

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: P136431

Luminaire Tested: **LD6A20D010TE ERW6A20940 6LW111H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136431
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P23375)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LD6A20D010TE ERW6A20940 6LW111H
Description: PORTFOLIO 6 INCH 60 DEGREE CUTOFF RECESSED SINGLE WALL WASH LUMINAIRE
SEMI-SPECULAR CLEAR TRIM AND SPECULAR CLEAR KICKER
Light Source: (1) HIGH LUMEN LED 4000K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2212.8 lumens
Efficiency: N/A
Efficacy: 67.5 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.17 / 1.12
Luminous Opening: Circular (Dia: 0.46' x H: 0')
CIE Type: Direct

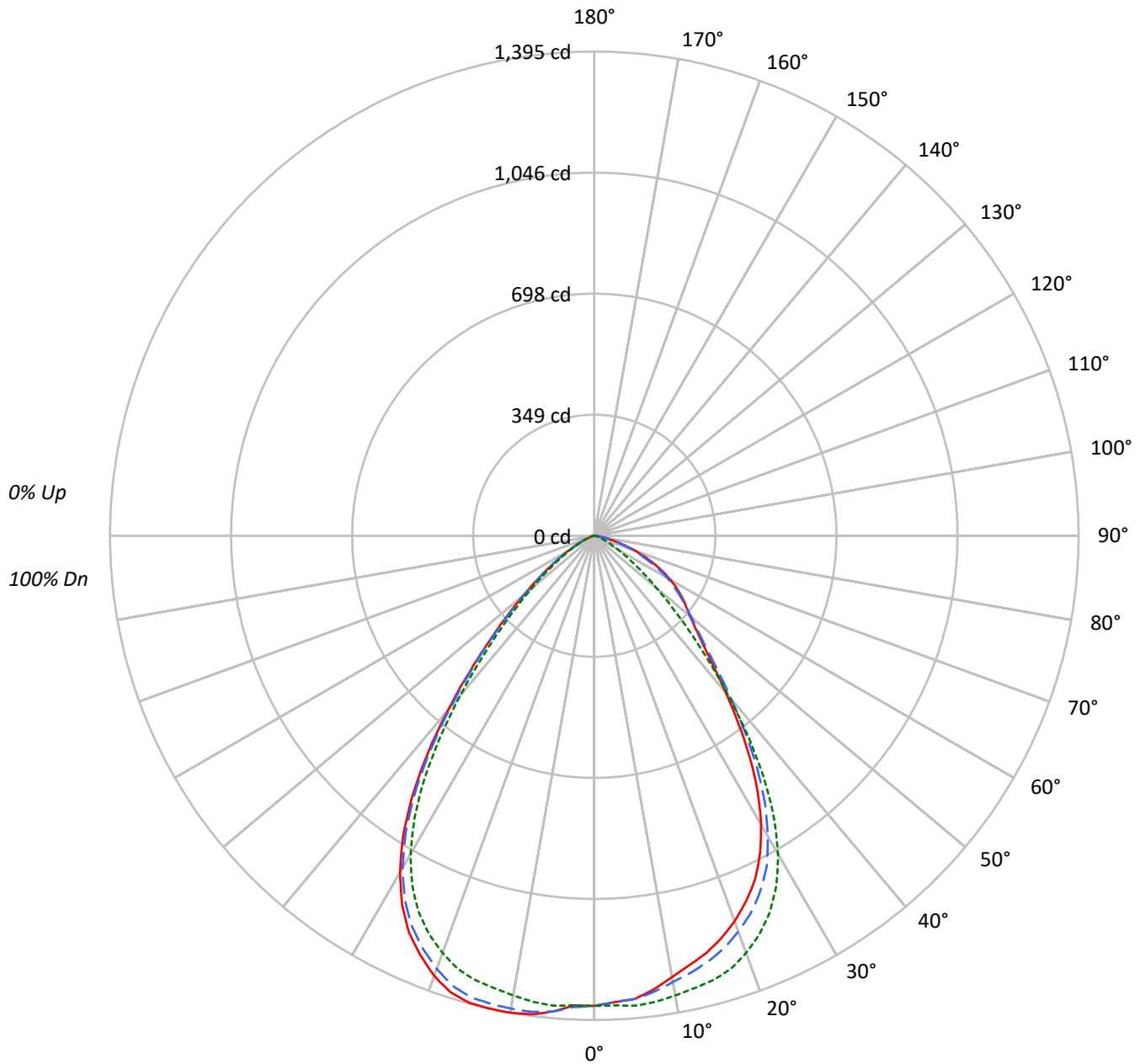
Input Watts (W): 32.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					0
RW	70	50	30	10	70	50	30	10		50	30	10		50	30	10		50	30	10
RCR																				
0	119	119	119	119	116	116	116	116		111	111	111		106	106	106		102	102	102
1	112	108	105	102	109	106	103	101		102	100	98		98	96	95		95	93	92
2	104	98	93	89	102	96	92	88		93	89	86		90	87	84		87	84	82
3	97	89	83	78	95	88	82	77		85	80	76		82	78	75		80	76	73
4	91	81	74	69	89	80	74	69		78	72	68		76	71	67		74	69	66
5	85	74	67	62	83	73	67	61		71	65	61		70	64	60		68	63	60
6	79	68	61	56	78	68	61	55		66	60	55		64	59	55		63	58	54
7	74	63	56	51	73	62	55	50		61	55	50		60	54	50		58	53	49
8	70	58	51	46	69	58	51	46		57	50	46		55	50	46		54	49	45
9	66	54	47	42	65	54	47	42		53	46	42		52	46	42		51	46	42
10	62	51	44	39	61	50	43	39		49	43	39		48	43	39		48	42	39

