

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: P584318

Luminaire Tested: **HC830D010-HM82555927-81WWW**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584318
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: HC830D010-HM82555927-81WWW
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2436.3 lumens
Efficiency: N/A
Efficacy: 87.0 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

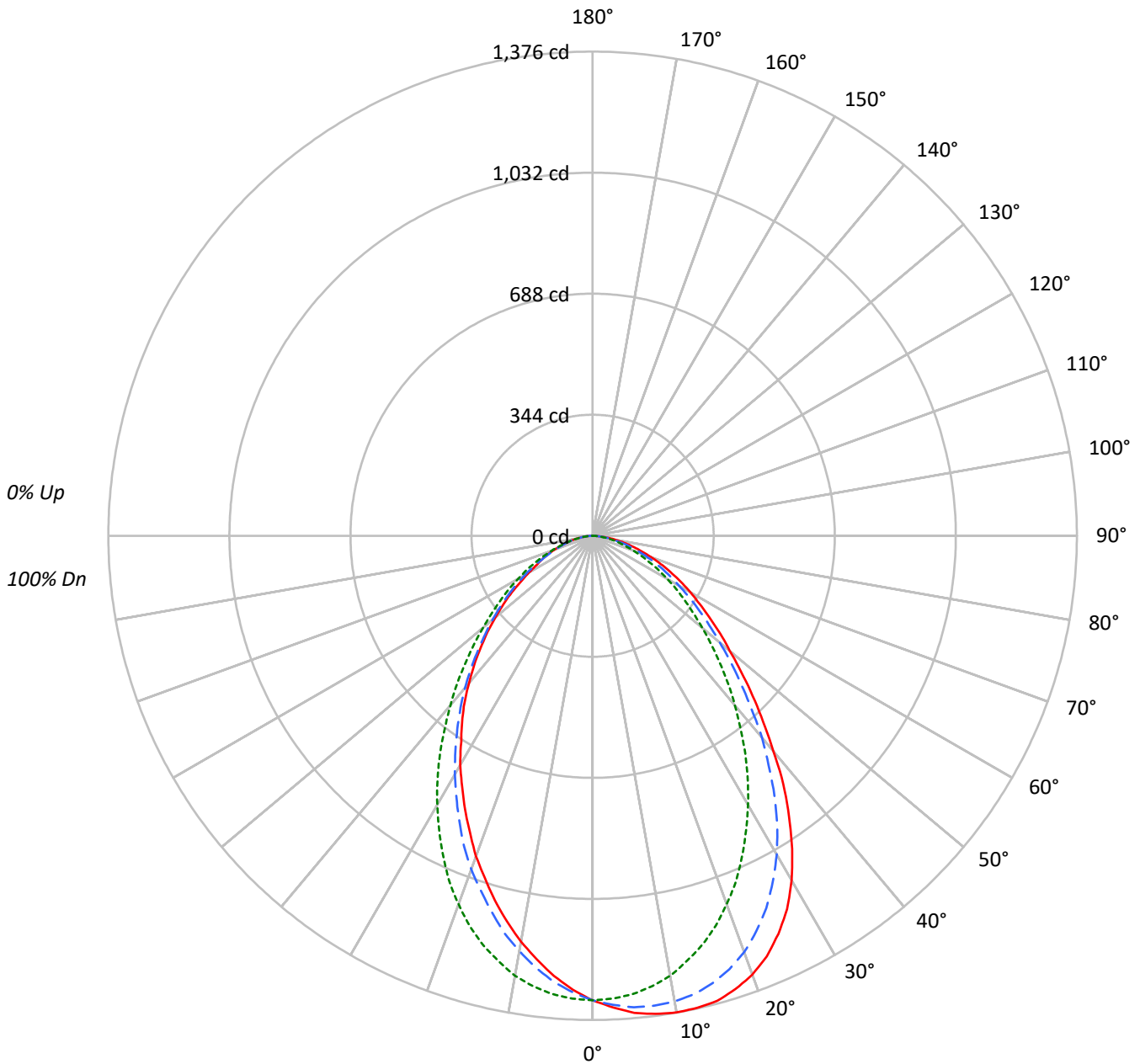
Input Watts (W): 28
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	40707	40707	40707
5°	42138	40472	38869
10°	43076	39766	36679
15°	43688	38427	34255
20°	43556	36560	31798
25°	42476	34187	29193
30°	40246	31444	26787
35°	36613	28451	24341
40°	32159	25308	21991
45°	28041	22267	19607
50°	24404	19506	17270
55°	21768	17145	15021
60°	19778	15023	12816
65°	17774	13068	11631
70°	15823	11135	10495
75°	13868	9388	8971
80°	11756	7636	7956
85°	8881	5732	6369



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.6	5.1
10°-20°	340.7	14.0
20°-30°	472.9	19.4
30°-40°	488.9	20.1
40°-50°	409.4	16.8
50°-60°	297.2	12.2
60°-70°	187.6	7.7
70°-80°	92.9	3.8
80°-90°	23.1	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°	937.3	38.5
0°-40°	1426.2	58.5
0°-60°	2132.8	87.5
0°-90°	2436.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2436.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1320	1320	1320	1320	1320	
5°	1361	1345	1308	1272	1256	130
15°	1368	1317	1204	1107	1073	385
25°	1248	1168	1005	896	858	572
35°	973	901	756	670	647	606
45°	643	596	511	460	450	497
55°	405	369	319	292	279	365
65°	244	213	179	158	159	243
75°	116	97	79	75	75	125
85°	25	20	16	18	18	30
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°	1320.1	1320.1	1320.1	1320.1	1320.1	1320.1	1320.1	1320.1	1320.1	1320.1	1320.1
2.5°	1341.7	1341.7	1343.5	1341.7	1341.7	1341.7	1339.9	1339.9	1338.1	1338.1	1334.4
5°	1361.3	1357.7	1361.3	1357.7	1357.7	1357.7	1355.9	1352.4	1350.6	1347.0	1345.2
7.5°	1370.3	1368.5	1368.5	1366.8	1366.8	1364.9	1363.1	1361.3	1354.2	1352.4	1347.0
10°	1375.7	1373.9	1373.9	1372.1	1368.5	1368.5	1364.9	1363.1	1354.2	1350.6	1343.5
12.5°	1373.9	1373.9	1373.9	1372.1	1366.8	1364.9	1361.3	1355.9	1348.8	1341.7	1334.4
15°	1368.5	1368.5	1364.9	1363.1	1357.7	1354.2	1352.4	1343.5	1336.2	1327.3	1316.6
17.5°	1350.6	1350.6	1348.8	1345.2	1339.9	1336.2	1332.6	1323.7	1316.6	1302.2	1291.5
