

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: P136430

Luminaire Tested: **LD6A20D010TE ERW6A20935 6LW111H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136430
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 ERW6A20935 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 3500K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2169.5 lumens
Efficiency: N/A
Efficacy: 66.1 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

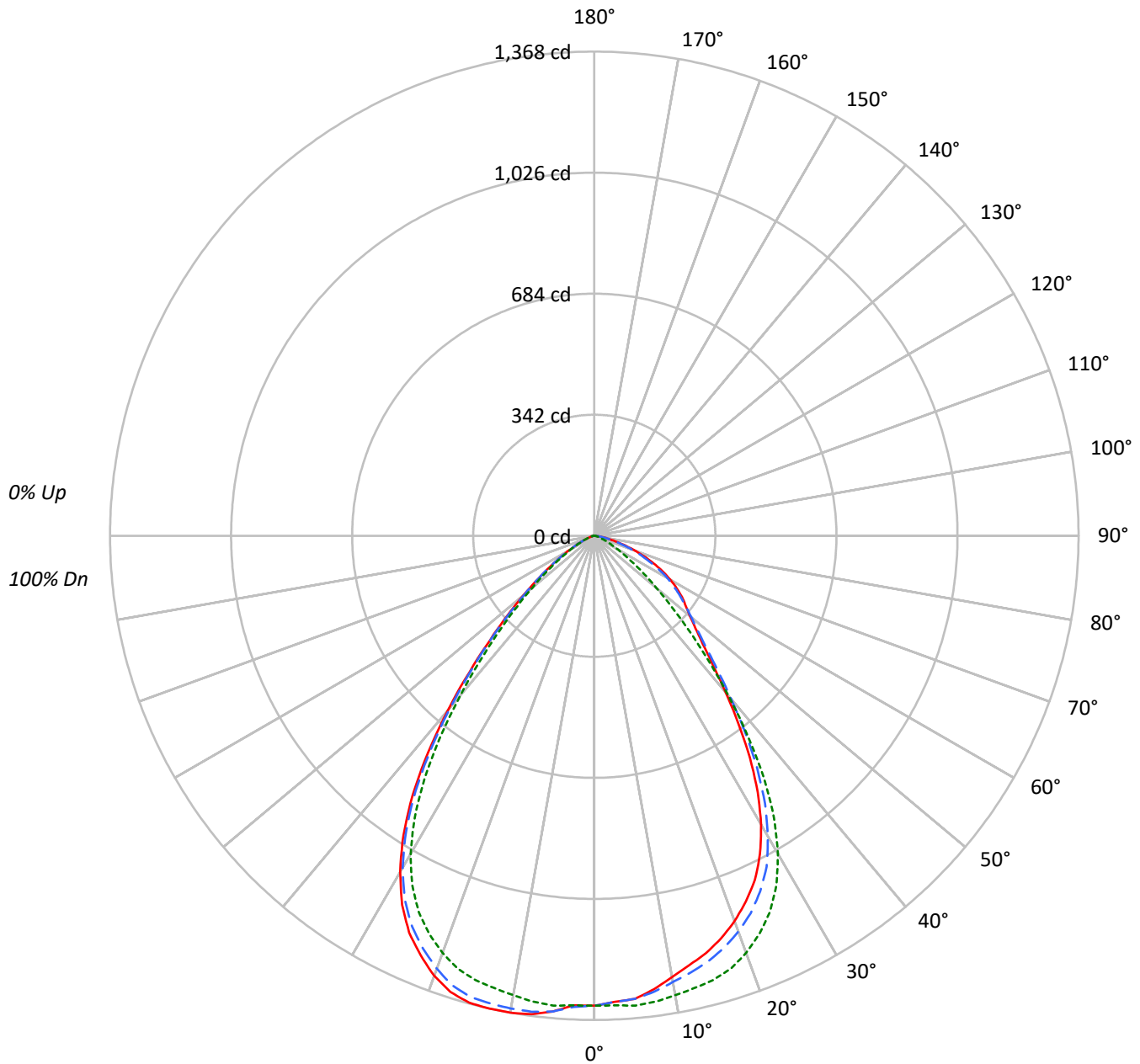
Input Watts (W): 32.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	86620	86620	86620
5°	86014	87265	88352
10°	83856	87327	90639
15°	82442	87751	92249
20°	80453	87055	91853
25°	77247	84446	89067
30°	70987	78151	82633
35°	61023	66511	71250
40°	49038	50052	54710
45°	39960	34682	38419
50°	35737	23182	26328
55°	34362	15151	17323
60°	32294	9630	10869
65°	28652	5882	6252
70°	23138	3624	3624
75°	16208	2395	2395
80°	10745	1803	1803
85°	5315	1797	1797



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.4	5.8
10°-20°	364.5	16.8
20°-30°	530.8	24.5
30°-40°	514.9	23.7
40°-50°	325.4	15.0
50°-60°	181.2	8.4
60°-70°	89.8	4.1
70°-80°	31.6	1.5
80°-90°	5.0	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°	1021.6	47.1
0°-40°	1536.5	70.8
0°-60°	2043.1	94.2
0°-90°	2169.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2169.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1328	1328	1328	1328	1328	
5°	1313	1313	1332	1349	1349	124
15°	1221	1244	1299	1349	1366	343
25°	1073	1109	1173	1218	1237	490
35°	766	802	835	880	895	475
45°	433	445	376	412	416	342
55°	302	295	133	152	152	269
65°	186	171	38	40	40	183
75°	64	60	10	10	10	72
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°	1327.7	1327.7	1327.7	1327.7	1327.7	1327.7	1327.7	1327.7	1327.7	1327.7	1327.7
2.5°	1318.2	1306.3	1311.1	1308.7	1311.1	1308.7	1315.8	1308.7	1313.4	1318.2	1308.7
5°	1313.4	1301.5	1303.9	1303.9	1303.9	1303.9	1311.1	1303.9	1308.7	1313.4	1306.3
7.5°	1292.0	1282.5	1284.9	1284.9	1284.9	1284.9	1292.0	1287.3	1292.0	1299.2	1292.0
10°	1265.8	1256.3	1261.1	1261.1	1261.1	1261.1	1270.6	1265.8	1270.6	1280.1	1273.0
