

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: P136425

Luminaire Tested: **LD6A20D010TE ERW6A20830 6LW111H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136425
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 ERW6A20830 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 3000K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2293.0 lumens
Efficiency: N/A
Efficacy: 69.9 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

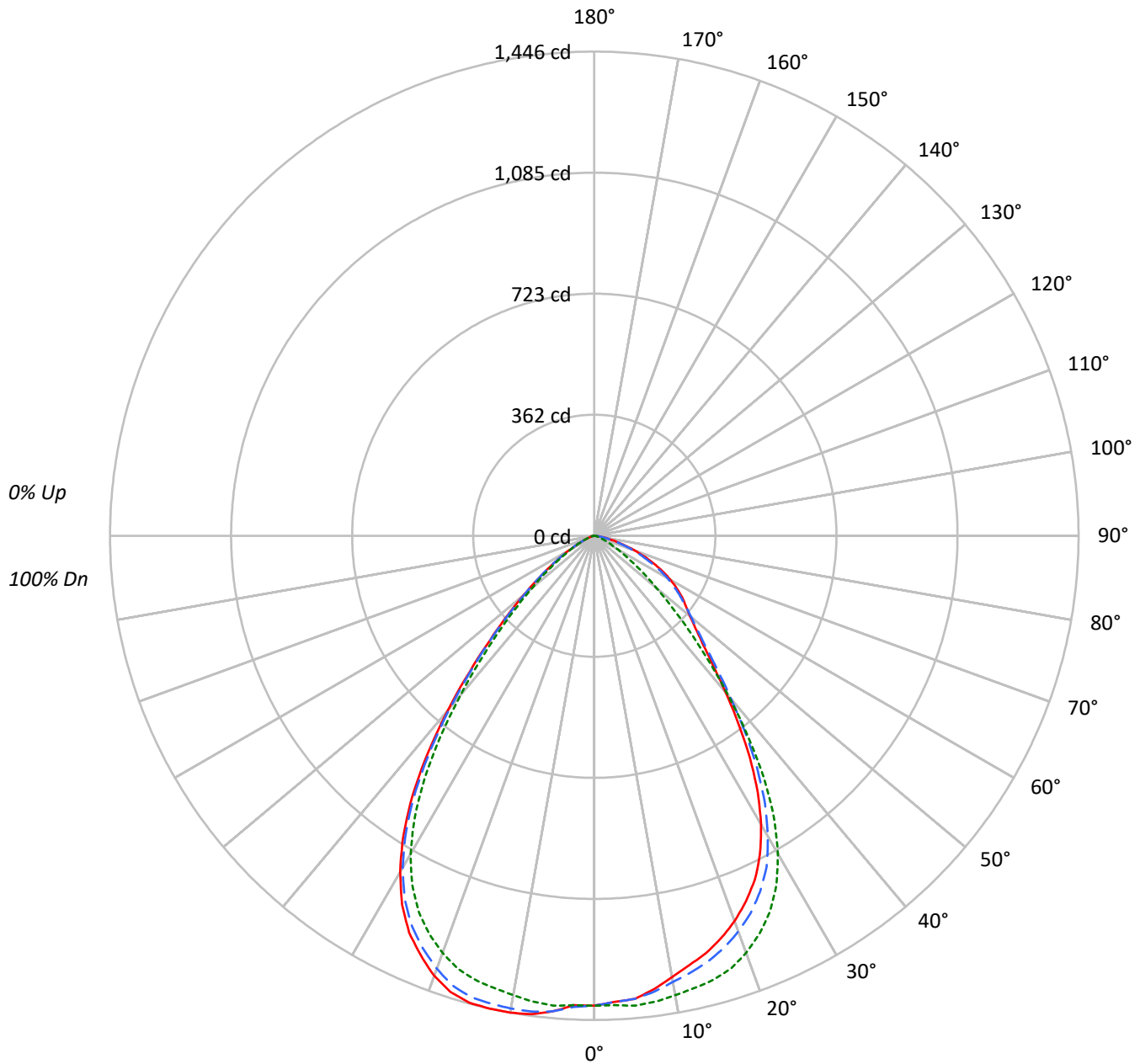
Input Watts (W): 32.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	91552	91552	91552
5°	90913	92229	93382
10°	88632	92295	95800
15°	87136	92742	97497
20°	85028	92012	97081
25°	81645	89247	94135
30°	75025	82603	87342
35°	64496	70302	75311
40°	51832	52905	57827
45°	42229	36666	40605
50°	37777	24501	27820
55°	36330	16015	18313
60°	34121	10178	11482
65°	30288	6206	6607
70°	24473	3834	3834
75°	17116	2546	2546
80°	11346	1879	1879
85°	5614	1871	1871



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.6	5.8
10°-20°	385.2	16.8
20°-30°	561.0	24.5
30°-40°	544.2	23.7
40°-50°	343.9	15.0
50°-60°	191.5	8.4
60°-70°	94.9	4.1
70°-80°	33.4	1.5
80°-90°	5.2	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°	1079.8	47.1
0°-40°	1624.0	70.8
0°-60°	2159.4	94.2
0°-90°	2293.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2293.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1403	1403	1403	1403	1403	
5°	1388	1388	1408	1426	1426	131
15°	1290	1315	1373	1426	1444	363
25°	1134	1172	1240	1288	1308	517
35°	810	848	883	930	946	502
45°	458	470	397	435	440	362
55°	319	312	141	161	161	284
65°	196	181	40	43	43	193
75°	68	63	10	10	10	76
85°	8	8	2	2	2	12
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°	1403.3	1403.3	1403.3	1403.3	1403.3	1403.3	1403.3	1403.3	1403.3	1403.3	1403.3
2.5°	1393.2	1380.7	1385.7	1383.2	1385.7	1383.2	1390.7	1383.2	1388.2	1393.2	1383.2
5°	1388.2	1375.6	1378.2	1378.2	1378.2	1378.2	1385.7	1378.2	1383.2	1388.2	1380.7
7.5°	1365.6	1355.5	1358.0	1358.0	1358.0	1358.0	1365.6	1360.6	1365.6	1373.1	1365.6
10°	1337.9	1327.9	1332.9	1332.9	1332.9	1332.9	1342.9	1337.9	1342.9	1353.0	1345.5