20°	1327.3	1325.5	1323.7	1318.4	1313.0	1311.2	1305.8	1293.3	1284.4	1273.5	1259.3
22.5°	1293.3	1291.5	1289.7	1286.1	1277.1	1273.5	1270.0	1261.1	1244.9	1234.2	1216.2
25°	1248.4	1248.4	1244.9	1239.5	1230.6	1226.9	1221.6	1212.7	1198.3	1182.2	1167.8
27.5°	1196.5	1194.7	1189.4	1185.8	1178.7	1173.3	1164.3	1153.6	1139.2	1126.7	1108.7
30°	1130.3	1130.3	1126.7	1121.3	1112.3	1108.7	1101.6	1089.0	1074.7	1058.6	1046.1
32.5°	1055.0	1055.0	1049.6	1046.1	1040.7	1031.7	1029.9	1015.6	1003.0	990.6	976.2
35°	972.6	974.4	970.8	963.7	954.8	954.8	951.1	938.6	924.3	911.7	901.0
37.5°	890.2	884.9	883.1	879.5	874.2	866.9	863.3	858.0	845.5	836.5	820.4
40°	798.9	800.7	797.1	793.5	791.8	786.4	784.5	775.6	766.7	755.8	748.7
42.5°	716.5	716.5	716.5	712.9	709.4	704.0	702.1	696.8	686.1	678.9	668.1
45°	643.0	637.7	637.7	635.9	634.1	630.5	625.2	621.6	614.4	609.0	596.5
47.5°	571.4	573.2	571.4	569.6	564.2	562.4	560.6	553.5	546.3	541.0	532.0
50°	508.7	512.3	508.7	508.7	505.1	503.3	499.7	494.4	489.0	480.0	471.1
52.5°	456.8	456.8	454.9	453.1	447.8	444.2	442.4	440.6	431.7	424.5	417.3
55°	404.9	406.6	406.6	401.3	399.4	395.8	394.0	388.7	385.1	374.4	368.9
57.5°	360.0	358.2	360.0	356.5	352.9	349.3	347.5	343.9	338.5	331.4	324.2
60°	320.7	317.0	317.0	315.2	311.6	309.9	306.3	300.9	295.6	288.3	283.0
62.5°	281.2	279.4	277.6	275.8	272.3	270.5	268.7	263.4	257.9	252.5	247.2
65°	243.6	243.6	241.8	238.3	236.5	234.7	232.8	229.2	222.1	218.5	213.2
67.5°	209.6	207.8	207.8	204.2	200.6	198.8	198.8	195.2	189.9	184.5	181.0
70°	175.5	177.3	175.5	173.7	170.1	170.1	166.6	164.8	157.7	155.9	150.4
72.5°	145.1	145.1	143.3	143.3	139.7	137.9	137.9	134.4	130.8	127.2	123.5
75°	116.4	116.4	116.4	114.6	112.8	109.3	109.3	107.5	103.9	100.4	96.8
77.5°	91.3	89.5	89.5	87.7	86.0	84.2	84.2	82.4	78.8	77.0	73.5
80°	66.2	64.4	64.4	64.4	60.9	62.7	60.9	59.1	57.3	55.5	53.7
82.5°	43.0	44.8	44.8	43.0	41.1	41.1	41.1	39.4	39.4	37.6	35.8
85°	25.1	25.1	25.1	25.1	23.3	23.3	23.3	21.5	21.5	21.5	19.7
87.5°	10.7	10.7	10.7	10.7	10.7	10.7	8.9	8.9	8.9	8.9	8.9
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°	1320.1	1320.1	1320.1	1320.1	1320.1	1320.1	1320.1	1320.1	1320.1	1320.1	1320.1
2.5°	1334.4	1330.8	1329.1	1327.3	1327.3	1325.5	1323.7	1320.1	1320.1	1316.6	1314.8
5°	1341.7	1336.2	1332.6	1329.1	1327.3	1323.7	1320.1	1314.8	1313.0	1307.5	1302.2
7.5°	1343.5	1334.4	1330.8	1323.7	1320.1	1316.6	1309.3	1304.0	1296.8	1291.5	1284.4