12.5°	1242.0	1234.9	1239.6	1239.6	1239.6	1242.0	1249.2	1246.8	1251.5	1263.4	1256.3
15°	1220.6	1213.4	1218.2	1218.2	1218.2	1220.6	1227.7	1230.1	1234.9	1244.4	1239.6
17.5°	1192.1	1185.0	1192.1	1192.1	1189.7	1194.5	1203.9	1203.9	1208.7	1220.6	1218.2
20°	1158.8	1151.7	1158.8	1158.8	1156.4	1161.2	1170.7	1173.1	1177.8	1189.7	1187.4
22.5°	1118.3	1115.9	1118.3	1123.1	1120.7	1123.1	1132.6	1135.0	1139.7	1154.0	1151.7
25°	1073.1	1070.7	1075.5	1077.9	1075.5	1077.9	1087.4	1089.8	1094.5	1108.8	1108.8
27.5°	1013.6	1011.2	1018.3	1018.3	1018.3	1023.1	1030.2	1035.0	1037.4	1054.0	1051.7
30°	942.3	939.9	944.6	947.0	947.0	947.0	956.5	963.7	966.1	980.3	980.3
32.5°	858.9	858.9	861.3	866.1	863.7	868.5	875.6	880.4	885.1	897.0	897.0
35°	766.2	768.6	770.9	775.7	773.3	775.7	782.8	787.6	790.0	801.9	799.5
37.5°	668.6	671.0	673.3	675.7	675.7	678.1	685.2	687.6	690.0	699.5	694.8
40°	575.8	575.8	578.2	583.0	580.6	585.3	590.1	592.5	592.5	599.6	594.9
42.5°	494.9	497.3	499.6	502.0	502.0	504.4	509.2	511.5	511.5	513.9	506.8
45°	433.1	435.5	435.5	440.2	440.2	442.6	445.0	447.4	445.0	445.0	437.8
47.5°	387.9	390.2	392.6	395.0	395.0	397.4	399.8	399.8	397.4	395.0	385.5
50°	352.1	356.9	356.9	359.3	361.7	364.0	364.0	364.0	359.3	356.9	342.6
52.5°	326.0	328.3	330.7	333.1	333.1	335.5	337.9	335.5	330.7	323.6	309.3
55°	302.1	304.5	306.9	309.3	309.3	309.3	309.3	306.9	302.1	295.0	280.7
57.5°	276.0	278.4	280.7	283.1	283.1	283.1	283.1	280.7	276.0	266.5	249.9
60°	247.5	249.9	252.3	254.6	254.6	254.6	252.3	249.9	245.1	238.0	221.3
62.5°	216.5	218.9	221.3	221.3	221.3	218.9	218.9	216.5	211.8	204.6	188.0
65°	185.6	185.6	188.0	188.0	188.0	188.0	185.6	183.2	178.5	171.3	159.4
67.5°	152.3	154.6	154.6	154.6	154.6	154.6	152.3	152.3	147.5	140.4	130.8
70°	121.3	121.3	123.7	123.7	123.7	123.7	121.3	121.3	116.6	111.8	102.3
72.5°	90.4	90.4	90.4	92.8	92.8	92.8	90.4	90.4	88.1	83.3	76.2
75°	64.3	64.3	64.3	66.7	66.7	66.7	66.7	64.3	61.9	59.5	54.8
77.5°	42.9	45.2	42.9	42.9	42.9	45.2	42.9	42.9	42.9	40.5	35.7
80°	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	26.2	26.2	23.8
