

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: P584113

Luminaire Tested: **HC825D010-HM82555827-81WWBB**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584113
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: HC825D010-HM82555827-81WWBB
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2057.5 lumens
Efficiency: N/A
Efficacy: 76.8 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

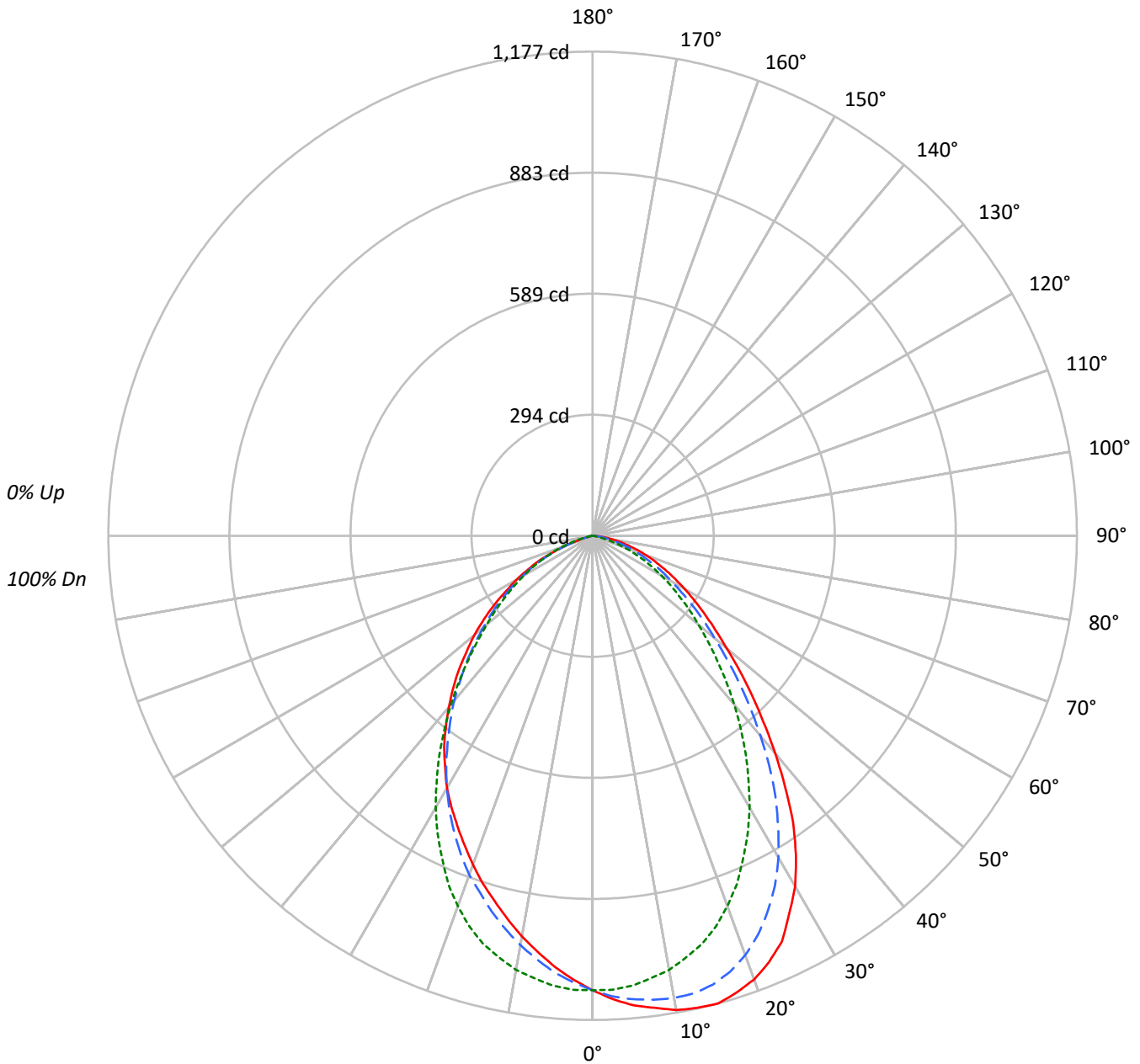
Input Watts (W): 26.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
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°	34062	34062	34062
5°	35470	33988	32558
10°	36657	33554	30968
15°	37581	32786	29361
20°	37659	31424	27903
25°	37022	29438	26461
30°	35041	27161	25220
35°	31949	24424	23682
40°	27783	21536	21866
45°	23837	18652	20017
50°	20360	16076	17980
55°	17843	13844	15623
60°	15881	11810	13136
65°	14090	9631	10478
70°	12505	7150	5951
75°	10425	3741	1775
80°	8204	1172	284
85°	5838	566	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.1	5.1
10°-20°	291.7	14.2
20°-30°	412.9	20.1
30°-40°	432.0	21.0
40°-50°	360.3	17.5
50°-60°	255.5	12.4
60°-70°	147.2	7.2
70°-80°	47.3	2.3
80°-90°	6.5	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°	808.7	39.3
0°-40°	1240.7	60.3
0°-60°	1856.5	90.2
0°-90°	2057.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2057.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1105	1105	1105	1105	1105	
5°	1146	1131	1098	1065	1052	110
15°	1177	1129	1027	946	920	331
25°	1088	1007	865	796	778	497
35°	849	774	649	614	629	526
45°	547	502	428	433	459	424
55°	332	297	258	271	291	300
65°	193	162	132	132	144	193
75°	88	64	31	15	15	95
85°	16	8	2	0	0	21
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°	1104.6	1104.6	1104.6	1104.6	1104.6	1104.6	1104.6	1104.6	1104.6	1104.6	1104.6
2.5°	1127.7	1126.1	1124.4	1126.1	1124.4	1126.1	1124.4	1124.4	1122.8	1121.1	1121.1
5°	1145.9	1144.3	1144.3	1144.3	1142.5	1140.9	1140.9	1139.2	1136.0	1134.3	1131.0
7.5°	1157.4	1159.1	1159.1	1159.1	1155.8	1155.8	1152.5	1149.2	1145.9	1142.5	1137.6
10°	1170.7	1170.7	1169.0	1167.4	1164.1	1162.3	1160.7	1157.4	1152.5	1145.9	1140.9
12.5°	1175.6	1175.6	1173.9	1170.7	1169.0	1167.4	1165.7	1160.7	1154.1	1145.9	1139.2
15°	1177.2	1173.9	1172.3	1170.7	1167.4	1162.3	1162.3	1155.8	1147.6	1137.6	1129.4
