

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: io LED

Report Number: P251777

Luminaire Tested: **LD4B30D010 EU4B30508027 4LBLWW1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P251777
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1712-453-12)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LD4B30D010 EU4B30508027 4LBLWW1H
Description: PORTFOLIO 4 INCH LENS WALLWASH RECESSED DOWNLIGHT, WITH HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2135.0 lumens
Efficiency: N/A
Efficacy: 76.2 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 1.03 / 1.12
Luminous Opening: Circular (Dia: 0.38' x H: 0')
CIE Type: Direct

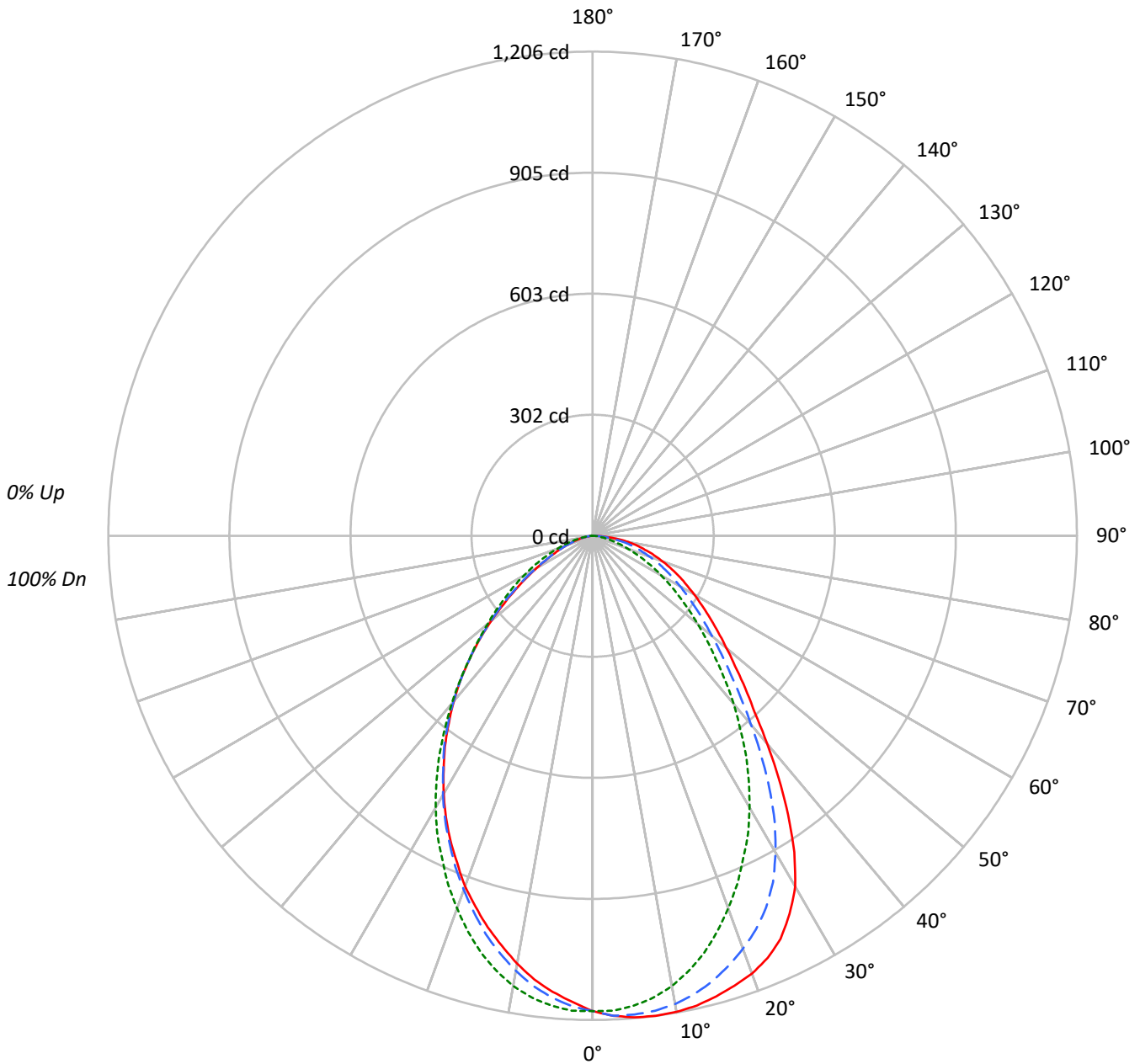
Input Watts (W): 28
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P251777