12.5°	1312.8	1305.2	1310.3	1310.3	1310.3	1312.8	1320.3	1317.8	1322.8	1335.4	1327.9
15°	1290.1	1282.6	1287.6	1287.6	1287.6	1290.1	1297.7	1300.2	1305.2	1315.3	1310.3
17.5°	1260.0	1252.4	1260.0	1260.0	1257.4	1262.5	1272.5	1272.5	1277.6	1290.1	1287.6
20°	1224.7	1217.2	1224.7	1224.7	1222.2	1227.3	1237.3	1239.8	1244.9	1257.4	1254.9
22.5°	1182.0	1179.5	1182.0	1187.0	1184.5	1187.0	1197.1	1199.6	1204.6	1219.7	1217.2
25°	1134.2	1131.7	1136.7	1139.2	1136.7	1139.2	1149.3	1151.8	1156.8	1171.9	1171.9
27.5°	1071.3	1068.8	1076.4	1076.4	1076.4	1081.4	1088.9	1094.0	1096.5	1114.1	1111.6
30°	995.9	993.4	998.4	1000.9	1000.9	1000.9	1011.0	1018.5	1021.0	1036.1	1036.1
32.5°	907.9	907.9	910.4	915.4	912.9	917.9	925.5	930.5	935.5	948.1	948.1
35°	809.8	812.3	814.8	819.9	817.3	819.9	827.4	832.4	834.9	847.5	845.0
37.5°	706.7	709.2	711.7	714.2	714.2	716.7	724.3	726.8	729.3	739.4	734.3
40°	608.6	608.6	611.1	616.1	613.6	618.7	623.7	626.2	626.2	633.7	628.7
42.5°	523.1	525.6	528.1	530.6	530.6	533.2	538.2	540.7	540.7	543.2	535.7
45°	457.7	460.2	460.2	465.3	465.3	467.8	470.3	472.8	470.3	470.3	462.7
47.5°	409.9	412.4	415.0	417.5	417.5	420.0	422.5	422.5	420.0	417.5	407.4
50°	372.2	377.2	377.2	379.7	382.3	384.8	384.8	384.8	379.7	377.2	362.1
52.5°	344.5	347.1	349.6	352.1	352.1	354.6	357.1	354.6	349.6	342.0	326.9
55°	319.4	321.9	324.4	326.9	326.9	326.9	326.9	324.4	319.4	311.8	296.8
57.5°	291.7	294.2	296.8	299.3	299.3	299.3	299.3	296.8	291.7	281.7	264.1
60°	261.5	264.1	266.6	269.1	269.1	269.1	266.6	264.1	259.0	251.5	233.9
62.5°	228.9	231.4	233.9	233.9	233.9	231.4	231.4	228.9	223.8	216.3	198.7
65°	196.2	196.2	198.7	198.7	198.7	198.7	196.2	193.6	188.6	181.1	168.5
67.5°	161.0	163.5	163.5	163.5	163.5	163.5	161.0	161.0	155.9	148.4	138.3
70°	128.3	128.3	130.8	130.8	130.8	130.8	128.3	128.3	123.2	118.2	108.1
72.5°	95.6	95.6	95.6	98.1	98.1	98.1	95.6	95.6	93.1	88.0	80.5
75°	67.9	67.9	67.9	70.4	70.4	70.4	70.4	67.9	65.4	62.9	57.8
77.5°	45.3	47.8	45.3	45.3	45.3	47.8	45.3	45.3	45.3	42.8	37.7
80°	30.2	30.2	30.2	30.2	30.2	30.2	30.2	30.2	27.7	27.7	25.1
82.5°	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	15.1	15.1
85°	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