82.5°	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	14.3	14.3
85°	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
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°	1327.7	1327.7	1327.7	1327.7	1327.7	1327.7	1327.7	1327.7	1327.7	1327.7	1327.7
2.5°	1315.8	1320.6	1325.3	1320.6	1313.4	1327.7	1325.3	1327.7	1325.3	1320.6	1334.9
5°	1313.4	1318.2	1325.3	1320.6	1315.8	1330.1	1327.7	1332.5	1332.5	1327.7	1342.0
7.5°	1299.2	1303.9	1315.8	1311.1	1306.3	1320.6	1323.0	1327.7	1330.1	1325.3	1342.0
10°	1282.5	1287.3	1299.2	1296.8	1294.4	1311.1	1313.4	1318.2	1320.6	1318.2	1334.9
12.5°	1265.8	1273.0	1284.9	1282.5	1282.5	1299.2	1301.5	1308.7	1313.4	1311.1	1330.1
15°	1249.2	1258.7	1273.0	1270.6	1270.6	1289.6	1292.0	1299.2	1303.9	1303.9	1323.0
17.5°	1227.7	1237.3	1251.5	1249.2	1253.9	1268.2	1273.0	1282.5	1287.3	1284.9	1306.3
20°	1196.8	1208.7	1223.0	1220.6	1223.0	1242.0	1246.8	1253.9	1258.7	1258.7	1277.7
22.5°	1161.2	1173.1	1187.4	1185.0	1189.7	1203.9	1208.7	1218.2	1223.0	1220.6	1239.6
25°	1118.3	1130.2	1142.1	1142.1	1144.5	1161.2	1165.9	1173.1	1180.2	1177.8	1194.5
27.5°	1061.2	1073.1	1085.0	1082.6	1085.0	1101.7	1106.4	1113.6	1120.7	1118.3	1135.0
30°	987.5	999.4	1008.9	1006.5	1008.9	1025.5	1027.9	1037.4	1044.5	1044.5	1058.8
32.5°	901.8	913.7	918.4	913.7	918.4	930.3	935.1	944.6	949.4	951.8	966.1
35°	804.3	811.4	813.8	809.0	809.0	820.9	825.7	835.1	839.9	842.3	854.2
37.5°	697.1	701.9	697.1	690.0	692.4	697.1	704.3	711.4	718.6	720.9	732.9
40°	592.5	590.1	583.0	571.1	568.7	575.8	580.6	587.7	592.5	597.3	604.4
42.5°	499.6	494.9	480.6	466.3	464.0	464.0	466.3	473.5	478.2	480.6	490.1
45°	425.9	416.4	395.0	378.3	368.8	371.2	371.2	375.9	378.3	383.1	390.2
47.5°	368.8	352.1	326.0	304.5	295.0	292.6	292.6	295.0	297.4	302.1	306.9
50°	323.6	302.1	271.3	247.5	235.6	230.8	230.8	228.4	233.2	235.6	240.3
52.5°	287.9	261.8	226.1	199.9	185.6	180.8	178.5	178.5	178.5	180.8	185.6
55°	254.6	226.1	188.0	161.8	145.1	140.4	135.6	133.2	135.6	138.0	140.4
57.5°	226.1	195.1	157.0	128.5	114.2	107.0	102.3	99.9	99.9	102.3	104.7
60°	197.5	166.5	128.5	102.3	88.1	80.9	76.2	73.8	73.8	76.2	76.2