CATALOG NUMBER: LD4B30D010 EU4B30508027 4LBLWW1H

Luminous Intensity Polar Plot





TEST NUMBER: P251777

CATALOG NUMBER: LD4B30D010 EU4B30508027 4LBLWW1H

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	103	100	108	104	101	98	100	98	95	96	94	92	93	91	90	88																			
2	102	95	89	85	100	93	88	84	90	85	82	87	83	80	84	81	78	76																			
3	94	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	69	67																			
4	88	77	69	63	85	76	69	63	73	67	62	71	66	61	69	64	61	59																			
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52																			
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47																			
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44	42																			
8	66	54	46	41	65	53	46	41	52	45	41	51	45	40	50	44	40	38																			
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35																			
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	115400	115400	115400
5°	117798	114941	111556
10°	119160	112668	107076
15°	119834	108443	101824
20°	120348	102396	96349
25°	119093	95393	90102
30°	113570	87946	83433
35°	100997	79106	76286
40°	85977	69527	68369
45°	74068	59748	59500
50°	66014	51641	49988
55°	60659	44568	39930
60°	56818	38340	31245
65°	54607	32354	24375
70°	52430	25959	19718
75°	50759	20560	15100
80°	51129	14312	9204
85°	42827	10176	4026



TEST NUMBER: P251777

CATALOG NUMBER: LD4B30D010 EU4B30508027 4LBLWW1H

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.8	5.2
10°-20°	304.7	14.3
20°-30°	426.1	20.0
30°-40°	438.0	20.5
40°-50°	355.5	16.7
50°-60°	250.3	11.7
60°-70°	154.1	7.2
70°-80°	77.0	3.6
80°-90°	18.3	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°	841.7	39.4
0°-40°	1279.7	59.9
0°-60°	1885.6	88.3
0°-90°	2135.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2135.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1184	1184	1184	1184	1184	
5°	1204	1197	1175	1155	1140	115
15°	1188	1149	1075	1027	1009	336
25°	1108	1022	887	843	838	506
35°	849	767	665	645	641	528
45°	537	485	434	434	432	418
55°	357	313	262	240	235	321
65°	237	199	140	108	106	234
75°	135	106	55	40	40	144
85°	38	26	9	6	4	45
90°	0	0	0	0	0	