87.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
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°	1403.3	1403.3	1403.3	1403.3	1403.3	1403.3	1403.3	1403.3	1403.3	1403.3	1403.3
2.5°	1390.7	1395.8	1400.8	1395.8	1388.2	1403.3	1400.8	1403.3	1400.8	1395.8	1410.8
5°	1388.2	1393.2	1400.8	1395.8	1390.7	1405.8	1403.3	1408.3	1408.3	1403.3	1418.4
7.5°	1373.1	1378.2	1390.7	1385.7	1380.7	1395.8	1398.3	1403.3	1405.8	1400.8	1418.4
10°	1355.5	1360.6	1373.1	1370.6	1368.1	1385.7	1388.2	1393.2	1395.8	1393.2	1410.8
12.5°	1337.9	1345.5	1358.0	1355.5	1355.5	1373.1	1375.6	1383.2	1388.2	1385.7	1405.8
15°	1320.3	1330.4	1345.5	1342.9	1342.9	1363.1	1365.6	1373.1	1378.2	1378.2	1398.3
17.5°	1297.7	1307.7	1322.8	1320.3	1325.3	1340.4	1345.5	1355.5	1360.6	1358.0	1380.7
20°	1265.0	1277.6	1292.6	1290.1	1292.6	1312.8	1317.8	1325.3	1330.4	1330.4	1350.5
22.5°	1227.3	1239.8	1254.9	1252.4	1257.4	1272.5	1277.6	1287.6	1292.6	1290.1	1310.3
25°	1182.0	1194.6	1207.1	1207.1	1209.7	1227.3	1232.3	1239.8	1247.4	1244.9	1262.5
27.5°	1121.6	1134.2	1146.8	1144.3	1146.8	1164.4	1169.4	1177.0	1184.5	1182.0	1199.6
30°	1043.7	1056.2	1066.3	1063.8	1066.3	1083.9	1086.4	1096.5	1104.0	1104.0	1119.1
32.5°	953.1	965.7	970.7	965.7	970.7	983.3	988.3	998.4	1003.4	1006.0	1021.0
35°	850.0	857.6	860.1	855.1	855.1	867.6	872.7	882.7	887.8	890.3	902.8
37.5°	736.9	741.9	736.9	729.3	731.8	736.9	744.4	751.9	759.5	762.0	774.6
40°	626.2	623.7	616.1	603.6	601.1	608.6	613.6	621.2	626.2	631.2	638.8
42.5°	528.1	523.1	508.0	492.9	490.4	490.4	492.9	500.5	505.5	508.0	518.1
45°	450.2	440.1	417.5	399.9	389.8	392.3	392.3	397.4	399.9	404.9	412.4
47.5°	389.8	372.2	344.5	321.9	311.8	309.3	309.3	311.8	314.4	319.4	324.4
50°	342.0	319.4	286.7	261.5	249.0	243.9	243.9	241.4	246.5	249.0	254.0
52.5°	304.3	276.6	238.9	211.2	196.2	191.1	188.6	188.6	188.6	191.1	196.2
55°	269.1	238.9	198.7	171.0	153.4	148.4	143.3	140.8	143.3	145.9	148.4
57.5°	238.9	206.2	166.0	135.8	120.7	113.2	108.1	105.6	105.6	108.1	110.7
60°	208.7	176.0	135.8	108.1	93.1	85.5	80.5	78.0	78.0	80.5	80.5
62.5°	176.0	145.9	110.7	85.5	70.4	62.9	57.8	57.8	55.3	55.3	57.8
65°	148.4	120.7	90.5	67.9	52.8	47.8	42.8	40.2	40.2	37.7	40.2