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	88349	88349	88349
5°	87737	89007	90121
10°	85532	89076	92441
15°	84090	89500	94086
20°	82057	88798	93679
25°	78788	86130	90845
30°	72403	79718	84283
35°	62242	67841	72675
40°	50018	51057	55809
45°	40753	35383	39185
50°	36458	23649	26846
55°	35056	15458	17676
60°	32933	9812	11078
65°	29223	5990	6360
70°	23596	3720	3720
75°	16536	2445	2445
80°	10933	1841	1841
85°	5464	1797	1797



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.9	5.8
10°-20°	371.7	16.8
20°-30°	541.4	24.5
30°-40°	525.1	23.7
40°-50°	331.9	15.0
50°-60°	184.8	8.4
60°-70°	91.6	4.1
70°-80°	32.3	1.5
80°-90°	5.1	0.2
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°	1042.0	47.1
0°-40°	1567.2	70.8
0°-60°	2083.9	94.2
0°-90°	2212.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2212.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1354	1354	1354	1354	1354	
5°	1340	1340	1359	1376	1376	126
15°	1245	1269	1325	1376	1393	350
25°	1094	1131	1196	1243	1262	499
35°	782	818	852	898	912	484
45°	442	454	384	420	425	349
55°	308	301	136	155	155	275
65°	189	175	39	41	41	186
75°	66	61	10	10	10	73
85°	7	7	2	2	2	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1354.2	1354.2	1354.2	1354.2	1354.2	1354.2	1354.2	1354.2	1354.2	1354.2	1354.2
2.5°	1344.6	1332.4	1337.3	1334.8	1337.3	1334.8	1342.1	1334.8	1339.7	1344.6	1334.8
5°	1339.7	1327.5	1330.0	1330.0	1330.0	1330.0	1337.3	1330.0	1334.8	1339.7	1332.4
7.5°	1317.8	1308.1	1310.5	1310.5	1310.5	1310.5	1317.8	1312.9	1317.8	1325.1	1317.8
10°	1291.1	1281.4	1286.3	1286.3	1286.3	1286.3	1296.0	1291.1	1296.0	1305.6	1298.4
12.5°	1266.8	1259.5	1264.4	1264.4	1264.4	1266.8	1274.1	1271.7	1276.6	1288.7	1281.4
15°	1245.0	1237.7	1242.6	1242.6	1242.6	1245.0	1252.3	1254.7	1259.5	1269.3	1264.4
17.5°	1215.8	1208.6	1215.8	1215.8	1213.4	1218.3	1228.0	1228.0	1232.9	1245.0	1242.6
20°	1181.9	1174.6	1181.9	1181.9	1179.5	1184.3	1194.1	1196.5	1201.4	1213.4	1211.0
22.5°	1140.6	1138.2	1140.6	1145.5	1143.1	1145.5	1155.2	1157.7	1162.5	1177.0	1174.6
25°	1094.5	1092.1	1097.0	1099.4	1097.0	1099.4	1109.1	1111.6	1116.4	1130.9	1130.9
27.5°	1033.8	1031.4	1038.7	1038.7	1038.7	1043.6	1050.9	1055.7	1058.2	1075.1	1072.7
30°	961.1	958.6	963.5	965.9	965.9	965.9	975.7	982.9	985.3	999.9	999.9
32.5°	876.1	876.1	878.6	883.4	881.0	885.9	893.1	897.9	902.8	915.0	915.0
35°	781.5	783.9	786.3	791.2	788.8	791.2	798.5	803.3	805.7	817.9	815.4
37.5°	682.0	684.4	686.8	689.3	689.3	691.7	699.0	701.4	703.8	713.5	708.6
40°	587.3	587.3	589.7	594.6	592.2	597.0	601.9	604.3	604.3	611.6	606.8
42.5°	504.8	507.2	509.7	512.1	512.1	514.5	519.4	521.8	521.8	524.2	517.0
45°	441.7	444.1	444.1	449.0	449.0	451.4	453.8	456.3	453.8	453.8	446.5
47.5°	395.6	398.0	400.4	402.9	402.9	405.3	407.7	407.7	405.3	402.9	393.1
50°	359.2	364.0	364.0	366.5	368.9	371.3	371.3	371.3	366.5	364.0	349.4
52.5°	332.5	334.9	337.4	339.8	339.8	342.2	344.6	342.2	337.4	330.1	315.5
55°	308.2	310.6	313.1	315.5	315.5	315.5	315.5	313.1	308.2	300.9	286.4
57.5°	281.5	284.0	286.4	288.8	288.8	288.8	288.8	286.4	281.5	271.8	254.8