TEST NUMBER: P251777

CATALOG NUMBER: LD4B30D010 EU4B30508027 4LBLWW1H

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1184.1	1184.1	1184.1	1184.1	1184.1	1184.1	1184.1	1184.1	1184.1	1184.1	1184.1
2.5°	1196.8	1198.6	1193.2	1198.6	1191.3	1195.0	1196.8	1193.2	1189.5	1196.8	1196.8
5°	1204.1	1204.1	1198.6	1205.9	1196.8	1198.6	1202.3	1196.8	1191.3	1198.6	1196.8
7.5°	1205.9	1205.9	1198.6	1205.9	1196.8	1198.6	1200.5	1195.0	1189.5	1195.0	1193.2
10°	1204.1	1202.3	1196.8	1204.1	1195.0	1195.0	1196.8	1191.3	1182.2	1187.7	1184.1
12.5°	1198.6	1198.6	1191.3	1198.6	1185.9	1185.9	1187.7	1180.4	1173.1	1173.1	1169.5
15°	1187.7	1187.7	1180.4	1185.9	1174.9	1174.9	1173.1	1165.8	1156.7	1156.7	1149.4
17.5°	1174.9	1174.9	1167.7	1173.1	1160.4	1160.4	1158.6	1147.6	1134.9	1133.1	1123.9
20°	1160.4	1160.4	1151.3	1154.9	1140.3	1140.3	1138.5	1125.8	1111.2	1107.5	1094.8
22.5°	1138.5	1138.5	1129.4	1131.2	1116.7	1114.8	1113.0	1098.4	1083.9	1078.4	1062.0
25°	1107.5	1105.7	1098.4	1098.4	1083.9	1080.2	1076.6	1062.0	1047.4	1036.5	1021.9
27.5°	1062.0	1063.8	1054.7	1056.5	1038.3	1034.7	1032.9	1014.6	998.3	987.3	972.7
30°	1009.2	1003.7	994.6	994.6	980.0	978.2	974.6	958.2	940.0	927.2	910.8
32.5°	934.5	932.7	923.6	923.6	907.2	907.2	899.9	883.5	867.1	859.8	843.4
35°	848.9	847.1	839.8	839.8	825.2	827.0	819.7	807.0	790.6	779.7	766.9
37.5°	761.4	759.6	752.3	754.2	741.4	741.4	735.9	723.2	710.4	705.0	688.6
40°	675.8	674.0	664.9	670.4	659.4	655.8	654.0	644.9	630.3	623.0	613.9
42.5°	597.5	599.3	590.2	593.8	584.7	581.1	579.3	572.0	561.1	553.8	544.7
45°	537.4	533.7	530.1	530.1	521.0	519.2	517.3	508.2	500.9	493.7	484.6
47.5°	480.9	477.3	473.6	475.4	468.2	466.3	462.7	455.4	446.3	442.7	433.5
50°	435.4	433.5	428.1	428.1	420.8	419.0	415.3	409.9	400.8	395.3	388.0
52.5°	393.5	393.5	388.0	386.2	380.7	378.9	377.1	369.8	362.5	355.2	347.9
55°	357.0	355.2	351.6	351.6	344.3	342.5	340.6	333.4	326.1	320.6	313.3
57.5°	322.4	322.4	318.8	318.8	313.3	309.7	309.7	302.4	293.3	289.6	280.5
60°	291.5	291.5	287.8	287.8	282.4	282.4	278.7	271.4	266.0	258.7	251.4
62.5°	262.3	264.1	260.5	258.7	253.2	251.4	251.4	245.9	236.8	231.3	224.1
65°	236.8	235.0	233.2	231.3	225.9	224.1	224.1	216.8	211.3	204.0	198.6
67.5°	209.5	209.5	205.8	205.8	202.2	200.4	196.7	191.3	185.8	180.3	174.9
70°	184.0	184.0	182.2	182.2	176.7	174.9	173.1	167.6	162.1	156.7	149.4
72.5°	160.3	158.5	156.7	156.7	153.0	151.2	149.4	143.9	138.4	133.0	127.5
75°	134.8	134.8	133.0	133.0	129.3	127.5	127.5	123.9	116.6	112.9	105.7
77.5°	112.9	112.9	111.1	111.1	107.5	107.5	105.7	100.2	96.5	91.1	87.4
80°	91.1	89.3	89.3	87.4	83.8	83.8	82.0	80.2	74.7	71.0	65.6
82.5°	63.8	63.8	63.8	61.9	60.1	60.1	58.3	54.6	51.0	49.2	43.7
85°	38.3	38.3	36.4	34.6	36.4	34.6	32.8	31.0	29.1	27.3	25.5
87.5°	16.4	16.4	14.6	14.6	14.6	14.6	14.6	12.8	10.9	10.9	9.1
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: P251777

