

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: P584131

Luminaire Tested: **HC825D010-HM82555830-81WWW**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584131
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-HM82555830-81WWW
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2193.0 lumens
Efficiency: N/A
Efficacy: 81.8 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

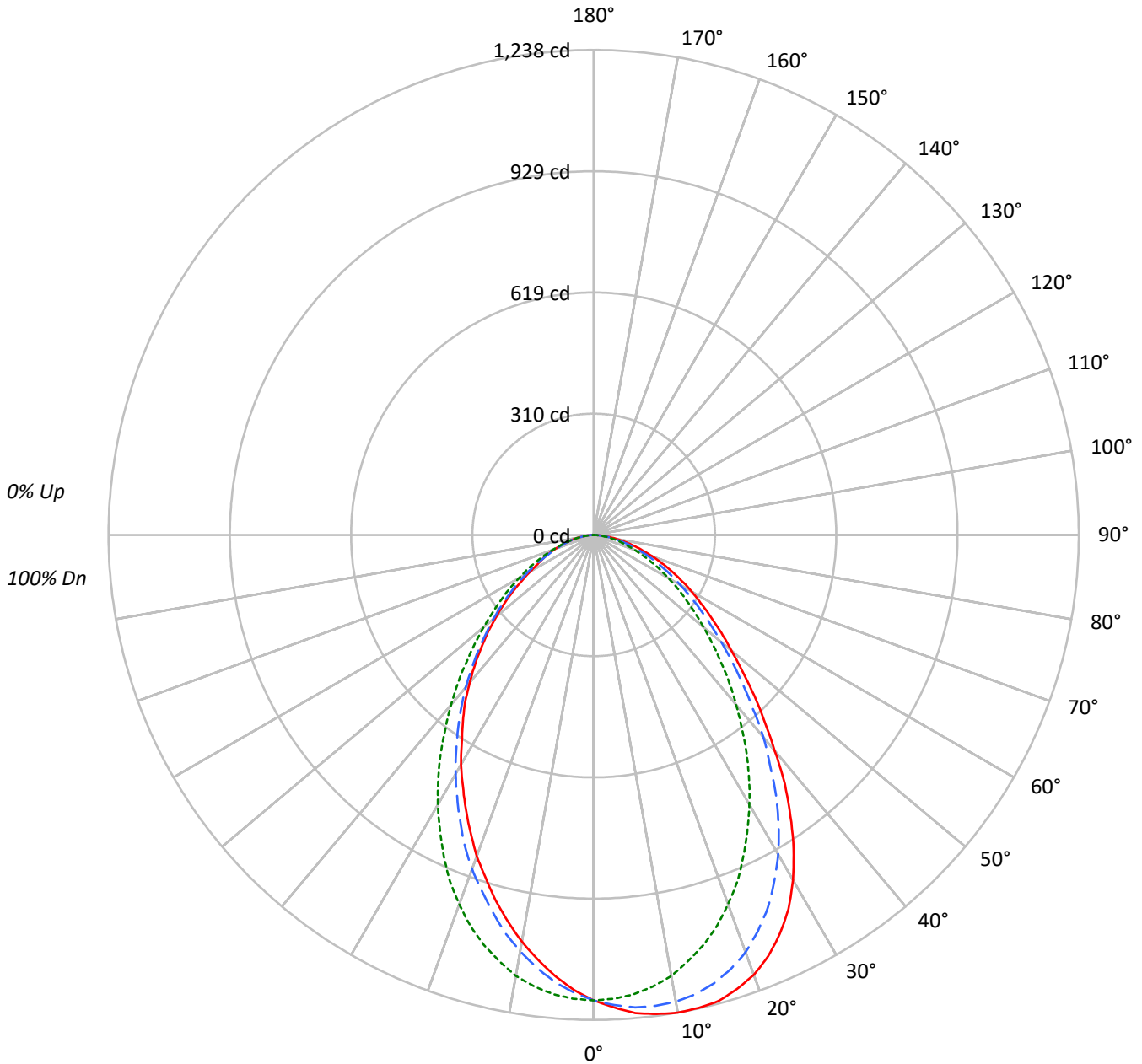
Input Watts (W): 26.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	36640	36640	36640
5°	37931	36433	34984
10°	38774	35796	33019
15°	39324	34590	30832
20°	39208	32910	28625
25°	38236	30775	26277
30°	36226	28304	24113
35°	32957	25613	21913
40°	28947	22780	19797
45°	25245	20043	17649
50°	21967	17558	15548
55°	19585	15430	13526
60°	17799	13519	11533
65°	15994	11762	10470
70°	14245	10035	9449
75°	12486	8447	8066
80°	10601	6872	7156
85°	7996	5166	5732



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.3	5.1
10°-20°	306.7	14.0
20°-30°	425.7	19.4
30°-40°	440.1	20.1
40°-50°	368.5	16.8
50°-60°	267.5	12.2
60°-70°	168.8	7.7
70°-80°	83.6	3.8
80°-90°	20.8	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°	843.7	38.5
0°-40°	1283.8	58.5
0°-60°	1919.8	87.5
0°-90°	2193.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2193.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1188	1188	1188	1188	1188	
5°	1225	1211	1177	1145	1130	117
15°	1232	1185	1084	996	966	347
25°	1124	1051	904	806	772	515
35°	876	811	680	603	582	545
45°	579	537	460	414	405	448
55°	364	332	287	263	252	329
65°	219	192	161	142	144	219
75°	105	87	71	68	68	112
85°	23	18	15	16	16	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°	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2
2.5°	1207.6	1207.6	1209.2	1207.6	1207.6	1207.6	1206.0	1206.0	1204.4	1204.4	1201.2
5°	1225.4	1222.2	1225.4	1222.2	1222.2	1222.2	1220.5	1217.3	1215.7	1212.4	1210.8
7.5°	1233.4	1231.8	1231.8	1230.2	1230.2	1228.6	1227.0	1225.4	1218.9	1217.3	1212.4
10°	1238.3	1236.6	1236.6	1235.0	1231.8	1231.8	1228.6	1227.0	1218.9	1215.7	1209.2
12.5°	1236.6	1236.6	1236.6	1235.0	1230.2	1228.6	1225.4	1220.5	1214.1	1207.6	1201.2
15°	1231.8	1231.8	1228.6	1227.0	1222.2	1218.9	1217.3	1209.2	1202.8	1194.8	1185.0
17.5°	1215.7	1215.7	1214.1	1210.8	1206.0	1202.8	1199.6	1191.6	1185.0	1172.2	1162.4