17.5°	1164.1	1165.7	1162.3	1159.1	1154.1	1150.8	1145.9	1140.9	1131.0	1119.4	1111.2
20°	1147.6	1145.9	1144.3	1139.2	1132.7	1131.0	1126.1	1117.8	1109.6	1096.3	1084.8
22.5°	1121.1	1119.4	1116.1	1112.8	1106.3	1103.0	1098.0	1088.1	1076.5	1063.4	1050.1
25°	1088.1	1084.8	1079.8	1073.2	1068.3	1065.0	1058.3	1048.5	1035.2	1020.4	1007.2
27.5°	1035.2	1040.3	1036.9	1027.0	1022.1	1015.4	1013.8	1000.6	989.0	974.1	959.3
30°	984.1	984.1	979.2	974.1	965.9	961.0	954.3	944.5	932.8	914.7	903.2
32.5°	919.7	918.1	911.4	909.7	903.2	893.2	891.6	878.4	866.8	853.6	838.8
35°	848.7	845.4	838.8	833.9	830.5	825.5	820.6	809.0	797.5	784.3	774.4
37.5°	767.7	767.7	766.1	757.9	754.6	751.2	746.3	734.8	728.1	715.0	705.0
40°	690.2	688.5	683.5	681.9	678.6	673.7	670.4	663.7	653.9	643.9	634.0
42.5°	614.2	615.9	609.3	610.9	604.3	601.0	599.3	589.5	584.5	574.6	566.4
45°	546.6	544.8	541.5	539.9	536.6	533.3	530.0	525.0	516.8	506.9	501.9
47.5°	483.7	478.8	478.8	477.2	475.5	468.9	467.3	462.3	457.3	447.5	440.8
50°	424.4	424.4	424.4	422.6	417.7	416.1	412.8	407.8	402.9	396.2	386.4
52.5°	376.4	376.4	376.4	374.8	368.2	366.6	364.9	358.3	351.7	346.8	340.2
55°	331.9	333.5	331.9	328.6	323.6	323.6	318.6	315.3	308.8	303.8	297.2
57.5°	293.9	293.9	290.6	288.9	285.7	284.0	280.7	277.3	269.1	264.2	255.9
60°	257.5	255.9	255.9	252.6	249.3	246.0	244.4	239.4	236.1	227.8	221.3
62.5°	224.6	224.6	221.3	221.3	214.6	214.6	213.0	208.0	203.1	194.8	191.5
65°	193.1	193.1	191.5	189.9	184.9	183.3	181.6	176.7	171.7	166.8	161.8
67.5°	165.1	165.1	161.8	160.2	156.9	155.3	151.9	148.6	143.6	138.7	133.8
70°	138.7	137.1	135.4	133.8	130.4	128.8	125.5	122.2	117.3	114.0	108.9
72.5°	112.2	112.2	110.6	107.3	105.7	104.0	102.4	99.1	94.2	89.1	85.8
75°	87.5	87.5	87.5	84.2	80.9	79.3	79.3	76.0	72.7	67.7	64.4
77.5°	67.7	66.0	64.4	64.4	61.1	59.5	57.8	56.2	51.1	49.5	46.2
80°	46.2	47.8	46.2	44.6	42.9	41.3	41.3	38.0	36.3	33.1	29.7
82.5°	31.4	29.7	29.7	28.0	28.0	26.4	26.4	23.1	21.5	19.8	18.2
85°	16.5	16.5	14.9	14.9	14.9	13.2	13.2	11.6	11.6	10.0	8.2
87.5°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	3.3	3.3	3.3
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°	1104.6	1104.6	1104.6	1104.6	1104.6	1104.6	1104.6	1104.6	1104.6	1104.6	1104.6
2.5°	1119.4	1116.1	1114.5	1114.5	1112.8	1111.2	1109.6	1107.9	1104.6	1104.6	1101.2
