

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: P584115

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

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584115
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-18)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 10/21/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC825D010-HM82555827-81WWWB
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2338.2 lumens
Efficiency: N/A
Efficacy: 87.2 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.09 / 1.18
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

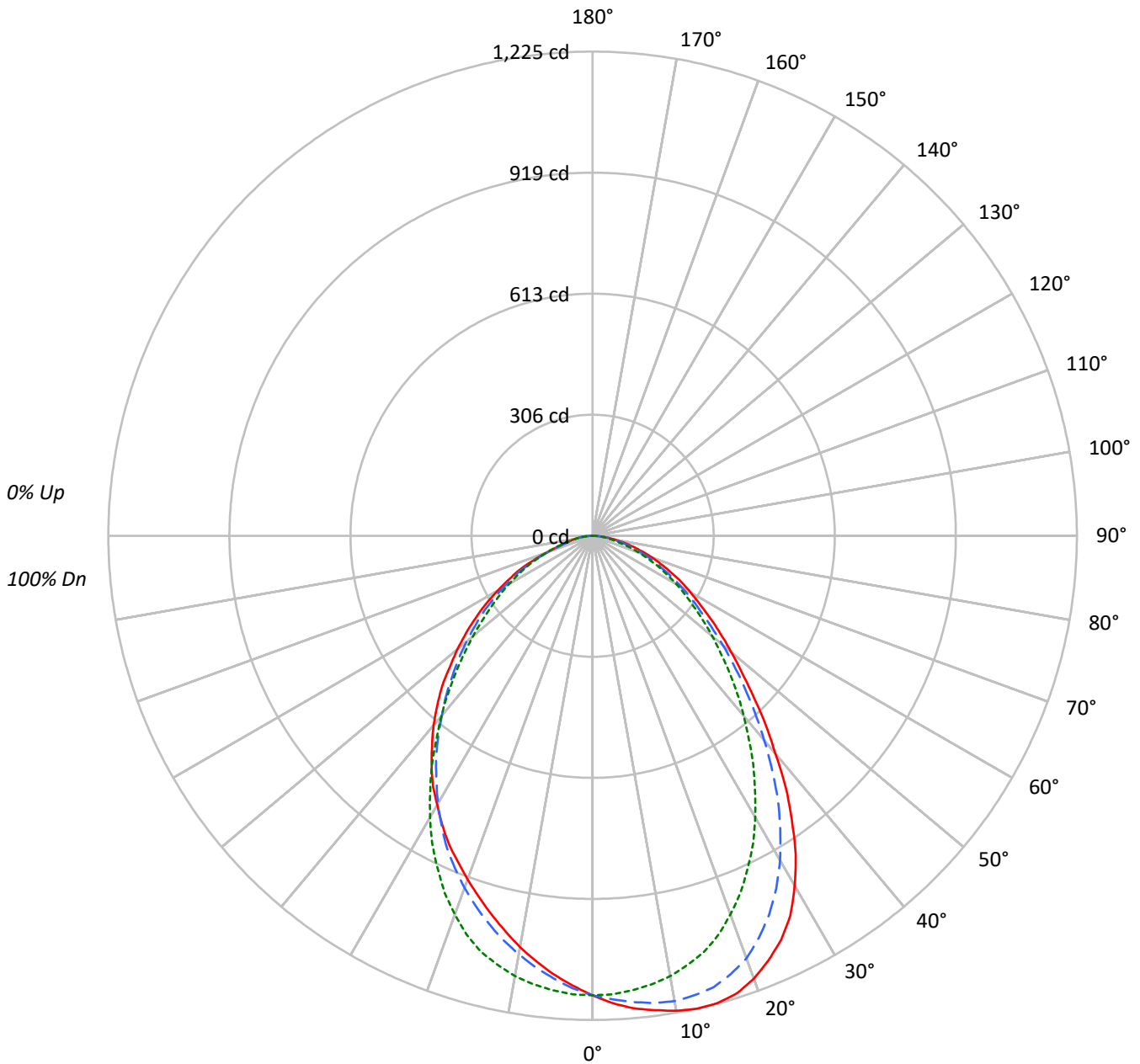
Input Watts (W): 26.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					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	92	91	89	87								
2	102	94	88	83	99	93	87	82	89	85	81	86	82	79	83	80	77	75								
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65								
4	87	76	68	62	84	75	67	61	72	66	61	70	64	60	68	63	59	57								
5	80	69	60	54	78	67	60	54	65	59	54	64	58	53	62	57	52	50								
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45								
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42	40								
8	65	52	45	39	64	52	44	39	51	44	39	49	43	39	48	43	38	37								
9	61	48	41	36	60	48	41	36	47	40	35	46	40	35	45	39	35	33								
10	57	45	38	33	56	44	37	33	44	37	32	43	37	32	42	36	32	30								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	35850	35850	35850
5°	37160	35730	34505
10°	38210	35420	33091
15°	39066	34794	31630
20°	39126	33439	30348
25°	38376	31578	29274
30°	36397	29283	27987
35°	33074	26667	26731
40°	28918	23931	25191
45°	25062	21316	23475
50°	21943	18935	21391
55°	19532	16779	19360
60°	17620	15073	17003
65°	15906	13258	14819
70°	14299	11171	11017
75°	12593	8864	8257
80°	10566	7334	7920
85°	8173	6439	7005



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.7	4.7
10°-20°	308.9	13.2
20°-30°	441.5	18.9
30°-40°	469.1	20.1
40°-50°	403.9	17.3
50°-60°	302.0	12.9
60°-70°	192.6	8.2
70°-80°	87.6	3.7
80°-90°	23.0	1.0
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°	860.1	36.8
0°-40°	1329.2	56.8
0°-60°	2035.0	87.0
0°-90°	2338.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2338.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1163	1163	1163	1163	1163	
5°	1200	1184	1154	1125	1115	115
15°	1224	1182	1090	1016	991	345
25°	1128	1057	928	872	860	516
35°	879	818	708	690	710	547
45°	575	543	489	502	538	447
55°	363	334	312	338	360	327
65°	218	193	182	190	203	217
75°	106	91	74	68	69	112