62.5°	166.5	138.0	104.7	80.9	66.7	59.5	54.8	54.8	52.4	52.4	54.8
65°	140.4	114.2	85.7	64.3	50.0	45.2	40.5	38.1	38.1	35.7	38.1
67.5°	114.2	92.8	69.0	50.0	38.1	33.3	28.6	28.6	26.2	26.2	26.2
70°	90.4	73.8	54.8	38.1	30.9	23.8	21.4	19.0	19.0	19.0	19.0
72.5°	66.7	54.8	40.5	28.6	21.4	19.0	16.7	14.3	11.9	11.9	11.9
75°	47.6	38.1	28.6	21.4	16.7	14.3	11.9	9.5	9.5	9.5	9.5
77.5°	33.3	26.2	21.4	14.3	11.9	9.5	7.1	7.1	7.1	7.1	4.8
80°	21.4	16.7	14.3	9.5	7.1	7.1	4.8	4.8	4.8	4.8	4.8
82.5°	11.9	9.5	7.1	7.1	4.8	4.8	2.4	2.4	2.4	2.4	2.4
85°	4.8	4.8	4.8	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°	1327.7	1327.7	1327.7	1327.7	1327.7	1327.7	1327.7	1327.7	1327.7	1327.7	1327.7
2.5°	1320.6	1330.1	1330.1	1334.9	1327.7	1332.5	1339.6	1337.2	1330.1	1332.5	1334.9
5°	1330.1	1339.6	1342.0	1349.1	1342.0	1349.1	1358.7	1356.3	1349.1	1353.9	1356.3
7.5°	1330.1	1342.0	1346.8	1353.9	1349.1	1356.3	1368.2	1365.8	1358.7	1363.4	1368.2
10°	1325.3	1337.2	1344.4	1351.5	1346.8	1356.3	1365.8	1365.8	1361.1	1365.8	1373.0
12.5°	1320.6	1332.5	1339.6	1346.8	1342.0	1353.9	1365.8	1363.4	1361.1	1365.8	1373.0
15°	1313.4	1325.3	1332.5	1339.6	1337.2	1349.1	1361.1	1361.1	1356.3	1363.4	1370.6
17.5°	1296.8	1308.7	1318.2	1323.0	1320.6	1332.5	1344.4	1344.4	1339.6	1346.8	1353.9
20°	1268.2	1280.1	1289.6	1294.4	1292.0	1301.5	1313.4	1315.8	1311.1	1318.2	1325.3
22.5°	1232.5	1242.0	1251.5	1256.3	1253.9	1263.4	1275.3	1277.7	1273.0	1280.1	1284.9
25°	1189.7	1196.8	1206.3	1211.1	1208.7	1218.2	1230.1	1230.1	1227.7	1232.5	1237.3
27.5°	1130.2	1139.7	1146.9	1151.7	1151.7	1158.8	1168.3	1170.7	1168.3	1173.1	1180.2
30°	1056.4	1061.2	1070.7	1073.1	1075.5	1082.6	1092.1	1092.1	1089.8	1094.5	1101.7
32.5°	963.7	970.8	978.0	980.3	982.7	989.9	997.0	999.4	997.0	1001.8	1008.9
35°	854.2	861.3	868.5	870.8	873.2	880.4	887.5	889.9	887.5	892.3	899.4
37.5°	732.9	737.6	744.8	747.1	751.9	756.7	761.4	766.2	763.8	768.6	773.3
40°	609.2	611.5	618.7	621.1	625.8	630.6	635.3	637.7	637.7	640.1	642.4
42.5°	492.5	497.3	502.0	504.4	509.2	511.5	516.3	518.7	518.7	521.1	523.5
45°	392.6	397.4	402.1	404.5	409.3	411.7	414.0	416.4	414.0	414.0	418.8