20°	1194.8	1193.2	1191.6	1186.6	1181.8	1180.2	1175.4	1164.1	1156.0	1146.4	1133.5
22.5°	1164.1	1162.4	1160.8	1157.6	1149.6	1146.4	1143.2	1135.1	1120.6	1110.9	1094.7
25°	1123.8	1123.8	1120.6	1115.7	1107.7	1104.5	1099.6	1091.5	1078.7	1064.1	1051.3
27.5°	1077.1	1075.5	1070.5	1067.3	1060.9	1056.1	1048.0	1038.3	1025.5	1014.1	998.0
30°	1017.4	1017.4	1014.1	1009.3	1001.2	998.0	991.6	980.3	967.4	952.8	941.6
32.5°	949.6	949.6	944.8	941.6	936.8	928.7	927.0	914.2	902.9	891.6	878.7
35°	875.5	877.1	873.9	867.4	859.3	859.3	856.1	844.9	831.9	820.7	811.0
37.5°	801.3	796.5	794.9	791.7	786.8	780.4	777.1	772.3	761.0	753.0	738.4
40°	719.1	720.8	717.4	714.2	712.6	707.8	706.2	698.2	690.0	680.4	674.0
42.5°	644.9	644.9	644.9	641.7	638.5	633.7	632.0	627.2	617.5	611.1	601.4
45°	578.9	573.9	573.9	572.3	570.7	567.5	562.7	559.5	553.0	548.2	536.9
47.5°	514.3	516.0	514.3	512.7	507.9	506.2	504.6	498.2	491.8	487.0	478.8
50°	457.9	461.2	457.9	457.9	454.6	453.0	449.8	445.0	440.2	432.1	424.0
52.5°	411.1	411.1	409.5	407.9	403.1	399.9	398.3	396.6	388.5	382.1	375.7
55°	364.3	366.0	366.0	361.1	359.5	356.3	354.7	349.9	346.7	336.9	332.1
57.5°	324.1	322.5	324.1	320.9	317.6	314.4	312.8	309.6	304.7	298.3	291.8
60°	288.6	285.4	285.4	283.8	280.6	278.9	275.7	270.8	266.0	259.6	254.8
62.5°	253.2	251.6	250.0	248.3	245.0	243.4	241.8	237.0	232.2	227.4	222.5
65°	219.2	219.2	217.6	214.4	212.8	211.2	209.6	206.4	199.9	196.7	191.9
67.5°	188.6	187.0	187.0	183.8	180.6	179.0	179.0	175.7	170.9	166.1	162.9
70°	158.0	159.6	158.0	156.4	153.2	153.2	149.9	148.3	141.9	140.3	135.5
72.5°	130.6	130.6	128.9	128.9	125.7	124.1	124.1	120.9	117.7	114.5	111.3
75°	104.8	104.8	104.8	103.1	101.5	98.3	98.3	96.7	93.5	90.3	87.1
77.5°	82.2	80.6	80.6	79.0	77.4	75.8	75.8	74.2	70.9	69.3	66.1
80°	59.7	58.0	58.0	58.0	54.8	56.4	54.8	53.2	51.6	50.0	48.4
82.5°	38.7	40.3	40.3	38.7	37.1	37.1	37.1	35.5	35.5	33.8	32.2
85°	22.6	22.6	22.6	22.6	21.0	21.0	21.0	19.4	19.4	19.4	17.8
87.5°	9.6	9.6	9.6	9.6	9.6	9.6	8.0	8.0	8.0	8.0	8.0
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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2
2.5°	1201.2	1198.0	1196.4	1194.8	1194.8	1193.2	1191.6	1188.2	1188.2	1185.0	1183.4
5°	1207.6	1202.8	1199.6	1196.4	1194.8	1191.6	1188.2	1183.4	1181.8	1177.0	1172.2
7.5°	1209.2	1201.2	1198.0	1191.6	1188.2	1185.0	1178.6	1173.8	1167.4	1162.4	1156.0