85°	23	20	18	20	20	28
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°	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6
2.5°	1184.1	1180.7	1182.4	1180.7	1182.4	1182.4	1179.1	1179.1	1179.1	1179.1	1174.1
5°	1200.5	1198.9	1198.9	1197.2	1195.6	1197.2	1195.6	1193.9	1190.7	1189.0	1184.1
7.5°	1210.5	1210.5	1210.5	1210.5	1208.8	1207.2	1205.6	1202.3	1198.9	1195.6	1192.3
10°	1220.3	1222.0	1220.3	1218.7	1217.1	1213.8	1212.1	1208.8	1203.9	1198.9	1195.6
12.5°	1225.4	1225.4	1223.7	1223.7	1220.3	1218.7	1213.8	1208.8	1203.9	1198.9	1190.7
15°	1223.7	1223.7	1222.0	1220.3	1215.4	1213.8	1210.5	1205.6	1197.2	1190.7	1182.4
17.5°	1213.8	1212.1	1208.8	1208.8	1202.3	1200.5	1197.2	1190.7	1182.4	1172.5	1162.6
20°	1192.3	1192.3	1190.7	1189.0	1182.4	1177.4	1174.1	1165.9	1159.2	1147.7	1137.8
22.5°	1162.6	1165.9	1162.6	1159.2	1151.0	1149.4	1144.4	1134.5	1124.6	1111.4	1099.9
25°	1127.9	1126.3	1124.6	1121.3	1114.7	1111.4	1104.8	1094.8	1085.0	1070.1	1056.8
27.5°	1083.3	1076.7	1076.7	1070.1	1065.2	1060.2	1056.8	1047.0	1033.7	1022.2	1005.7
30°	1022.2	1023.9	1015.6	1013.9	1005.7	1002.4	995.7	985.9	974.3	961.1	947.9
32.5°	956.2	951.2	951.2	944.6	938.0	933.0	931.4	919.9	909.9	896.7	883.5
35°	878.6	878.6	873.5	871.9	865.3	862.0	857.1	850.4	838.9	827.3	817.5
37.5°	802.6	799.3	797.6	794.4	789.3	784.4	784.4	772.9	771.1	758.0	744.8
40°	718.4	721.6	718.4	713.4	711.8	708.4	706.8	700.2	695.3	683.7	675.4
42.5°	647.4	644.0	644.0	642.4	635.8	635.8	632.5	629.2	620.9	617.6	607.8
45°	574.7	578.0	573.0	574.7	568.1	568.1	568.1	561.4	554.9	549.9	543.3
47.5°	511.9	513.6	513.6	508.7	507.0	507.0	503.6	500.3	495.4	488.8	483.9
50°	457.4	459.1	455.8	454.1	450.8	449.2	449.2	442.6	439.2	432.7	429.4
52.5°	407.9	407.9	406.3	406.3	401.2	401.2	397.9	393.0	389.7	386.4	378.1
55°	363.3	363.3	361.7	360.1	360.1	355.0	353.4	348.4	345.2	338.5	333.6
57.5°	320.4	322.1	320.4	318.8	317.0	315.4	312.1	307.2	303.9	298.9	295.6
60°	285.7	285.7	284.1	282.4	279.1	277.5	275.7	272.5	267.5	264.2	259.3
62.5°	252.6	251.0	249.3	247.7	244.4	244.4	241.1	237.8	232.8	229.5	226.2
65°	218.0	218.0	216.4	216.4	214.6	211.3	209.7	208.1	201.5	199.8	193.2
67.5°	186.6	188.2	185.0	185.0	181.7	181.7	180.0	175.1	173.4	170.1	166.8
70°	158.6	158.6	158.6	156.9	153.5	151.9	150.2	147.0	145.3	142.0	138.7
72.5°	130.4	130.4	128.8	128.8	127.1	125.5	123.9	120.6	120.6	117.3	114.0
75°	105.7	105.7	104.0	102.4	100.7	100.7	99.1	97.5	94.2	92.4	90.8
77.5°	80.9	80.9	80.9	79.3	77.6	77.6	77.6	74.4	71.0	71.0	69.3
80°	59.5	59.5	57.8	57.8	56.2	56.2	56.2	54.5	52.9	51.1	49.5