5°	1127.7	1124.4	1122.8	1117.8	1114.5	1114.5	1107.9	1106.3	1101.2	1098.0	1094.7
7.5°	1134.3	1127.7	1122.8	1117.8	1114.5	1111.2	1104.6	1098.0	1091.4	1084.8	1081.4
10°	1134.3	1127.7	1119.4	1111.2	1107.9	1104.6	1096.3	1086.5	1078.1	1071.6	1063.4
12.5°	1131.0	1121.1	1111.2	1104.6	1098.0	1093.0	1083.2	1073.2	1063.4	1050.1	1043.5
15°	1121.1	1107.9	1098.0	1086.5	1081.4	1073.2	1065.0	1050.1	1038.5	1027.0	1018.7
17.5°	1101.2	1084.8	1073.2	1061.7	1053.4	1048.5	1035.2	1022.1	1008.8	995.6	985.7
20°	1071.6	1056.7	1043.5	1028.6	1022.1	1015.4	999.0	985.7	972.5	957.6	947.7
22.5°	1035.2	1020.4	1002.3	990.7	980.8	972.5	957.6	942.8	929.6	916.3	903.2
25°	990.7	975.8	959.3	941.2	934.5	926.3	909.7	894.9	880.1	865.2	853.6
27.5°	942.8	923.0	909.7	889.9	883.4	875.0	857.0	840.4	827.2	815.7	802.4
30°	885.0	870.1	851.9	833.9	827.2	819.0	804.1	789.2	776.1	762.8	749.6
32.5°	822.3	807.4	789.2	776.1	766.1	759.5	744.6	731.5	718.2	705.0	693.5
35°	756.2	739.7	726.5	713.3	705.0	696.8	681.9	670.4	660.4	648.8	637.3
37.5°	688.5	677.0	663.7	648.8	640.6	634.0	622.4	609.3	601.0	591.1	582.8
40°	622.4	609.3	597.7	584.5	577.9	573.0	561.4	551.5	543.2	535.0	530.0
42.5°	554.8	543.2	531.7	523.4	518.4	513.5	505.3	493.7	488.8	480.4	475.5
45°	492.0	482.1	473.9	462.3	459.0	455.7	445.8	437.5	432.6	427.7	424.4
47.5°	432.6	426.0	416.1	409.5	404.6	401.2	394.6	388.0	383.1	379.7	376.4
50°	381.5	373.1	366.6	359.9	356.6	351.7	345.1	341.8	338.4	335.1	335.1
52.5°	333.5	325.3	318.6	313.7	310.4	307.1	302.2	300.5	297.2	297.2	295.5
55°	288.9	284.0	277.3	270.8	269.1	267.5	264.2	260.9	259.3	257.5	259.3
57.5°	251.0	246.0	239.4	234.4	232.8	231.1	229.5	226.2	224.6	224.6	224.6
60°	216.2	211.3	206.4	201.5	201.5	198.2	196.5	194.8	193.1	191.5	191.5
62.5°	184.9	180.0	175.1	171.7	170.0	168.4	165.1	163.5	161.8	161.8	160.2
65°	156.9	150.2	148.6	143.6	142.0	140.4	138.7	135.4	133.8	132.0	130.4
67.5°	128.8	125.5	120.5	117.3	115.6	114.0	112.2	108.9	107.3	105.7	102.4
70°	104.0	100.7	97.4	94.2	92.4	90.8	87.5	84.2	82.6	79.3	74.3
72.5°	80.9	77.6	74.3	71.0	69.3	67.7	64.4	61.1	57.8	54.5	51.1
75°	61.1	57.8	52.9	49.5	47.8	47.8	42.9	39.6	36.3	31.4	28.0
77.5°	42.9	38.0	36.3	33.1	31.4	28.0	24.7	21.5	18.2	16.5	13.2
80°	28.0	24.7	21.5	19.8	18.2	16.5	14.9	11.6	8.2	6.6	4.9
82.5°	16.5	14.9	13.2	11.6	10.0	8.2	6.6	6.6	4.9	3.3	1.6
85°	8.2	6.6	4.9	4.9	3.3	3.3	3.3	1.6	1.6	1.6	1.6