10°	1202.8	1196.4	1188.2	1180.2	1178.6	1173.8	1164.1	1157.6	1149.6	1143.2	1133.5
12.5°	1193.2	1183.4	1175.4	1165.7	1160.8	1156.0	1146.4	1136.7	1125.4	1114.1	1104.5
15°	1177.0	1165.7	1154.4	1143.2	1136.7	1131.8	1120.6	1109.3	1098.0	1083.5	1073.9
17.5°	1152.8	1139.9	1128.6	1114.1	1107.7	1102.8	1088.3	1075.5	1060.9	1046.4	1036.7
20°	1122.2	1106.1	1093.1	1077.1	1072.2	1064.1	1049.7	1035.1	1019.0	1002.9	991.6
22.5°	1081.9	1065.7	1051.3	1035.1	1027.1	1019.0	1004.5	986.8	970.6	957.8	946.4
25°	1035.1	1020.6	1002.9	988.4	978.7	969.0	952.8	938.4	923.8	904.5	893.2
27.5°	983.5	965.8	952.8	933.6	923.8	917.4	899.7	880.3	867.4	849.7	836.8
30°	925.4	909.4	894.8	875.5	865.8	859.3	843.3	825.5	812.6	794.9	782.0
32.5°	864.2	846.5	828.7	815.9	804.5	798.1	780.4	769.1	753.0	738.4	724.0
35°	798.1	780.4	767.5	749.7	743.3	736.8	722.4	707.8	693.3	680.4	669.1
37.5°	727.2	714.2	699.8	686.8	682.0	675.6	657.8	644.9	633.7	620.7	611.1
40°	657.8	646.5	636.9	623.9	615.9	611.1	598.1	586.9	573.9	565.9	556.3
42.5°	594.9	582.1	572.3	562.7	554.7	549.8	538.5	530.5	520.8	512.7	501.4
45°	528.8	522.4	511.1	503.0	498.2	491.8	483.7	474.0	466.0	459.6	451.4
47.5°	470.8	464.4	456.2	446.6	443.4	438.6	430.5	424.0	417.6	411.1	403.1
50°	417.6	409.5	403.1	396.6	393.4	388.5	380.5	377.3	372.5	366.0	361.1
52.5°	369.3	362.7	356.3	348.3	346.7	343.5	338.5	332.1	327.3	324.1	320.9
55°	325.7	319.3	314.4	307.9	306.3	303.1	296.7	293.4	290.2	287.0	283.8
57.5°	287.0	280.6	274.1	270.8	267.6	264.4	262.8	258.0	254.8	253.2	250.0
60°	251.6	245.0	240.2	235.4	233.8	232.2	229.0	225.8	222.5	219.2	217.6
62.5°	217.6	211.2	208.0	204.8	201.6	201.6	198.3	195.1	191.9	190.2	187.0
65°	187.0	183.8	179.0	174.1	172.5	172.5	167.7	166.1	164.5	161.2	158.0
67.5°	158.0	154.8	149.9	148.3	146.7	145.1	143.5	140.3	137.1	135.5	132.3
70°	132.3	128.9	125.7	124.1	122.5	120.9	117.7	116.1	112.9	111.3	109.7
72.5°	106.5	104.8	101.5	99.9	98.3	96.7	95.1	93.5	90.3	88.7	87.1
75°	85.5	83.9	80.6	79.0	77.4	77.4	75.8	72.5	70.9	70.9	69.3
77.5°	64.5	62.9	61.3	59.7	58.0	58.0	56.4	54.8	53.2	53.2	51.6
80°	46.8	45.2	43.5	43.5	43.5	41.9	40.3	40.3	38.7	38.7	37.1
82.5°	30.6	30.6	29.0	29.0	29.0	27.4	27.4	25.8	25.8	25.8	25.8
85°	17.8	17.8	17.8	16.2	16.2	16.2	16.2	16.2	16.2	14.6	16.2
87.5°	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	6.4	6.4	6.4
