

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: P584132

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

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584132
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-HM82555830-81WWWB
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2283.3 lumens
Efficiency: N/A
Efficacy: 85.2 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

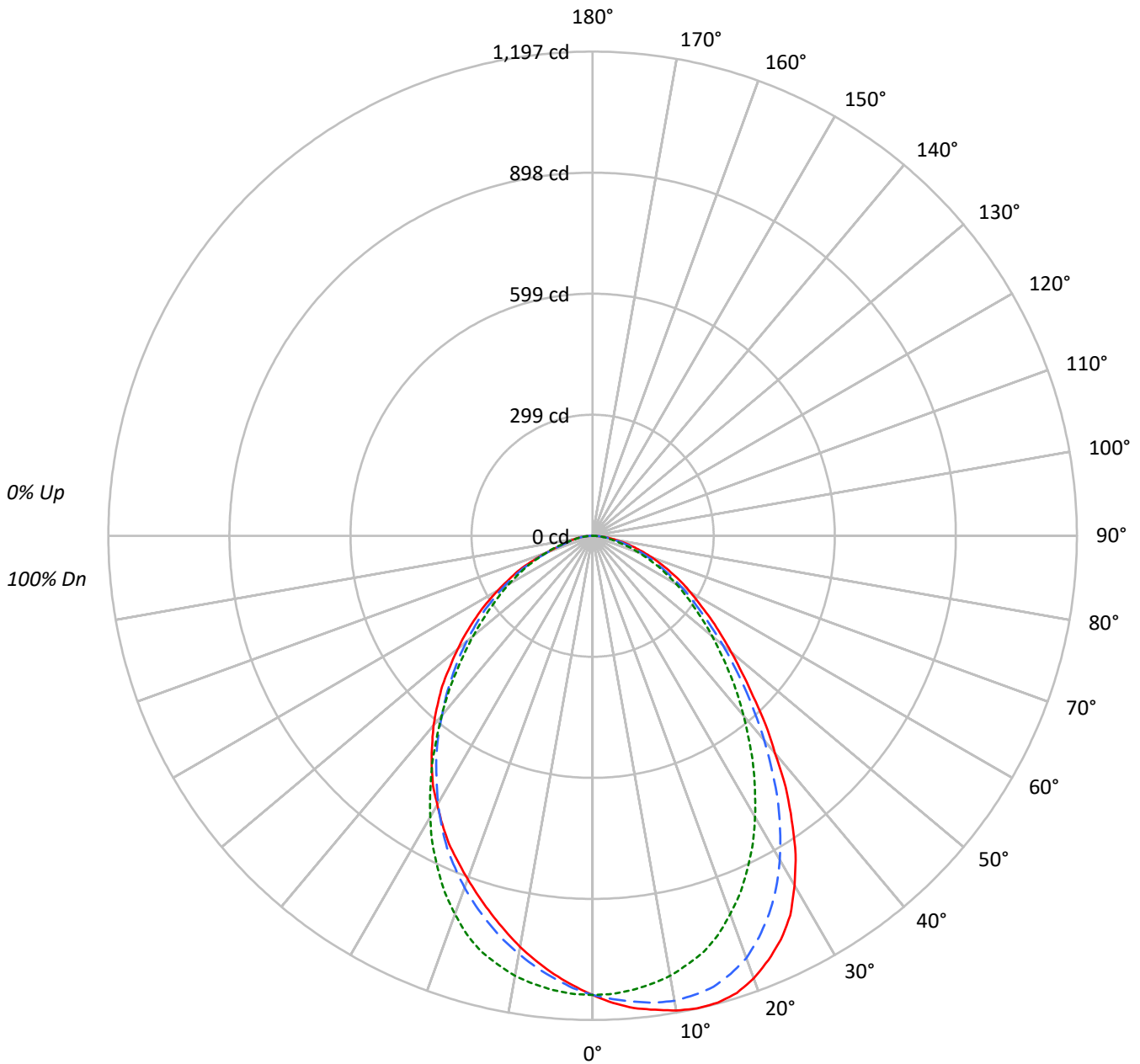
Input Watts (W): 26.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	35008	35008	35008
5°	36291	34891	33694
10°	37318	34590	32317
15°	38149	33977	30890
20°	38207	32651	29636
25°	37478	30836	28587
30°	35543	28592	27332
35°	32295	26046	26106
40°	28238	23371	24603
45°	24473	20815	22925
50°	21429	18489	20887
55°	19075	16381	18903
60°	17200	14721	16608
65°	15527	12944	14476
70°	13957	10900	10756
75°	12307	8638	8066
80°	10317	7156	7725
85°	7996	6298	6864