87.5°	3.3	1.6	1.6	1.6	1.6	1.6	1.6	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°	1104.6	1104.6	1104.6	1104.6	1104.6	1104.6	1104.6	1104.6	1104.6	1104.6	1104.6
2.5°	1099.6	1098.0	1096.3	1094.7	1094.7	1091.4	1091.4	1089.7	1086.5	1084.8	1084.8
5°	1089.7	1084.8	1081.4	1079.8	1078.1	1073.2	1071.6	1068.3	1065.0	1061.7	1060.0
7.5°	1074.9	1066.6	1063.4	1061.7	1056.7	1051.8	1048.5	1043.5	1038.5	1033.6	1031.9
10°	1056.7	1048.5	1040.3	1036.9	1031.9	1028.6	1022.1	1015.4	1010.5	1005.5	1000.6
12.5°	1033.6	1023.7	1015.4	1012.1	1007.2	1000.6	990.7	987.4	979.2	975.8	969.2
15°	1007.2	995.6	987.4	982.4	977.4	967.6	961.0	954.3	946.1	942.8	936.1
17.5°	974.1	961.0	952.7	947.7	944.5	936.1	926.3	918.1	909.7	906.5	901.5
20°	934.5	926.3	914.7	909.7	906.5	896.6	886.6	883.4	876.8	870.1	865.2
22.5°	889.9	881.7	870.1	865.2	863.5	855.3	847.0	842.1	837.1	832.1	827.2
25°	843.7	833.9	823.9	820.6	817.3	810.7	804.1	800.8	795.9	792.5	789.2
27.5°	794.2	784.3	776.1	771.0	767.7	762.8	759.5	756.2	753.0	749.6	747.9
30°	741.4	731.5	724.8	721.5	718.2	716.6	711.7	709.9	708.3	705.0	706.6
32.5°	688.5	680.3	673.7	668.8	668.8	665.4	663.7	663.7	662.1	662.1	662.1
35°	630.8	625.7	620.8	619.2	617.5	615.9	614.2	615.9	614.2	615.9	617.5
37.5°	577.9	573.0	569.7	568.0	566.4	568.0	566.4	566.4	568.0	571.3	573.0
40°	523.4	520.1	516.8	518.4	516.8	516.8	516.8	521.7	523.4	525.0	526.7
42.5°	472.2	468.9	467.3	467.3	468.9	467.3	470.6	472.2	475.5	480.4	483.7
45°	422.6	421.0	421.0	422.6	421.0	424.4	424.4	427.7	432.6	435.9	439.2
47.5°	376.4	376.4	376.4	378.1	378.1	379.7	383.1	384.7	388.0	391.3	394.6
50°	333.5	335.1	336.8	336.8	336.8	340.2	343.5	345.1	346.8	348.4	353.3
52.5°	295.5	297.2	297.2	298.9	300.5	302.2	303.8	307.1	308.8	312.0	313.7
55°	259.3	259.3	262.6	264.2	264.2	264.2	267.5	267.5	270.8	272.4	275.7
57.5°	224.6	226.2	226.2	227.8	227.8	229.5	231.1	232.8	234.4	236.1	237.8
60°	191.5	191.5	191.5	193.1	194.8	196.5	194.8	198.2	198.2	201.5	203.1
62.5°	160.2	161.8	161.8	161.8	161.8	161.8	161.8	163.5	165.1	166.8	168.4
65°	130.4	130.4	130.4	128.8	130.4	128.8	130.4	132.0	132.0	133.8	135.4
67.5°	100.7	100.7	97.4	97.4	99.1	99.1	99.1	99.1	97.4	100.7	100.7
70°	72.7	71.0	69.3	67.7	67.7	66.0	66.0	64.4	64.4	64.4	64.4
72.5°	47.8	44.6	41.3	39.6	38.0	38.0	34.7	33.1	34.7	34.7	34.7