67.5°	120.7	98.1	72.9	52.8	40.2	35.2	30.2	30.2	27.7	27.7	27.7
70°	95.6	78.0	57.8	40.2	32.7	25.1	22.6	20.1	20.1	20.1	20.1
72.5°	70.4	57.8	42.8	30.2	22.6	20.1	17.6	15.1	12.6	12.6	12.6
75°	50.3	40.2	30.2	22.6	17.6	15.1	12.6	10.1	10.1	10.1	10.1
77.5°	35.2	27.7	22.6	15.1	12.6	10.1	7.5	7.5	7.5	7.5	5.0
80°	22.6	17.6	15.1	10.1	7.5	7.5	5.0	5.0	5.0	5.0	5.0
82.5°	12.6	10.1	7.5	7.5	5.0	5.0	2.5	2.5	2.5	2.5	2.5
85°	5.0	5.0	5.0	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
87.5°	2.5	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°	1403.3	1403.3	1403.3	1403.3	1403.3	1403.3	1403.3	1403.3	1403.3	1403.3	1403.3
2.5°	1395.8	1405.8	1405.8	1410.8	1403.3	1408.3	1415.9	1413.4	1405.8	1408.3	1410.8
5°	1405.8	1415.9	1418.4	1425.9	1418.4	1425.9	1436.0	1433.5	1425.9	1431.0	1433.5
7.5°	1405.8	1418.4	1423.4	1431.0	1425.9	1433.5	1446.1	1443.5	1436.0	1441.0	1446.1
10°	1400.8	1413.4	1420.9	1428.5	1423.4	1433.5	1443.5	1443.5	1438.5	1443.5	1451.1
12.5°	1395.8	1408.3	1415.9	1423.4	1418.4	1431.0	1443.5	1441.0	1438.5	1443.5	1451.1
15°	1388.2	1400.8	1408.3	1415.9	1413.4	1425.9	1438.5	1438.5	1433.5	1441.0	1448.6
17.5°	1370.6	1383.2	1393.2	1398.3	1395.8	1408.3	1420.9	1420.9	1415.9	1423.4	1431.0
20°	1340.4	1353.0	1363.1	1368.1	1365.6	1375.6	1388.2	1390.7	1385.7	1393.2	1400.8
22.5°	1302.7	1312.8	1322.8	1327.9	1325.3	1335.4	1348.0	1350.5	1345.5	1353.0	1358.0
25°	1257.4	1265.0	1275.0	1280.1	1277.6	1287.6	1300.2	1300.2	1297.7	1302.7	1307.7
27.5°	1194.6	1204.6	1212.2	1217.2	1217.2	1224.7	1234.8	1237.3	1234.8	1239.8	1247.4
30°	1116.6	1121.6	1131.7	1134.2	1136.7	1144.3	1154.3	1154.3	1151.8	1156.8	1164.4
32.5°	1018.5	1026.1	1033.6	1036.1	1038.6	1046.2	1053.7	1056.2	1053.7	1058.8	1066.3
35°	902.8	910.4	917.9	920.4	923.0	930.5	938.1	940.6	938.1	943.1	950.6
37.5°	774.6	779.6	787.2	789.7	794.7	799.7	804.8	809.8	807.3	812.3	817.3
40°	643.8	646.3	653.9	656.4	661.4	666.4	671.5	674.0	674.0	676.5	679.0
42.5°	520.6	525.6	530.6	533.2	538.2	540.7	545.7	548.2	548.2	550.8	553.3
45°	415.0	420.0	425.0	427.5	432.6	435.1	437.6	440.1	437.6	437.6	442.6
47.5°	326.9	332.0	337.0	339.5	342.0	344.5	347.1	347.1	347.1	349.6	349.6