82.5°	39.6	39.6	39.6	39.6	38.0	38.0	38.0	36.4	34.7	34.7	34.7
85°	23.1	23.1	23.1	23.1	21.5	21.5	21.5	21.5	21.5	19.8	19.8
87.5°	10.0	8.2	10.0	8.2	10.0	8.2	10.0	8.2	8.2	8.2	8.2
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°	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6
2.5°	1175.8	1174.1	1172.5	1170.8	1170.8	1169.2	1165.9	1164.3	1162.6	1161.0	1161.0
5°	1182.4	1180.7	1177.4	1174.1	1172.5	1169.2	1165.9	1162.6	1159.2	1154.3	1152.7
7.5°	1187.4	1182.4	1179.1	1172.5	1170.8	1167.6	1162.6	1157.6	1151.0	1144.4	1139.4
10°	1187.4	1180.7	1175.8	1167.6	1164.3	1161.0	1154.3	1146.1	1137.8	1131.2	1123.0
12.5°	1184.1	1175.8	1167.6	1159.2	1154.3	1149.4	1139.4	1131.2	1121.3	1111.4	1104.8
15°	1172.5	1162.6	1152.7	1142.8	1137.8	1131.2	1121.3	1109.7	1099.9	1089.9	1078.3
17.5°	1151.0	1141.2	1129.6	1118.0	1111.4	1106.5	1091.6	1083.3	1068.5	1058.6	1048.6
20°	1123.0	1111.4	1096.5	1085.0	1076.7	1071.7	1060.2	1045.3	1033.7	1019.0	1009.0
22.5°	1086.6	1071.7	1056.8	1045.3	1037.0	1030.5	1015.6	1000.8	990.8	977.7	966.1
25°	1043.7	1028.8	1013.9	997.5	989.2	982.6	969.4	956.2	943.0	928.1	918.2
27.5°	992.5	975.9	962.8	947.9	939.7	929.7	914.8	901.7	888.4	878.6	865.3
30°	936.4	918.2	905.0	890.1	881.9	873.5	858.7	845.5	834.0	822.4	815.8
32.5°	868.6	855.5	842.2	827.3	820.7	815.8	800.9	787.7	774.5	764.6	759.6
35°	804.2	789.3	777.8	764.6	756.4	751.4	738.2	726.6	720.0	708.4	701.8
37.5°	736.5	724.9	711.8	698.5	693.6	688.7	678.7	667.1	657.3	649.0	645.7
40°	665.5	655.6	644.0	635.8	630.9	625.8	617.6	609.4	602.7	594.5	591.2
42.5°	597.8	591.2	581.3	571.4	566.5	564.7	554.9	548.3	545.0	541.6	538.3
45°	536.7	526.8	520.2	513.6	508.7	505.4	500.3	495.4	492.1	488.8	485.5
47.5°	477.2	469.0	462.3	457.4	452.5	450.8	447.6	442.6	439.2	439.2	439.2
50°	422.8	416.1	409.6	406.3	404.6	401.2	397.9	396.3	394.7	394.7	394.7
52.5°	374.8	368.3	363.3	360.1	360.1	356.7	353.4	351.7	351.7	351.7	351.7
55°	330.3	325.3	322.1	318.8	315.4	313.7	313.7	313.7	312.1	312.1	313.7
57.5°	290.6	287.3	282.4	279.1	277.5	277.5	275.7	274.1	275.7	277.5	279.1
60°	254.3	251.0	249.3	244.4	244.4	244.4	242.8	242.8	242.8	244.4	246.1
62.5°	221.3	219.7	216.4	214.6	213.0	213.0	211.3	211.3	211.3	211.3	213.0
65°	191.5	188.2	185.0	185.0	185.0	183.3	183.3	180.0	181.7	181.7	180.0
67.5°	163.5	160.2	158.6	156.9	155.3	155.3	153.5	151.9	150.2	150.2	150.2
70°	137.1	133.8	133.8	130.4	130.4	128.8	127.1	127.1	125.5	123.9	122.2
72.5°	110.6	109.0	107.3	105.7	105.7	105.7	104.0	102.4	100.7	99.1	95.8
75°	87.5	87.5	84.2	82.6	82.6	80.9	79.3	77.6	76.0	74.4	72.7