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°	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2
2.5°	1181.8	1180.2	1177.0	1177.0	1173.8	1173.8	1172.2	1170.6	1169.0	1167.4	1165.7
5°	1170.6	1164.1	1160.8	1159.2	1156.0	1154.4	1149.6	1146.4	1144.8	1141.5	1138.3
7.5°	1149.6	1143.2	1136.7	1135.1	1133.5	1127.0	1122.2	1117.3	1114.1	1110.9	1107.7
10°	1125.4	1118.9	1110.9	1107.7	1104.5	1096.4	1089.9	1085.1	1078.7	1072.2	1070.5
12.5°	1096.4	1086.7	1077.1	1073.9	1068.9	1060.9	1054.5	1046.4	1041.5	1033.5	1031.9
15°	1062.5	1051.3	1043.1	1035.1	1031.9	1023.8	1012.5	1006.1	996.4	993.2	985.1
17.5°	1022.2	1010.9	999.6	996.4	991.6	980.3	969.0	961.0	951.2	946.4	941.6
20°	980.3	965.8	954.5	951.2	944.8	935.2	923.8	915.8	907.8	898.1	893.2
22.5°	932.0	915.8	906.1	898.1	896.4	885.2	872.3	865.8	859.3	851.3	844.9
25°	878.7	864.2	852.9	846.5	843.3	833.5	823.9	815.9	806.1	801.3	793.3
27.5°	823.9	814.3	799.7	793.3	788.4	780.4	769.1	764.2	754.6	748.1	743.3
30°	770.7	756.2	748.1	740.0	735.2	727.2	717.4	712.6	704.6	698.2	693.3
32.5°	712.6	703.0	691.6	688.4	682.0	674.0	667.5	659.4	653.0	646.5	644.9
35°	659.4	646.5	635.3	632.0	627.2	619.1	615.9	611.1	603.1	601.4	594.9
37.5°	601.4	594.9	582.1	577.2	575.6	569.1	562.7	559.5	554.7	549.8	548.2
40°	546.6	538.5	532.1	527.2	524.0	519.2	512.7	511.1	507.9	501.4	499.8
42.5°	495.0	487.0	480.4	478.8	474.0	469.2	466.0	461.2	459.6	457.9	454.6
45°	445.0	440.2	433.7	432.1	430.5	424.0	420.8	417.6	414.4	412.8	409.5
47.5°	399.9	395.0	390.2	388.5	385.3	383.7	378.9	377.3	372.5	370.9	369.3
50°	356.3	353.1	349.9	348.3	345.1	343.5	340.2	336.9	333.7	332.1	330.5
52.5°	317.6	314.4	311.2	309.6	307.9	304.7	301.5	298.3	296.7	295.1	293.4
55°	280.6	277.3	275.7	274.1	272.5	270.8	266.0	264.4	262.8	261.2	258.0
57.5°	246.6	243.4	240.2	240.2	238.6	237.0	233.8	230.6	230.6	227.4	224.2
60°	216.0	212.8	209.6	208.0	206.4	203.2	201.6	199.9	198.3	196.7	193.5
62.5°	183.8	182.2	179.0	179.0	175.7	174.1	172.5	170.9	169.3	166.1	164.5
65°	156.4	154.8	151.5	149.9	149.9	148.3	145.1	143.5	141.9	141.9	140.3
67.5°	130.6	128.9	125.7	124.1	124.1	122.5	120.9	120.9	119.3	117.7	119.3
70°	108.1	104.8	104.8	103.1	103.1	101.5	99.9	99.9	99.9	101.5	101.5
72.5°	85.5	83.9	82.2	82.2	82.2	82.2	80.6	80.6	82.2	83.9	83.9
75°	67.7	66.1	66.1	66.1	64.5	64.5	66.1	66.1	67.7	67.7	67.7
77.5°	50.0	50.0	50.0	50.0	50.0	50.0	51.6	51.6	53.2	53.2	53.2
