3	120.3	120.3	120.3
72.5°	98.1	98.1	98.1	98.1	98.1	98.1	98.1	98.1
75°	77.8	79.6	79.6	79.6	77.8	79.6	79.6	77.8
77.5°	61.1	61.1	61.1	61.1	61.1	61.1	61.1	61.1
80°	46.2	46.2	46.2	46.2	46.2	46.2	46.2	46.2
82.5°	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5
85°	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
87.5°	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
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)