60°	252.4	254.8	257.2	259.6	259.6	259.6	257.2	254.8	250.0	242.7	225.7
62.5°	220.8	223.3	225.7	225.7	225.7	223.3	223.3	220.8	216.0	208.7	191.7
65°	189.3	189.3	191.7	191.7	191.7	191.7	189.3	186.9	182.0	174.7	162.6
67.5°	155.4	157.8	157.8	157.8	157.8	157.8	155.4	155.4	150.5	143.2	133.5
70°	123.7	123.7	126.2	126.2	126.2	126.2	123.7	123.7	118.9	114.1	104.4
72.5°	92.2	92.2	92.2	94.7	94.7	94.7	92.2	92.2	89.8	84.9	77.6
75°	65.6	65.6	65.6	68.0	68.0	68.0	68.0	65.6	63.1	60.7	55.8
77.5°	43.7	46.1	43.7	43.7	43.7	46.1	43.7	43.7	43.7	41.2	36.4
80°	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	26.7	26.7	24.2
82.5°	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	14.6	14.6
85°	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
87.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1354.2	1354.2	1354.2	1354.2	1354.2	1354.2	1354.2	1354.2	1354.2	1354.2	1354.2
2.5°	1342.1	1346.9	1351.8	1346.9	1339.7	1354.2	1351.8	1354.2	1351.8	1346.9	1361.5
5°	1339.7	1344.6	1351.8	1346.9	1342.1	1356.6	1354.2	1359.1	1359.1	1354.2	1368.8
7.5°	1325.1	1330.0	1342.1	1337.3	1332.4	1346.9	1349.3	1354.2	1356.6	1351.8	1368.8
10°	1308.1	1312.9	1325.1	1322.7	1320.2	1337.3	1339.7	1344.6	1346.9	1344.6	1361.5
12.5°	1291.1	1298.4	1310.5	1308.1	1308.1	1325.1	1327.5	1334.8	1339.7	1337.3	1356.6
15°	1274.1	1283.9	1298.4	1296.0	1296.0	1315.4	1317.8	1325.1	1330.0	1330.0	1349.3
17.5°	1252.3	1262.0	1276.6	1274.1	1279.0	1293.6	1298.4	1308.1	1312.9	1310.5	1332.4
20°	1220.7	1232.9	1247.5	1245.0	1247.5	1266.8	1271.7	1279.0	1283.9	1283.9	1303.2
22.5°	1184.3	1196.5	1211.0	1208.6	1213.4	1228.0	1232.9	1242.6	1247.5	1245.0	1264.4
25°	1140.6	1152.8	1164.9	1164.9	1167.3	1184.3	1189.2	1196.5	1203.8	1201.4	1218.3
27.5°	1082.4	1094.5	1106.7	1104.3	1106.7	1123.6	1128.5	1135.8	1143.1	1140.6	1157.7
30°	1007.2	1019.3	1029.0	1026.6	1029.0	1046.0	1048.4	1058.2	1065.5	1065.5	1079.9
32.5°	919.8	932.0	936.8	932.0	936.8	948.9	953.8	963.5	968.4	970.8	985.3
35°	820.3	827.6	830.0	825.2	825.2	837.3	842.2	851.8	856.7	859.1	871.3
37.5°	711.0	715.9	711.0	703.8	706.3	711.0	718.3	725.6	732.9	735.4	747.5
40°	604.3	601.9	594.6	582.4	580.0	587.3	592.2	599.5	604.3	609.2	616.4
42.5°	509.7	504.8	490.2	475.7	473.3	473.3	475.7	482.9	487.8	490.2	499.9
45°	434.4	424.7	402.9	385.9	376.2	378.6	378.6	383.5	385.9	390.7	398.0
47.5°	376.2	359.2	332.5	310.6	300.9	298.5	298.5	300.9	303.3	308.2	313.1
50°	330.1	308.2	276.7	252.4	240.3	235.4	235.4	233.0	237.9	240.3	245.2
52.5°	293.7	266.9	230.6	203.9	189.3	184.4	182.0	182.0	182.0	184.4	189.3
55°	259.6	230.6	191.7	165.0	148.1	143.2	138.3	135.9	138.3	140.8	143.2
57.5°	230.6	199.0	160.2	131.0	116.4	109.3	104.4	102.0	102.0	104.4	106.8
60°	201.5	169.9	131.0	104.4	89.8	82.5	77.6	75.2	75.2	77.6	77.6
62.5°	169.9	140.8	106.8	82.5	68.0	60.7	55.8	55.8	53.4	53.4	55.8
65°	143.2	116.4	87.4	65.6	51.0	46.1	41.2	38.8	38.8	36.4	38.8
67.5°	116.4	94.7	70.3	51.0	38.8	34.0	29.1	29.1	26.7	26.7	26.7
70°	92.2	75.2	55.8	38.8	31.5	24.2	21.9	19.5	19.5	19.5	19.5
72.5°	68.0	55.8	41.2	29.1	21.9	19.5	17.0	14.6	12.2	12.2	12.2