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.1	4.7
10°-20°	301.7	13.2
20°-30°	431.1	18.9
30°-40°	458.1	20.1
40°-50°	394.4	17.3
50°-60°	294.9	12.9
60°-70°	188.1	8.2
70°-80°	85.6	3.7
80°-90°	22.4	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°	839.9	36.8
0°-40°	1297.9	56.8
0°-60°	1987.2	87.0
0°-90°	2283.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2283.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1135	1135	1135	1135	1135	
5°	1172	1156	1127	1098	1088	112
15°	1195	1155	1064	992	968	337
25°	1102	1032	906	852	840	504
35°	858	798	692	674	694	534
45°	561	530	477	490	526	436
55°	355	326	305	331	352	319
65°	213	189	177	185	198	212
75°	103	89	72	66	68	110
85°	23	19	18	19	19	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°	1135.3	1135.3	1135.3	1135.3	1135.3	1135.3	1135.3	1135.3	1135.3	1135.3	1135.3
2.5°	1156.2	1153.0	1154.6	1153.0	1154.6	1154.6	1151.4	1151.4	1151.4	1151.4	1146.6
5°	1172.4	1170.8	1170.8	1169.2	1167.5	1169.2	1167.5	1165.9	1162.7	1161.1	1156.2
7.5°	1182.0	1182.0	1182.0	1182.0	1180.4	1178.8	1177.2	1174.0	1170.8	1167.5	1164.3
10°	1191.8	1193.4	1191.8	1190.1	1188.4	1185.2	1183.6	1180.4	1175.6	1170.8	1167.5
12.5°	1196.6	1196.6	1195.0	1195.0	1191.8	1190.1	1185.2	1180.4	1175.6	1170.8	1162.7
15°	1195.0	1195.0	1193.4	1191.8	1186.8	1185.2	1182.0	1177.2	1169.2	1162.7	1154.6
17.5°	1185.2	1183.6	1180.4	1180.4	1174.0	1172.4	1169.2	1162.7	1154.6	1144.9	1135.3
20°	1164.3	1164.3	1162.7	1161.1	1154.6	1149.8	1146.6	1138.5	1132.1	1120.7	1111.1
22.5°	1135.3	1138.5	1135.3	1132.1	1124.0	1122.3	1117.5	1107.9	1098.1	1085.3	1074.0
25°	1101.5	1099.9	1098.1	1094.9	1088.5	1085.3	1078.9	1069.1	1059.5	1045.0	1032.1
27.5°	1057.9	1051.4	1051.4	1045.0	1040.1	1035.3	1032.1	1022.4	1009.5	998.2	982.0
30°	998.2	999.8	991.8	990.2	982.0	978.8	972.4	962.7	951.4	938.5	925.7
32.5°	933.7	928.9	928.9	922.4	915.9	911.1	909.5	898.3	888.5	875.7	862.7
35°	857.9	857.9	853.1	851.5	845.0	841.8	837.0	830.5	819.2	808.0	798.2
37.5°	783.8	780.5	778.9	775.6	770.8	766.0	766.0	754.7	753.1	740.2	727.3
40°	701.5	704.7	701.5	696.7	695.1	691.9	690.2	683.7	678.9	667.6	659.5
42.5°	632.2	628.9	628.9	627.3	620.8	620.8	617.6	614.4	606.4	603.2	593.4
45°	561.2	564.4	559.6	561.2	554.7	554.7	554.7	548.3	541.8	537.0	530.5
47.5°	499.9	501.5	501.5	496.7	495.1	495.1	491.9	488.7	483.7	477.3	472.5
50°	446.7	448.3	445.1	443.5	440.2	438.6	438.6	432.2	429.0	422.5	419.2
52.5°	398.4	398.4	396.6	396.6	391.8	391.8	388.6	383.8	380.6	377.4	369.3
55°	354.8	354.8	353.2	351.6	351.6	346.7	345.1	340.3	337.0	330.6	325.7
57.5°	312.9	314.5	312.9	311.3	309.7	308.1	304.7	299.9	296.7	291.9	288.7
60°	278.9	278.9	277.3	275.7	272.5	270.9	269.3	266.1	261.3	258.0	253.2
62.5°	246.7	245.1	243.5	241.9	238.7	238.7	235.4	232.2	227.4	224.2	221.0
65°	212.8	212.8	211.2	211.2	209.6	206.4	204.8	203.2	196.8	195.2	188.6
67.5°	182.2	183.8	180.6	180.6	177.4	177.4	175.8	171.0	169.3	166.1	162.9