50°	256.5	259.0	264.1	264.1	269.1	269.1	271.6	271.6	271.6	271.6	274.1
52.5°	198.7	201.2	206.2	206.2	208.7	211.2	211.2	211.2	211.2	213.8	211.2
55°	150.9	153.4	155.9	155.9	161.0	161.0	161.0	161.0	161.0	161.0	161.0
57.5°	113.2	115.7	118.2	118.2	118.2	120.7	118.2	120.7	120.7	120.7	120.7
60°	83.0	85.5	85.5	85.5	88.0	88.0	88.0	88.0	88.0	88.0	88.0
62.5°	57.8	57.8	60.4	60.4	60.4	62.9	60.4	60.4	62.9	62.9	60.4
65°	40.2	40.2	42.8	42.8	42.8	42.8	42.8	42.8	42.8	42.8	42.8
67.5°	27.7	27.7	27.7	30.2	30.2	30.2	30.2	30.2	30.2	30.2	30.2
70°	20.1	20.1	20.1	20.1	20.1	20.1	20.1	20.1	20.1	20.1	20.1
72.5°	12.6	12.6	12.6	12.6	15.1	15.1	15.1	15.1	15.1	15.1	15.1
75°	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1
77.5°	5.0	5.0	7.5	7.5	7.5	5.0	5.0	5.0	7.5	7.5	5.0
80°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
82.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
85°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0.0	2.5	2.5	2.5
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: P136425

CATALOG NUMBER: LD6A20D010TE ERW6A20830 6LW111H

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1403.3	1403.3	1403.3	1403.3
2.5°	1410.8	1408.3	1410.8	1403.3
5°	1433.5	1431.0	1436.0	1425.9
7.5°	1448.6	1446.1	1451.1	1441.0
10°	1451.1	1451.1	1456.1	1446.1
12.5°	1451.1	1451.1	1456.1	1446.1
15°	1451.1	1448.6	1453.6	1443.5
17.5°	1433.5	1433.5	1438.5	1428.5
20°	1400.8	1400.8	1405.8	1398.3
22.5°	1360.6	1360.6	1363.1	1355.5
25°	1310.3	1307.7	1312.8	1307.7
27.5°	1247.4	1244.9	1247.4	1242.4
30°	1161.9	1159.4	1164.4	1159.4
32.5°	1066.3	1061.3	1066.3	1061.3
35°	948.1	943.1	948.1	945.6
37.5°	817.3	812.3	817.3	814.8
40°	679.0	676.5	681.5	679.0
42.5°	553.3	548.2	553.3	550.8
45°	442.6	437.6	442.6	440.1
47.5°	349.6	347.1	352.1	349.6
50°	274.1	271.6	274.1	274.1
52.5°	211.2	208.7	211.2	211.2
55°	161.0	158.4	161.0	161.0
57.5°	120.7	118.2	120.7	120.7
60°	88.0	88.0	88.0	88.0
62.5°	62.9	60.4	62.9	62.9
65°	42.8	42.8	42.8	42.8
67.5°	30.2	30.2	30.2	30.2
70°	20.1	20.1	20.1	20.1
72.5°	15.1	15.1	15.1	12.6
75°	10.1	10.1	10.1	10.1
77.5°	7.5	5.0	7.5	7.5
80°	5.0	5.0	5.0	5.0
82.5°	2.5	2.5	2.5	2.5
85°	2.5	2.5	2.5	2.5
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)