10°	1336.2	1329.1	1320.1	1311.2	1309.3	1304.0	1293.3	1286.1	1277.1	1270.0	1259.3
12.5°	1325.5	1314.8	1305.8	1295.1	1289.7	1284.4	1273.5	1262.8	1250.2	1237.7	1226.9
15°	1307.5	1295.1	1282.6	1270.0	1262.8	1257.5	1244.9	1232.4	1219.8	1203.7	1192.9
17.5°	1280.7	1266.4	1253.8	1237.7	1230.6	1225.1	1209.1	1194.7	1178.7	1162.5	1151.8
20°	1246.7	1228.8	1214.4	1196.5	1191.1	1182.2	1166.1	1150.0	1132.0	1114.1	1101.6
22.5°	1202.0	1184.0	1167.8	1150.0	1141.0	1132.0	1115.9	1096.3	1078.3	1064.0	1051.4
25°	1150.0	1133.8	1114.1	1098.0	1087.2	1076.5	1058.6	1042.5	1026.3	1004.8	992.3
27.5°	1092.7	1073.0	1058.6	1037.2	1026.3	1019.2	999.5	978.0	963.7	943.9	929.7
30°	1028.1	1010.3	994.1	972.6	961.9	954.8	936.8	917.1	902.8	883.1	868.8
32.5°	960.1	940.4	920.6	906.4	893.8	886.6	866.9	854.4	836.5	820.4	804.2
35°	886.6	866.9	852.6	832.9	825.8	818.6	802.5	786.4	770.2	755.8	743.4
37.5°	807.8	793.5	777.4	763.1	757.6	750.5	730.8	716.5	704.0	689.6	678.9
40°	730.8	718.3	707.6	693.2	684.3	678.9	664.5	652.0	637.7	628.7	617.9
42.5°	661.0	646.6	635.9	625.2	616.1	610.8	598.3	589.3	578.6	569.6	557.0
45°	587.5	580.4	567.9	558.8	553.5	546.3	537.3	526.6	517.7	510.6	501.5
47.5°	523.0	515.9	506.9	496.2	492.6	487.3	478.2	471.1	463.9	456.8	447.8
50°	463.9	454.9	447.8	440.6	437.1	431.7	422.7	419.1	413.8	406.6	401.3
52.5°	410.2	403.1	395.8	386.9	385.1	381.6	376.2	368.9	363.6	360.0	356.5
55°	361.8	354.7	349.3	342.1	340.3	336.7	329.6	326.0	322.5	318.9	315.2
57.5°	318.9	311.6	304.5	300.9	297.4	293.8	292.0	286.5	283.0	281.2	277.6
60°	279.4	272.3	266.9	261.5	259.7	257.9	254.3	250.8	247.2	243.6	241.8
62.5°	241.8	234.7	231.0	227.5	223.9	223.9	220.3	216.8	213.2	211.4	207.8
65°	207.8	204.2	198.8	193.5	191.7	191.7	186.3	184.5	182.7	179.1	175.5
67.5°	175.5	171.9	166.6	164.8	163.0	161.2	159.4	155.9	152.3	150.4	146.8
70°	146.8	143.3	139.7	137.9	136.1	134.4	130.8	129.0	125.4	123.5	121.8
72.5°	118.2	116.4	112.8	111.1	109.3	107.5	105.7	103.9	100.4	98.6	96.8
75°	94.9	93.1	89.5	87.7	86.0	86.0	84.2	80.6	78.8	78.8	77.0
77.5°	71.7	69.9	68.0	66.2	64.4	64.4	62.7	60.9	59.1	59.1	57.3
80°	52.0	50.2	48.4	48.4	48.4	46.6	44.8	44.8	43.0	43.0	41.1
82.5°	34.0	34.0	32.2	32.2	32.2	30.4	30.4	28.7	28.7	28.7	28.7
85°	19.7	19.7	19.7	18.0	18.0	18.0	18.0	18.0	18.0	16.2	18.0
87.5°	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	7.1	7.1	7.1
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°	1320.1	1320.1	1320.1	1320.1	1320.1	1320.1	1320.1	1320.1	1320.1	1320.1	1320.1