70°	154.8	154.8	154.8	153.2	150.0	148.4	146.7	143.5	141.9	138.7	135.5
72.5°	127.4	127.4	125.8	125.8	124.1	122.5	120.9	117.7	117.7	114.5	111.3
75°	103.3	103.3	101.5	99.9	98.3	98.3	96.7	95.1	91.9	90.3	88.7
77.5°	79.0	79.0	79.0	77.4	75.8	75.8	75.8	72.5	69.3	69.3	67.7
80°	58.1	58.1	56.4	56.4	54.8	54.8	54.8	53.2	51.6	50.0	48.4
82.5°	38.7	38.7	38.7	38.7	37.1	37.1	37.1	35.5	33.8	33.8	33.8
85°	22.6	22.6	22.6	22.6	21.0	21.0	21.0	21.0	21.0	19.4	19.4
87.5°	9.6	8.0	9.6	8.0	9.6	8.0	9.6	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°	1135.3	1135.3	1135.3	1135.3	1135.3	1135.3	1135.3	1135.3	1135.3	1135.3	1135.3
2.5°	1148.2	1146.6	1144.9	1143.3	1143.3	1141.7	1138.5	1136.9	1135.3	1133.7	1133.7
5°	1154.6	1153.0	1149.8	1146.6	1144.9	1141.7	1138.5	1135.3	1132.1	1127.2	1125.6
7.5°	1159.5	1154.6	1151.4	1144.9	1143.3	1140.1	1135.3	1130.5	1124.0	1117.5	1112.7
10°	1159.5	1153.0	1148.2	1140.1	1136.9	1133.7	1127.2	1119.1	1111.1	1104.7	1096.5
12.5°	1156.2	1148.2	1140.1	1132.1	1127.2	1122.3	1112.7	1104.7	1094.9	1085.3	1078.9
15°	1144.9	1135.3	1125.6	1115.9	1111.1	1104.7	1094.9	1083.7	1074.0	1064.3	1053.0
17.5°	1124.0	1114.3	1103.1	1091.7	1085.3	1080.5	1065.9	1057.9	1043.4	1033.7	1024.0
20°	1096.5	1085.3	1070.7	1059.5	1051.4	1046.6	1035.3	1020.8	1009.5	995.0	985.3
22.5°	1061.1	1046.6	1032.1	1020.8	1012.8	1006.2	991.8	977.2	967.6	954.7	943.4
25°	1019.2	1004.6	990.2	974.0	966.0	959.5	946.6	933.7	920.8	906.3	896.7
27.5°	969.2	953.0	940.1	925.7	917.5	907.9	893.3	880.5	867.6	857.9	845.0
30°	914.3	896.7	883.7	869.2	861.1	853.1	838.6	825.6	814.4	803.0	796.6
32.5°	848.2	835.3	822.4	808.0	801.4	796.6	782.1	769.2	756.3	746.6	741.8
35°	785.4	770.8	759.5	746.6	738.6	733.7	720.9	709.5	703.1	691.9	685.3
37.5°	719.3	707.9	695.1	682.1	677.3	672.5	662.8	651.5	641.8	633.8	630.6
40°	649.9	640.2	628.9	620.8	616.0	611.2	603.2	595.0	588.6	580.6	577.3
42.5°	583.8	577.3	567.6	558.0	553.1	551.5	541.8	535.4	532.1	528.9	525.7
45°	524.1	514.5	507.9	501.5	496.7	493.5	488.7	483.7	480.5	477.3	474.1
47.5°	466.1	458.0	451.5	446.7	441.8	440.2	437.0	432.2	429.0	429.0	429.0
50°	412.8	406.4	400.0	396.6	395.0	391.8	388.6	387.0	385.4	385.4	385.4
52.5°	366.0	359.6	354.8	351.6	351.6	348.3	345.1	343.5	343.5	343.5	343.5
55°	322.5	317.7	314.5	311.3	308.1	306.4	306.4	306.4	304.7	304.7	306.4
57.5°	283.9	280.6	275.7	272.5	270.9	270.9	269.3	267.7	269.3	270.9	272.5
60°	248.3	245.1	243.5	238.7	238.7	238.7	237.0	237.0	237.0	238.7	240.3
62.5°	216.1	214.4	211.2	209.6	208.0	208.0	206.4	206.4	206.4	206.4	208.0
65°	187.0	183.8	180.6	180.6	180.6	179.0	179.0	175.8	177.4	177.4	175.8
67.5°	159.6	156.4	154.8	153.2	151.6	151.6	150.0	148.4	146.7	146.7	146.7
70°	133.9	130.6	130.6	127.4	127.4	125.8	124.1	124.1	122.5	120.9	119.3
72.5°	108.1	106.5	104.9	103.3	103.3	103.3	101.5	99.9	98.3	96.7	93.5
75°	85.5	85.5	82.3	80.7	80.7	79.0	77.4	75.8	74.2	72.5	70.9
77.5°	66.1	64.5	61.3	59.7	59.7	59.7	58.1	56.4	54.8	53.2	51.6