CATALOG NUMBER: LD4B30D010 EU4B30508027 4LBLWW1H

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1184.1	1184.1	1184.1	1184.1	1184.1	1184.1	1184.1	1184.1	1184.1	1184.1	1184.1
2.5°	1185.9	1191.3	1189.5	1187.7	1184.1	1184.1	1184.1	1182.2	1184.1	1184.1	1180.4
5°	1185.9	1189.5	1187.7	1184.1	1180.4	1180.4	1178.6	1174.9	1174.9	1174.9	1167.7
7.5°	1180.4	1184.1	1178.6	1174.9	1171.3	1167.7	1167.7	1162.2	1162.2	1160.4	1153.1
10°	1169.5	1171.3	1164.0	1160.4	1154.9	1153.1	1149.4	1142.2	1140.3	1138.5	1131.2
12.5°	1153.1	1154.9	1145.8	1138.5	1131.2	1129.4	1125.8	1116.7	1113.0	1109.4	1100.3
15°	1129.4	1129.4	1118.5	1109.4	1102.1	1100.3	1091.2	1082.0	1078.4	1074.8	1062.0
17.5°	1102.1	1100.3	1085.7	1076.6	1067.5	1063.8	1054.7	1043.8	1036.5	1032.9	1021.9
20°	1072.9	1067.5	1051.1	1042.0	1031.0	1025.6	1016.5	1001.9	994.6	987.3	976.4
22.5°	1038.3	1031.0	1012.8	1000.1	989.1	983.7	970.9	958.2	947.2	940.0	927.2
25°	996.4	987.3	967.3	950.9	941.8	936.3	923.6	909.0	898.1	887.1	876.2
27.5°	947.2	936.3	916.3	899.9	890.8	881.7	872.6	856.2	847.1	837.9	825.2
30°	887.1	874.4	856.2	841.6	830.7	823.4	812.4	797.9	786.9	781.5	768.7
32.5°	821.6	807.0	790.6	776.0	770.5	761.4	752.3	737.8	728.7	723.2	714.1
35°	748.7	737.8	719.5	708.6	699.5	695.9	688.6	674.0	670.4	664.9	654.0
37.5°	672.2	663.1	650.3	641.2	633.9	630.3	623.0	613.9	608.4	603.0	597.5
40°	601.1	593.8	582.9	575.6	566.5	561.1	561.1	550.1	546.5	546.5	541.0
42.5°	531.9	528.3	519.2	508.2	506.4	500.9	499.1	493.7	490.0	488.2	486.4
45°	473.6	468.2	459.0	453.6	448.1	448.1	442.7	437.2	435.4	433.5	431.7
47.5°	422.6	415.3	408.0	402.6	398.9	397.1	391.6	388.0	386.2	386.2	384.4
50°	377.1	371.6	364.3	358.9	355.2	351.6	347.9	344.3	342.5	340.6	340.6
52.5°	338.8	331.5	324.2	318.8	313.3	311.5	307.9	304.2	302.4	300.6	298.7
55°	304.2	298.7	289.6	284.2	278.7	278.7	273.2	267.8	264.1	262.3	260.5
57.5°	271.4	266.0	256.8	251.4	247.7	244.1	240.5	236.8	233.2	229.5	225.9
60°	242.3	236.8	227.7	220.4	218.6	215.0	211.3	204.0	200.4	196.7	193.1
62.5°	215.0	207.7	200.4	193.1	191.3	187.6	182.2	176.7	171.2	167.6	162.1
65°	189.4	184.0	174.9	169.4	163.9	162.1	156.7	149.4	143.9	140.3	134.8
67.5°	165.8	158.5	149.4	143.9	140.3	136.6	131.2	125.7	120.2	114.8	109.3
70°	142.1	136.6	127.5	122.0	118.4	114.8	109.3	102.0	96.5	91.1	87.4
72.5°	120.2	112.9	105.7	100.2	96.5	92.9	87.4	82.0	76.5	72.9	67.4
75°	100.2	92.9	87.4	80.2	78.3	74.7	69.2	63.8	58.3	54.6	51.0
77.5°	80.2	74.7	67.4	63.8	60.1	56.5	52.8	47.4	43.7	38.3	34.6
80°	60.1	54.6	49.2	45.5	41.9	40.1	36.4	32.8	29.1	25.5	23.7
82.5°	40.1	36.4	31.0	29.1	27.3	25.5	21.9	20.0	18.2	16.4	14.6
85°	21.9	20.0	18.2	14.6	14.6	12.8	10.9	10.9	9.1	9.1	7.3
87.5°	9.1	7.3	7.3	5.5	5.5	5.5	3.6	3.6	3.6	1.8	1.8
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: P251777