77.5°	67.7	66.0	62.7	61.1	61.1	61.1	59.5	57.8	56.2	54.5	52.9
80°	49.5	47.9	46.2	44.6	44.6	44.6	42.9	42.9	41.3	41.3	41.3
82.5°	33.1	33.1	31.4	31.4	31.4	31.4	29.7	29.7	29.7	29.7	29.7
85°	19.8	19.8	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2
87.5°	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2
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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6
2.5°	1157.6	1157.6	1154.3	1152.7	1151.0	1152.7	1149.4	1147.7	1146.1	1146.1	1144.4
5°	1147.7	1146.1	1139.4	1137.8	1136.1	1134.5	1131.2	1127.9	1124.6	1123.0	1121.3
7.5°	1134.5	1129.6	1123.0	1121.3	1119.6	1114.7	1109.7	1106.5	1101.5	1099.9	1096.5
10°	1116.3	1109.7	1104.8	1099.9	1096.5	1091.6	1086.6	1081.7	1075.0	1073.4	1068.5
12.5°	1094.8	1086.6	1076.7	1075.0	1070.1	1063.5	1056.8	1051.9	1047.0	1043.7	1038.8
15°	1068.5	1060.2	1050.3	1045.3	1040.4	1035.4	1027.2	1020.6	1015.6	1010.6	1005.7
17.5°	1037.0	1027.2	1019.0	1013.9	1010.6	1002.4	995.7	987.5	982.6	977.7	972.6
20°	999.1	990.8	979.3	974.3	972.6	966.1	957.8	954.5	947.9	943.0	939.7
22.5°	956.2	947.9	938.0	934.6	928.1	924.8	916.6	913.2	909.9	905.0	903.3
25°	908.2	900.0	891.7	890.1	885.1	881.9	876.9	871.9	871.9	867.0	867.0
27.5°	858.7	850.4	843.9	840.6	838.9	835.6	830.6	829.0	827.3	825.7	825.7
30°	805.9	796.0	792.7	791.1	789.3	786.0	784.4	781.1	782.8	784.4	782.8
32.5°	749.7	746.4	739.8	736.5	738.2	736.5	733.3	736.5	734.9	738.2	739.8
35°	695.3	692.0	688.7	688.7	685.3	685.3	685.3	686.9	690.3	692.0	695.3
37.5°	642.4	637.4	635.8	634.1	635.8	635.8	635.8	639.1	642.4	645.7	650.7
40°	586.3	582.9	582.9	582.9	582.9	587.9	586.3	589.6	592.9	597.8	602.7
42.5°	533.4	533.4	535.0	535.0	535.0	535.0	538.3	543.3	548.3	553.2	558.2
45°	483.9	483.9	483.9	487.2	487.2	488.8	495.4	498.7	502.0	507.0	511.9
47.5°	437.6	437.6	439.2	440.9	442.6	445.9	449.2	454.1	459.1	462.3	467.4
50°	394.7	396.3	399.6	403.0	403.0	404.6	409.6	412.8	416.1	421.2	422.8
52.5°	353.4	356.7	360.1	361.7	363.3	366.6	368.3	373.2	374.8	379.8	381.5
55°	315.4	317.0	322.1	323.7	323.7	327.0	330.3	333.6	338.5	338.5	341.9
57.5°	280.8	282.4	285.7	287.3	285.7	290.6	292.3	295.6	297.2	300.6	302.2
60°	246.1	249.3	251.0	251.0	252.6	254.3	257.7	257.7	261.0	264.2	264.2
62.5°	213.0	214.6	216.4	218.0	219.7	218.0	223.0	223.0	226.2	227.9	231.2
65°	181.7	183.3	183.3	185.0	185.0	186.6	186.6	188.2	189.9	193.2	194.8
67.5°	150.2	150.2	150.2	151.9	150.2	151.9	151.9	153.5	153.5	156.9	158.6
70°	122.2	120.6	118.9	118.9	118.9	118.9	117.3	118.9	118.9	120.6	120.6