80°	48.4	46.8	45.2	43.5	43.5	43.5	41.9	41.9	40.3	40.3	40.3
82.5°	32.2	32.2	30.6	30.6	30.6	30.6	29.0	29.0	29.0	29.0	29.0
85°	19.4	19.4	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8
87.5°	8.0	8.0	8.0	8.0	8.0	8.0	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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1135.3	1135.3	1135.3	1135.3	1135.3	1135.3	1135.3	1135.3	1135.3	1135.3	1135.3
2.5°	1130.5	1130.5	1127.2	1125.6	1124.0	1125.6	1122.3	1120.7	1119.1	1119.1	1117.5
5°	1120.7	1119.1	1112.7	1111.1	1109.5	1107.9	1104.7	1101.5	1098.1	1096.5	1094.9
7.5°	1107.9	1103.1	1096.5	1094.9	1093.3	1088.5	1083.7	1080.5	1075.6	1074.0	1070.7
10°	1090.1	1083.7	1078.9	1074.0	1070.7	1065.9	1061.1	1056.3	1049.8	1048.2	1043.4
12.5°	1069.1	1061.1	1051.4	1049.8	1045.0	1038.5	1032.1	1027.2	1022.4	1019.2	1014.4
15°	1043.4	1035.3	1025.6	1020.8	1016.0	1011.2	1003.0	996.6	991.8	987.0	982.0
17.5°	1012.8	1003.0	995.0	990.2	987.0	978.8	972.4	964.4	959.5	954.7	949.8
20°	975.6	967.6	956.3	951.4	949.8	943.4	935.3	932.1	925.7	920.8	917.5
22.5°	933.7	925.7	915.9	912.7	906.3	903.1	894.9	891.7	888.5	883.7	882.1
25°	886.9	878.9	870.8	869.2	864.3	861.1	856.3	851.5	851.5	846.6	846.6
27.5°	838.6	830.5	824.0	820.8	819.2	816.0	811.2	809.6	808.0	806.4	806.4
30°	787.0	777.2	774.0	772.4	770.8	767.6	766.0	762.8	764.4	766.0	764.4
32.5°	732.1	728.9	722.5	719.3	720.9	719.3	716.0	719.3	717.6	720.9	722.5
35°	678.9	675.7	672.5	672.5	669.3	669.3	669.3	670.9	674.1	675.7	678.9
37.5°	627.3	622.4	620.8	619.2	620.8	620.8	620.8	624.1	627.3	630.6	635.4
40°	572.4	569.2	569.2	569.2	569.2	574.1	572.4	575.7	579.0	583.8	588.6
42.5°	520.9	520.9	522.5	522.5	522.5	522.5	525.7	530.5	535.4	540.2	545.1
45°	472.5	472.5	472.5	475.7	475.7	477.3	483.7	487.0	490.3	495.1	499.9
47.5°	427.4	427.4	429.0	430.6	432.2	435.4	438.6	443.5	448.3	451.5	456.4
50°	385.4	387.0	390.2	393.4	393.4	395.0	400.0	403.2	406.4	411.2	412.8
52.5°	345.1	348.3	351.6	353.2	354.8	358.0	359.6	364.4	366.0	370.9	372.5
55°	308.1	309.7	314.5	316.1	316.1	319.3	322.5	325.7	330.6	330.6	333.8
57.5°	274.1	275.7	278.9	280.6	278.9	283.9	285.5	288.7	290.3	293.5	295.1
60°	240.3	243.5	245.1	245.1	246.7	248.3	251.6	251.6	254.8	258.0	258.0
62.5°	208.0	209.6	211.2	212.8	214.4	212.8	217.7	217.7	221.0	222.6	225.8
65°	177.4	179.0	179.0	180.6	180.6	182.2	182.2	183.8	185.4	188.6	190.2
67.5°	146.7	146.7	146.7	148.4	146.7	148.4	148.4	150.0	150.0	153.2	154.8
70°	119.3	117.7	116.1	116.1	116.1	116.1	114.5	116.1	116.1	117.7	117.7
72.5°	91.9	90.3	88.7	87.1	87.1	85.5	83.9	85.5	85.5	87.1	87.1
75°	69.3	66.1	66.1	66.1	64.5	64.5	64.5	66.1	66.1	66.1	67.7
77.5°	51.6	51.6	50.0	50.0	50.0	51.6	51.6	53.2	53.2	53.2	53.2
80°	38.7	40.3	40.3	40.3	40.3	41.9	41.9	41.9	41.9	43.5	43.5
82.5°	29.0	29.0	29.0	29.0	30.6	30.6	30.6	30.6	30.6	30.6	30.6
85°	17.8	19.4	19.4	17.8	19.4	19.4	19.4	19.4	19.4	19.4	19.4
87.5°	8.0	8.0	8.0	8.0	8.0	8.0	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