75°	24.7	21.5	19.8	18.2	16.5	16.5	14.9	14.9	14.9	14.9	14.9
77.5°	10.0	8.2	6.6	6.6	4.9	4.9	4.9	4.9	4.9	4.9	4.9
80°	3.3	3.3	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
82.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
85°	1.6	0.0	0.0	1.6	0.0	1.6	1.6	1.6	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: P584113

CATALOG NUMBER: HC825D010-HM82555827-81WWBB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1104.6	1104.6	1104.6	1104.6	1104.6	1104.6	1104.6	1104.6
2.5°	1083.2	1083.2	1081.4	1083.2	1079.8	1081.4	1079.8	1079.8
5°	1058.3	1055.0	1055.0	1055.0	1053.4	1053.4	1051.8	1051.8
7.5°	1028.6	1027.0	1025.4	1023.7	1022.1	1020.4	1020.4	1020.4
10°	999.0	995.6	995.6	993.9	990.7	989.0	989.0	989.0
12.5°	964.3	962.6	961.0	961.0	954.3	956.0	954.3	954.3
15°	931.2	929.6	929.6	924.6	921.3	921.3	921.3	919.7
17.5°	896.6	894.9	893.2	889.9	886.6	886.6	885.0	886.6
20°	860.3	858.6	855.3	855.3	853.6	851.9	848.7	850.3
22.5°	823.9	820.6	819.0	819.0	817.3	817.3	813.9	813.9
25°	785.9	784.3	782.6	784.3	781.0	781.0	777.7	777.7
27.5°	746.3	744.6	744.6	744.6	743.0	744.6	743.0	743.0
30°	706.6	706.6	705.0	705.0	706.6	705.0	706.6	708.3
32.5°	663.7	663.7	665.4	665.4	667.0	667.0	667.0	667.0
35°	619.2	622.4	622.4	624.1	625.7	627.4	627.4	629.1
37.5°	577.9	579.5	581.2	582.8	586.1	586.1	586.1	586.1
40°	533.3	535.0	538.2	536.6	543.2	544.8	543.2	543.2
42.5°	487.1	490.4	492.0	495.3	497.0	500.3	501.9	501.9
45°	444.2	445.8	449.1	452.4	454.1	459.0	459.0	459.0
47.5°	399.5	402.9	404.6	407.8	409.5	414.4	416.1	414.4
50°	356.6	359.9	363.3	363.3	368.2	369.9	373.1	374.8
52.5°	315.3	317.0	320.4	322.0	325.3	328.6	330.2	331.9
55°	275.7	277.3	280.7	280.7	285.7	287.3	290.6	290.6
57.5°	239.4	241.1	244.4	242.7	246.0	249.3	249.3	247.7
60°	204.7	204.7	204.7	208.0	209.7	211.3	213.0	213.0
62.5°	168.4	171.7	173.3	173.3	175.1	176.7	176.7	175.1
65°	135.4	138.7	140.4	140.4	142.0	142.0	142.0	143.6
67.5°	102.4	102.4	102.4	104.0	102.4	102.4	102.4	102.4
70°	64.4	64.4	64.4	64.4	62.7	64.4	64.4	66.0
72.5°	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7
75°	14.9	14.9	14.9	16.5	14.9	14.9	14.9	14.9
77.5°	6.6	4.9	6.6	6.6	4.9	4.9	4.9	4.9
80°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
82.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
85°	0.0	1.6	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)