2.5°	1313.0	1311.2	1307.5	1307.5	1304.0	1304.0	1302.2	1300.4	1298.6	1296.8	1295.1
5°	1300.4	1293.3	1289.7	1287.9	1284.4	1282.6	1277.1	1273.5	1271.8	1268.2	1264.6
7.5°	1277.1	1270.0	1262.8	1261.1	1259.3	1252.0	1246.7	1241.3	1237.7	1234.2	1230.6
10°	1250.2	1243.1	1234.2	1230.6	1226.9	1218.0	1210.9	1205.5	1198.3	1191.1	1189.4
12.5°	1218.0	1207.3	1196.5	1192.9	1187.6	1178.7	1171.4	1162.5	1157.1	1148.2	1146.4
15°	1180.4	1167.8	1158.9	1150.0	1146.4	1137.4	1124.9	1117.8	1107.0	1103.4	1094.5
17.5°	1135.6	1123.1	1110.5	1107.0	1101.6	1089.0	1076.5	1067.6	1056.8	1051.4	1046.1
20°	1089.0	1073.0	1060.4	1056.8	1049.6	1038.9	1026.3	1017.4	1008.5	997.7	992.3
22.5°	1035.4	1017.4	1006.7	997.7	995.9	983.4	969.0	961.9	954.8	945.7	938.6
25°	976.2	960.1	947.5	940.4	936.8	926.1	915.3	906.4	895.6	890.2	881.3
27.5°	915.3	904.6	888.4	881.3	875.9	866.9	854.4	849.1	838.2	831.1	825.8
30°	856.2	840.0	831.1	822.2	816.8	807.8	797.1	791.8	782.7	775.6	770.2
32.5°	791.8	780.9	768.5	764.9	757.6	748.7	741.6	732.7	725.4	718.3	716.5
35°	732.7	718.3	705.8	702.1	696.8	687.8	684.3	678.9	669.9	668.1	661.0
37.5°	668.1	661.0	646.6	641.2	639.4	632.3	625.2	621.6	616.1	610.8	609.0
40°	607.2	598.3	591.1	585.7	582.1	576.8	569.6	567.9	564.2	557.0	555.3
42.5°	549.9	541.0	533.7	532.0	526.6	521.3	517.7	512.3	510.6	508.7	505.1
45°	494.4	489.0	481.8	480.0	478.2	471.1	467.5	463.9	460.4	458.6	454.9
47.5°	444.2	438.9	433.5	431.7	428.2	426.3	420.9	419.1	413.8	412.0	410.2
50°	395.8	392.3	388.7	386.9	383.3	381.6	378.0	374.4	370.7	368.9	367.2
52.5°	352.9	349.3	345.8	343.9	342.1	338.5	334.9	331.4	329.6	327.8	326.0
55°	311.6	308.1	306.3	304.5	302.7	300.9	295.6	293.8	292.0	290.2	286.5
57.5°	274.1	270.5	266.9	266.9	265.1	263.4	259.7	256.1	256.1	252.5	249.0
60°	240.1	236.5	232.8	231.0	229.2	225.7	223.9	222.1	220.3	218.5	215.0
62.5°	204.2	202.4	198.8	198.8	195.2	193.5	191.7	189.9	188.1	184.5	182.7
65°	173.7	171.9	168.4	166.6	166.6	164.8	161.2	159.4	157.7	157.7	155.9
67.5°	145.1	143.3	139.7	137.9	137.9	136.1	134.4	134.4	132.6	130.8	132.6
70°	120.0	116.4	116.4	114.6	114.6	112.8	111.1	111.1	111.1	112.8	112.8
72.5°	94.9	93.1	91.3	91.3	91.3	91.3	89.5	89.5	91.3	93.1	93.1
75°	75.3	73.5	73.5	73.5	71.7	71.7	73.5	73.5	75.3	75.3	75.3
77.5°	55.5	55.5	55.5	55.5	55.5	55.5	57.3	57.3	59.1	59.1	59.1
80°	41.1	41.1	41.1	41.1	41.1	43.0	43.0	43.0	43.0	43.0	44.8