TEST NUMBER: P584132

CATALOG NUMBER: HC825D010-HM82555830-81WWWB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1135.3	1135.3	1135.3	1135.3	1135.3	1135.3	1135.3	1135.3
2.5°	1115.9	1115.9	1115.9	1115.9	1114.3	1114.3	1114.3	1112.7
5°	1091.7	1091.7	1091.7	1088.5	1090.1	1090.1	1086.9	1088.5
7.5°	1067.5	1065.9	1064.3	1064.3	1062.7	1061.1	1059.5	1061.1
10°	1040.1	1035.3	1035.3	1033.7	1033.7	1030.4	1030.4	1032.1
12.5°	1009.5	1006.2	1006.2	1004.6	1003.0	1001.4	999.8	999.8
15°	978.8	975.6	974.0	972.4	970.8	967.6	969.2	967.6
17.5°	948.2	943.4	943.4	941.8	940.1	936.9	936.9	935.3
20°	912.7	911.1	907.9	909.5	907.9	904.7	903.1	903.1
22.5°	877.3	877.3	875.7	875.7	874.1	872.4	870.8	870.8
25°	843.4	841.8	843.4	843.4	838.6	838.6	838.6	840.2
27.5°	804.6	806.4	804.6	804.6	804.6	804.6	806.4	804.6
30°	766.0	766.0	766.0	767.6	770.8	769.2	769.2	767.6
32.5°	724.1	725.7	725.7	727.3	728.9	732.1	732.1	733.7
35°	682.1	685.3	686.9	685.3	690.2	690.2	693.5	693.5
37.5°	638.6	640.2	643.4	645.0	648.3	649.9	651.5	651.5
40°	591.8	598.2	599.8	601.6	606.4	606.4	608.0	611.2
42.5°	548.3	554.7	556.4	558.0	561.2	566.0	564.4	567.6
45°	506.3	511.2	512.9	514.5	519.3	520.9	520.9	525.7
47.5°	461.2	464.4	466.1	469.3	472.5	475.7	478.9	477.3
50°	416.0	420.9	424.1	425.8	430.6	432.2	433.8	435.4
52.5°	375.8	379.0	380.6	382.2	387.0	388.6	390.2	393.4
55°	337.0	338.7	341.9	340.3	345.1	346.7	348.3	351.6
57.5°	298.3	299.9	301.5	301.5	304.7	308.1	309.7	311.3
60°	261.3	264.5	266.1	266.1	266.1	269.3	269.3	269.3
62.5°	227.4	227.4	229.0	229.0	232.2	232.2	232.2	232.2
65°	191.9	193.6	195.2	195.2	198.4	196.8	200.0	198.4
67.5°	154.8	154.8	158.0	158.0	156.4	158.0	158.0	158.0
70°	117.7	117.7	119.3	119.3	119.3	119.3	119.3	119.3
72.5°	87.1	87.1	87.1	88.7	87.1	87.1	88.7	87.1
75°	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7
77.5°	53.2	53.2	54.8	54.8	54.8	54.8	54.8	54.8
80°	43.5	43.5	43.5	43.5	45.2	43.5	43.5	43.5
82.5°	32.2	30.6	32.2	30.6	32.2	32.2	32.2	32.2
85°	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4
87.5°	8.0	8.0	8.0	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



Report Generated By 670245859 / DESKTOP-HRDQ47P





— 0°-180° - - 45°-225° - - - - 90°-270°













(END OF REPORT)