47.5°	309.3	314.1	318.8	321.2	323.6	326.0	328.3	328.3	328.3	330.7	330.7
50°	242.7	245.1	249.9	249.9	254.6	254.6	257.0	257.0	257.0	257.0	259.4
52.5°	188.0	190.4	195.1	195.1	197.5	199.9	199.9	199.9	199.9	202.3	199.9
55°	142.7	145.1	147.5	147.5	152.3	152.3	152.3	152.3	152.3	152.3	152.3
57.5°	107.0	109.4	111.8	111.8	111.8	114.2	111.8	114.2	114.2	114.2	114.2
60°	78.6	80.9	80.9	80.9	83.3	83.3	83.3	83.3	83.3	83.3	83.3
62.5°	54.8	54.8	57.1	57.1	57.1	59.5	57.1	57.1	59.5	59.5	57.1
65°	38.1	38.1	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5
67.5°	26.2	26.2	26.2	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6
70°	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
72.5°	11.9	11.9	11.9	11.9	14.3	14.3	14.3	14.3	14.3	14.3	14.3
75°	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5
77.5°	4.8	4.8	7.1	7.1	7.1	4.8	4.8	4.8	7.1	7.1	4.8
80°	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
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: P136430

CATALOG NUMBER: LD6A20D010TE ERW6A20935 6LW111H

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1327.7	1327.7	1327.7	1327.7
2.5°	1334.9	1332.5	1334.9	1327.7
5°	1356.3	1353.9	1358.7	1349.1
7.5°	1370.6	1368.2	1373.0	1363.4
10°	1373.0	1373.0	1377.7	1368.2
12.5°	1373.0	1373.0	1377.7	1368.2
15°	1373.0	1370.6	1375.3	1365.8
17.5°	1356.3	1356.3	1361.1	1351.5
20°	1325.3	1325.3	1330.1	1323.0
22.5°	1287.3	1287.3	1289.6	1282.5
25°	1239.6	1237.3	1242.0	1237.3
27.5°	1180.2	1177.8	1180.2	1175.5
30°	1099.3	1096.9	1101.7	1096.9
32.5°	1008.9	1004.1	1008.9	1004.1
35°	897.0	892.3	897.0	894.6
37.5°	773.3	768.6	773.3	770.9
40°	642.4	640.1	644.8	642.4
42.5°	523.5	518.7	523.5	521.1
45°	418.8	414.0	418.8	416.4
47.5°	330.7	328.3	333.1	330.7
50°	259.4	257.0	259.4	259.4
52.5°	199.9	197.5	199.9	199.9
55°	152.3	149.9	152.3	152.3
57.5°	114.2	111.8	114.2	114.2
60°	83.3	83.3	83.3	83.3
62.5°	59.5	57.1	59.5	59.5
65°	40.5	40.5	40.5	40.5
67.5°	28.6	28.6	28.6	28.6
70°	19.0	19.0	19.0	19.0
72.5°	14.3	14.3	14.3	11.9
75°	9.5	9.5	9.5	9.5
77.5°	7.1	4.8	7.1	7.1
80°	4.8	4.8	4.8	4.8
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)