82.5°	28.7	28.7	28.7	28.7	28.7	28.7	28.7	30.4	30.4	30.4	30.4
85°	16.2	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
87.5°	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
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: P584318

CATALOG NUMBER: HC830D010-HM82555927-81WWW

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1320.1	1320.1	1320.1	1320.1	1320.1	1320.1	1320.1	1320.1
2.5°	1293.3	1293.3	1293.3	1295.1	1291.5	1291.5	1291.5	1291.5
5°	1262.8	1261.1	1259.3	1261.1	1257.5	1257.5	1255.7	1255.7
7.5°	1225.1	1223.4	1221.6	1221.6	1218.0	1218.0	1216.2	1214.4
10°	1184.0	1180.4	1182.2	1178.7	1176.9	1175.1	1173.3	1171.4
12.5°	1139.2	1135.6	1133.8	1130.3	1126.7	1124.9	1126.7	1123.1
15°	1090.9	1085.4	1083.7	1080.1	1076.5	1074.7	1074.7	1073.0
17.5°	1037.2	1033.5	1031.7	1028.1	1026.3	1022.8	1021.0	1019.2
20°	987.0	978.0	979.9	976.2	974.4	967.3	967.3	969.0
22.5°	931.5	926.1	922.4	918.9	917.1	913.5	913.5	911.7
25°	875.9	870.6	868.8	865.1	863.3	859.8	858.0	858.0
27.5°	822.2	815.1	815.1	811.4	807.8	806.0	804.2	802.5
30°	764.9	759.5	757.6	757.6	755.8	755.8	750.5	752.3
32.5°	711.1	707.6	705.8	702.1	702.1	700.3	700.3	695.0
35°	657.4	652.0	653.8	650.3	648.5	646.6	648.5	646.6
37.5°	605.4	601.9	601.9	598.3	598.3	596.5	594.7	598.3
40°	553.5	551.7	549.9	548.1	549.9	548.1	544.6	546.3
42.5°	501.5	501.5	499.7	499.7	498.0	498.0	498.0	498.0
45°	454.9	453.1	453.1	451.3	451.3	451.3	451.3	449.6
47.5°	408.4	406.6	406.6	406.6	404.9	404.9	403.1	404.9
50°	363.6	363.6	361.8	361.8	363.6	361.8	360.0	360.0
52.5°	322.5	322.5	320.7	320.7	318.9	317.0	318.9	318.9
55°	284.8	283.0	281.2	281.2	279.4	277.6	277.6	279.4
57.5°	249.0	247.2	245.4	245.4	241.8	240.1	240.1	240.1
60°	215.0	211.4	211.4	209.6	209.6	207.8	207.8	207.8
62.5°	182.7	181.0	181.0	181.0	181.0	179.1	179.1	179.1
65°	155.9	155.9	155.9	157.7	157.7	159.4	159.4	159.4
67.5°	134.4	136.1	136.1	136.1	137.9	137.9	137.9	136.1
70°	114.6	114.6	114.6	116.4	116.4	116.4	116.4	116.4
72.5°	94.9	94.9	94.9	94.9	94.9	94.9	94.9	94.9
75°	75.3	77.0	77.0	77.0	75.3	77.0	77.0	75.3
77.5°	59.1	59.1	59.1	59.1	59.1	59.1	59.1	59.1
80°	44.8	44.8	44.8	44.8	44.8	44.8	44.8	44.8
82.5°	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4
85°	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
87.5°	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
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)