80°	37.1	37.1	37.1	37.1	37.1	38.7	38.7	38.7	38.7	38.7	40.3
82.5°	25.8	25.8	25.8	25.8	25.8	25.8	25.8	27.4	27.4	27.4	27.4
85°	14.6	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2
87.5°	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
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: P584131

CATALOG NUMBER: HC825D010-HM82555830-81WWW

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2
2.5°	1164.1	1164.1	1164.1	1165.7	1162.4	1162.4	1162.4	1162.4
5°	1136.7	1135.1	1133.5	1135.1	1131.8	1131.8	1130.2	1130.2
7.5°	1102.8	1101.2	1099.6	1099.6	1096.4	1096.4	1094.7	1093.1
10°	1065.7	1062.5	1064.1	1060.9	1059.3	1057.7	1056.1	1054.5
12.5°	1025.5	1022.2	1020.6	1017.4	1014.1	1012.5	1014.1	1010.9
15°	981.9	977.0	975.4	972.2	969.0	967.4	967.4	965.8
17.5°	933.6	930.3	928.7	925.4	923.8	920.6	919.0	917.4
20°	888.4	880.3	881.9	878.7	877.1	870.7	870.7	872.3
22.5°	838.5	833.5	830.3	827.1	825.5	822.3	822.3	820.7
25°	788.4	783.6	782.0	778.7	777.1	773.9	772.3	772.3
27.5°	740.0	733.6	733.6	730.4	727.2	725.6	724.0	722.4
30°	688.4	683.6	682.0	682.0	680.4	680.4	675.6	677.2
32.5°	640.1	636.9	635.3	632.0	632.0	630.4	630.4	625.6
35°	591.7	586.9	588.5	585.3	583.7	582.1	583.7	582.1
37.5°	545.0	541.7	541.7	538.5	538.5	536.9	535.3	538.5
40°	498.2	496.6	495.0	493.4	495.0	493.4	490.2	491.8
42.5°	451.4	451.4	449.8	449.8	448.2	448.2	448.2	448.2
45°	409.5	407.9	407.9	406.3	406.3	406.3	406.3	404.7
47.5°	367.7	366.0	366.0	366.0	364.3	364.3	362.7	364.3
50°	327.3	327.3	325.7	325.7	327.3	325.7	324.1	324.1
52.5°	290.2	290.2	288.6	288.6	287.0	285.4	287.0	287.0
55°	256.4	254.8	253.2	253.2	251.6	250.0	250.0	251.6
57.5°	224.2	222.5	220.8	220.8	217.6	216.0	216.0	216.0
60°	193.5	190.2	190.2	188.6	188.6	187.0	187.0	187.0
62.5°	164.5	162.9	162.9	162.9	162.9	161.2	161.2	161.2
65°	140.3	140.3	140.3	141.9	141.9	143.5	143.5	143.5
67.5°	120.9	122.5	122.5	122.5	124.1	124.1	124.1	122.5
70°	103.1	103.1	103.1	104.8	104.8	104.8	104.8	104.8
72.5°	85.5	85.5	85.5	85.5	85.5	85.5	85.5	85.5
75°	67.7	69.3	69.3	69.3	67.7	69.3	69.3	67.7
77.5°	53.2	53.2	53.2	53.2	53.2	53.2	53.2	53.2
80°	40.3	40.3	40.3	40.3	40.3	40.3	40.3	40.3
82.5°	27.4	27.4	27.4	27.4	27.4	27.4	27.4	27.4
85°	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2
87.5°	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
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)