CATALOG NUMBER: LD4B30D010 EU4B30508027 4LBLWW1H

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1184.1	1184.1	1184.1	1184.1	1184.1	1184.1	1184.1	1184.1	1184.1	1184.1	1184.1
2.5°	1182.2	1174.9	1174.9	1174.9	1169.5	1171.3	1173.1	1174.9	1173.1	1167.7	1173.1
5°	1169.5	1162.2	1162.2	1158.6	1154.9	1154.9	1154.9	1156.7	1154.9	1149.4	1151.3
7.5°	1153.1	1144.0	1142.2	1138.5	1134.9	1133.1	1133.1	1133.1	1131.2	1123.9	1127.6
10°	1127.6	1118.5	1114.8	1113.0	1107.5	1105.7	1103.9	1102.1	1100.3	1093.0	1096.6
12.5°	1096.6	1089.3	1082.0	1080.2	1074.8	1071.1	1069.3	1069.3	1065.7	1058.4	1062.0
15°	1060.2	1049.3	1043.8	1040.1	1034.7	1031.0	1027.4	1029.2	1027.4	1020.1	1021.9
17.5°	1016.5	1005.5	1000.1	998.3	991.0	987.3	985.5	985.5	983.7	976.4	978.2
20°	969.1	958.2	954.5	950.9	947.2	943.6	941.8	940.0	938.1	930.9	936.3
22.5°	921.7	909.0	903.5	903.5	896.2	894.4	892.6	894.4	892.6	885.3	889.0
25°	872.6	859.8	856.2	850.7	847.1	845.2	845.2	845.2	843.4	839.8	843.4
27.5°	817.9	808.8	803.3	801.5	797.9	796.1	794.2	796.1	796.1	790.6	794.2
30°	763.3	756.0	752.3	750.5	745.0	743.2	745.0	745.0	745.0	739.6	745.0
32.5°	708.6	703.1	701.3	695.9	692.2	692.2	692.2	694.0	692.2	688.6	694.0
35°	654.0	646.7	644.9	643.0	643.0	639.4	643.0	641.2	644.9	639.4	643.0
37.5°	595.7	592.0	590.2	590.2	586.6	588.4	588.4	588.4	592.0	586.6	590.2
40°	541.0	537.4	537.4	537.4	535.6	535.6	535.6	537.4	539.2	535.6	539.2
42.5°	486.4	484.6	484.6	482.7	480.9	482.7	484.6	484.6	486.4	482.7	484.6
45°	433.5	431.7	433.5	431.7	431.7	429.9	431.7	433.5	433.5	431.7	431.7
47.5°	384.4	384.4	382.5	382.5	382.5	382.5	382.5	382.5	382.5	378.9	382.5
50°	340.6	337.0	338.8	337.0	337.0	335.2	335.2	333.4	331.5	329.7	329.7
52.5°	298.7	295.1	295.1	293.3	291.5	291.5	289.6	287.8	286.0	282.4	282.4
55°	258.7	255.0	253.2	251.4	249.6	247.7	245.9	244.1	240.5	238.6	238.6
57.5°	222.2	218.6	215.0	215.0	211.3	209.5	205.8	202.2	200.4	196.7	196.7
60°	189.4	185.8	180.3	178.5	176.7	173.1	167.6	165.8	163.9	160.3	162.1
62.5°	158.5	153.0	147.6	145.7	143.9	140.3	136.6	133.0	131.2	133.0	133.0
65°	129.3	123.9	120.2	116.6	114.8	111.1	109.3	107.5	107.5	107.5	109.3
67.5°	103.8	98.4	94.7	92.9	89.3	87.4	87.4	87.4	87.4	87.4	87.4
70°	82.0	78.3	74.7	71.0	71.0	69.2	69.2	69.2	69.2	69.2	69.2
72.5°	61.9	58.3	56.5	56.5	54.6	54.6	54.6	54.6	52.8	52.8	54.6
75°	45.5	43.7	41.9	41.9	41.9	40.1	40.1	40.1	40.1	40.1	40.1
77.5°	32.8	31.0	31.0	29.1	29.1	29.1	29.1	29.1	29.1	27.3	27.3
80°	21.9	20.0	20.0	20.0	20.0	18.2	18.2	18.2	18.2	18.2	18.2
82.5°	12.8	12.8	12.8	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9
85°	7.3	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
87.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	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: P251777