72.5°	94.2	92.4	90.8	89.1	89.1	87.5	85.9	87.5	87.5	89.1	89.1
75°	71.0	67.7	67.7	67.7	66.0	66.0	66.0	67.7	67.7	67.7	69.3
77.5°	52.9	52.9	51.1	51.1	51.1	52.9	52.9	54.5	54.5	54.5	54.5
80°	39.6	41.3	41.3	41.3	41.3	42.9	42.9	42.9	42.9	44.6	44.6
82.5°	29.7	29.7	29.7	29.7	31.4	31.4	31.4	31.4	31.4	31.4	31.4
85°	18.2	19.8	19.8	18.2	19.8	19.8	19.8	19.8	19.8	19.8	19.8
87.5°	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2
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: P584115

CATALOG NUMBER: HC825D010-HM82555827-81WWWB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6	1162.6
2.5°	1142.8	1142.8	1142.8	1142.8	1141.2	1141.2	1141.2	1139.4
5°	1118.0	1118.0	1118.0	1114.7	1116.3	1116.3	1113.0	1114.7
7.5°	1093.2	1091.6	1089.9	1089.9	1088.3	1086.6	1085.0	1086.6
10°	1065.2	1060.2	1060.2	1058.6	1058.6	1055.2	1055.2	1056.8
12.5°	1033.7	1030.5	1030.5	1028.8	1027.2	1025.5	1023.9	1023.9
15°	1002.4	999.1	997.5	995.7	994.1	990.8	992.5	990.8
17.5°	971.0	966.1	966.1	964.4	962.8	959.5	959.5	957.8
20°	934.6	933.0	929.7	931.4	929.7	926.4	924.8	924.8
22.5°	898.4	898.4	896.7	896.7	895.1	893.4	891.7	891.7
25°	863.7	862.0	863.7	863.7	858.7	858.7	858.7	860.4
27.5°	824.0	825.7	824.0	824.0	824.0	824.0	825.7	824.0
30°	784.4	784.4	784.4	786.0	789.3	787.7	787.7	786.0
32.5°	741.5	743.1	743.1	744.8	746.4	749.7	749.7	751.4
35°	698.5	701.8	703.5	701.8	706.8	706.8	710.1	710.1
37.5°	654.0	655.6	658.9	660.5	663.8	665.5	667.1	667.1
40°	606.0	612.7	614.3	616.0	620.9	620.9	622.5	625.8
42.5°	561.4	568.1	569.8	571.4	574.7	579.6	578.0	581.3
45°	518.5	523.4	525.2	526.8	531.8	533.4	533.4	538.3
47.5°	472.3	475.6	477.2	480.5	483.9	487.2	490.5	488.8
50°	426.1	431.0	434.3	435.9	440.9	442.6	444.3	445.9
52.5°	384.8	388.1	389.7	391.4	396.3	397.9	399.6	403.0
55°	345.2	346.8	350.1	348.4	353.4	355.0	356.7	360.1
57.5°	305.5	307.2	308.8	308.8	312.1	315.4	317.0	318.8
60°	267.5	270.8	272.5	272.5	272.5	275.7	275.7	275.7
62.5°	232.8	232.8	234.5	234.5	237.8	237.8	237.8	237.8
65°	196.6	198.2	199.8	199.8	203.1	201.5	204.8	203.1
67.5°	158.6	158.6	161.8	161.8	160.2	161.8	161.8	161.8
70°	120.6	120.6	122.2	122.2	122.2	122.2	122.2	122.2
72.5°	89.1	89.1	89.1	90.8	89.1	89.1	90.8	89.1
75°	69.3	69.3	69.3	69.3	69.3	69.3	69.3	69.3
77.5°	54.5	54.5	56.2	56.2	56.2	56.2	56.2	56.2
80°	44.6	44.6	44.6	44.6	46.2	44.6	44.6	44.6
82.5°	33.1	31.4	33.1	31.4	33.1	33.1	33.1	33.1
85°	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.8
87.5°	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2
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)