75°	48.5	38.8	29.1	21.9	17.0	14.6	12.2	9.7	9.7	9.7	9.7
77.5°	34.0	26.7	21.9	14.6	12.2	9.7	7.3	7.3	7.3	7.3	4.9
80°	21.9	17.0	14.6	9.7	7.3	7.3	4.9	4.9	4.9	4.9	4.9
82.5°	12.2	9.7	7.3	7.3	4.9	4.9	2.4	2.4	2.4	2.4	2.4
85°	4.9	4.9	4.9	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
87.5°	2.4	0.0	0.0	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	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1354.2	1354.2	1354.2	1354.2	1354.2	1354.2	1354.2	1354.2	1354.2	1354.2	1354.2
2.5°	1346.9	1356.6	1356.6	1361.5	1354.2	1359.1	1366.3	1363.9	1356.6	1359.1	1361.5
5°	1356.6	1366.3	1368.8	1376.1	1368.8	1376.1	1385.8	1383.4	1376.1	1380.9	1383.4
7.5°	1356.6	1368.8	1373.6	1380.9	1376.1	1383.4	1395.4	1393.0	1385.8	1390.7	1395.4
10°	1351.8	1363.9	1371.2	1378.5	1373.6	1383.4	1393.0	1393.0	1388.2	1393.0	1400.3
12.5°	1346.9	1359.1	1366.3	1373.6	1368.8	1380.9	1393.0	1390.7	1388.2	1393.0	1400.3
15°	1339.7	1351.8	1359.1	1366.3	1363.9	1376.1	1388.2	1388.2	1383.4	1390.7	1397.9
17.5°	1322.7	1334.8	1344.6	1349.3	1346.9	1359.1	1371.2	1371.2	1366.3	1373.6	1380.9
20°	1293.6	1305.6	1315.4	1320.2	1317.8	1327.5	1339.7	1342.1	1337.3	1344.6	1351.8
22.5°	1257.1	1266.8	1276.6	1281.4	1279.0	1288.7	1300.8	1303.2	1298.4	1305.6	1310.5
25°	1213.4	1220.7	1230.4	1235.3	1232.9	1242.6	1254.7	1254.7	1252.3	1257.1	1262.0
27.5°	1152.8	1162.5	1169.7	1174.6	1174.6	1181.9	1191.6	1194.1	1191.6	1196.5	1203.8
30°	1077.5	1082.4	1092.1	1094.5	1097.0	1104.3	1114.0	1114.0	1111.6	1116.4	1123.6
32.5°	982.9	990.2	997.4	999.9	1002.3	1009.6	1016.9	1019.3	1016.9	1021.8	1029.0
35°	871.3	878.6	885.9	888.3	890.7	897.9	905.2	907.7	905.2	910.1	917.4
37.5°	747.5	752.4	759.6	762.0	766.9	771.8	776.6	781.5	779.0	783.9	788.8
40°	621.3	623.7	631.0	633.4	638.3	643.1	648.0	650.4	650.4	652.9	655.3
42.5°	502.4	507.2	512.1	514.5	519.4	521.8	526.6	529.0	529.0	531.5	533.9
45°	400.4	405.3	410.1	412.6	417.4	419.9	422.3	424.7	422.3	422.3	427.2
47.5°	315.5	320.4	325.2	327.7	330.1	332.5	334.9	334.9	334.9	337.4	337.4
50°	247.6	250.0	254.8	254.8	259.6	259.6	262.1	262.1	262.1	262.1	264.5
52.5°	191.7	194.2	199.0	199.0	201.5	203.9	203.9	203.9	203.9	206.3	203.9
55°	145.6	148.1	150.5	150.5	155.4	155.4	155.4	155.4	155.4	155.4	155.4
57.5°	109.3	111.7	114.1	114.1	114.1	116.4	114.1	116.4	116.4	116.4	116.4
60°	80.1	82.5	82.5	82.5	84.9	84.9	84.9	84.9	84.9	84.9	84.9
62.5°	55.8	55.8	58.3	58.3	58.3	60.7	58.3	58.3	60.7	60.7	58.3
65°	38.8	38.8	41.2	41.2	41.2	41.2	41.2	41.2	41.2	41.2	41.2
67.5°	26.7	26.7	26.7	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1
70°	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
72.5°	12.2	12.2	12.2	12.2	14.6	14.6	14.6	14.6	14.6	14.6	14.6
75°	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7
77.5°	4.9	4.9	7.3	7.3	7.3	4.9	4.9	4.9	7.3	7.3	4.9
80°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
82.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
85°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	0.0	2.4	2.4	2.4
87.5°	0.0	0.0	0.0	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	0.0	0.0	0.0