CATALOG NUMBER: LD4B30D010 EU4B30508027 4LBLWW1H

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1184.1	1184.1	1184.1	1184.1	1184.1	1184.1	1184.1	1184.1
2.5°	1162.2	1169.5	1171.3	1165.8	1167.7	1164.0	1165.8	1162.2
5°	1142.2	1147.6	1149.4	1145.8	1145.8	1142.2	1144.0	1140.3
7.5°	1116.7	1122.1	1123.9	1120.3	1120.3	1116.7	1116.7	1114.8
10°	1087.5	1089.3	1093.0	1087.5	1089.3	1085.7	1085.7	1082.0
12.5°	1051.1	1054.7	1058.4	1052.9	1052.9	1051.1	1051.1	1045.6
15°	1012.8	1016.5	1018.3	1014.6	1014.6	1012.8	1011.0	1009.2
17.5°	972.7	974.6	978.2	972.7	976.4	972.7	972.7	969.1
20°	927.2	932.7	934.5	929.0	930.9	929.0	929.0	929.0
22.5°	883.5	887.1	889.0	885.3	887.1	883.5	885.3	881.7
25°	837.9	839.8	841.6	837.9	841.6	839.8	837.9	837.9
27.5°	790.6	792.4	794.2	790.6	794.2	792.4	794.2	790.6
30°	739.6	743.2	746.9	743.2	745.0	743.2	743.2	741.4
32.5°	688.6	692.2	695.9	692.2	695.9	692.2	694.0	690.4
35°	641.2	643.0	644.9	641.2	643.0	643.0	643.0	641.2
37.5°	588.4	592.0	592.0	590.2	593.8	592.0	592.0	588.4
40°	537.4	539.2	541.0	537.4	539.2	537.4	539.2	537.4
42.5°	484.6	488.2	490.0	486.4	486.4	486.4	484.6	486.4
45°	429.9	433.5	437.2	431.7	433.5	433.5	433.5	431.7
47.5°	380.7	380.7	382.5	380.7	382.5	378.9	382.5	380.7
50°	329.7	329.7	333.4	329.7	329.7	329.7	329.7	329.7
52.5°	280.5	282.4	282.4	278.7	280.5	278.7	280.5	278.7
55°	235.0	235.0	236.8	235.0	235.0	235.0	235.0	235.0
57.5°	194.9	196.7	196.7	194.9	196.7	194.9	194.9	194.9
60°	162.1	162.1	162.1	160.3	162.1	160.3	162.1	160.3
62.5°	131.2	133.0	133.0	131.2	133.0	131.2	131.2	131.2
65°	107.5	107.5	107.5	107.5	107.5	107.5	107.5	105.7
67.5°	85.6	85.6	87.4	85.6	87.4	87.4	87.4	87.4
70°	69.2	69.2	69.2	69.2	69.2	69.2	69.2	69.2
72.5°	52.8	52.8	54.6	52.8	52.8	52.8	52.8	52.8
75°	40.1	40.1	40.1	40.1	40.1	38.3	38.3	40.1
77.5°	27.3	27.3	27.3	27.3	27.3	27.3	27.3	29.1
80°	18.2	18.2	18.2	18.2	16.4	16.4	18.2	16.4
82.5°	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1
85°	5.5	5.5	3.6	3.6	3.6	3.6	3.6	3.6
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 E9808895 / USPTCWHP6082093





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













(END OF REPORT)