TEST NUMBER: P136431

CATALOG NUMBER: LD6A20D010TE ERW6A20940 6LW111H

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1354.2	1354.2	1354.2	1354.2
2.5°	1361.5	1359.1	1361.5	1354.2
5°	1383.4	1380.9	1385.8	1376.1
7.5°	1397.9	1395.4	1400.3	1390.7
10°	1400.3	1400.3	1405.2	1395.4
12.5°	1400.3	1400.3	1405.2	1395.4
15°	1400.3	1397.9	1402.7	1393.0
17.5°	1383.4	1383.4	1388.2	1378.5
20°	1351.8	1351.8	1356.6	1349.3
22.5°	1312.9	1312.9	1315.4	1308.1
25°	1264.4	1262.0	1266.8	1262.0
27.5°	1203.8	1201.4	1203.8	1198.9
30°	1121.2	1118.8	1123.6	1118.8
32.5°	1029.0	1024.2	1029.0	1024.2
35°	915.0	910.1	915.0	912.5
37.5°	788.8	783.9	788.8	786.3
40°	655.3	652.9	657.7	655.3
42.5°	533.9	529.0	533.9	531.5
45°	427.2	422.3	427.2	424.7
47.5°	337.4	334.9	339.8	337.4
50°	264.5	262.1	264.5	264.5
52.5°	203.9	201.5	203.9	203.9
55°	155.4	152.9	155.4	155.4
57.5°	116.4	114.1	116.4	116.4
60°	84.9	84.9	84.9	84.9
62.5°	60.7	58.3	60.7	60.7
65°	41.2	41.2	41.2	41.2
67.5°	29.1	29.1	29.1	29.1
70°	19.5	19.5	19.5	19.5
72.5°	14.6	14.6	14.6	12.2
75°	9.7	9.7	9.7	9.7
77.5°	7.3	4.9	7.3	7.3
80°	4.9	4.9	4.9	4.9
82.5°	2.4	2.4	2.4	2.4
85°	2.4	2.4	2.4	2.4
87.5°	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - 90°-270°













(END OF REPORT)