

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: PORTFOLIO

Report Number: P252581

Luminaire Tested: **LE\_6B20D010 EC6B10209727 6LBDW1LI**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P252581  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1712-453-8)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LE\_6B20D010 EC6B10209727 6LBDW1LI  
Description: PORTFOLIO 6 INCH DOUBLE WALLWASH RECESSED DOWNLIGHT, WITH SPECULAR CLEAR TRIM  
Light Source: (1) HIGH LUMEN LED 97CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1813.7 lumens  
Efficiency: N/A  
Efficacy: 87.2 lumens/watt  
Spacing Criteria (0/90/45): 1.11 / 1.22 / 1.15  
Luminous Opening: Circular (Dia: 0.46' x H: 0')  
CIE Type: Direct

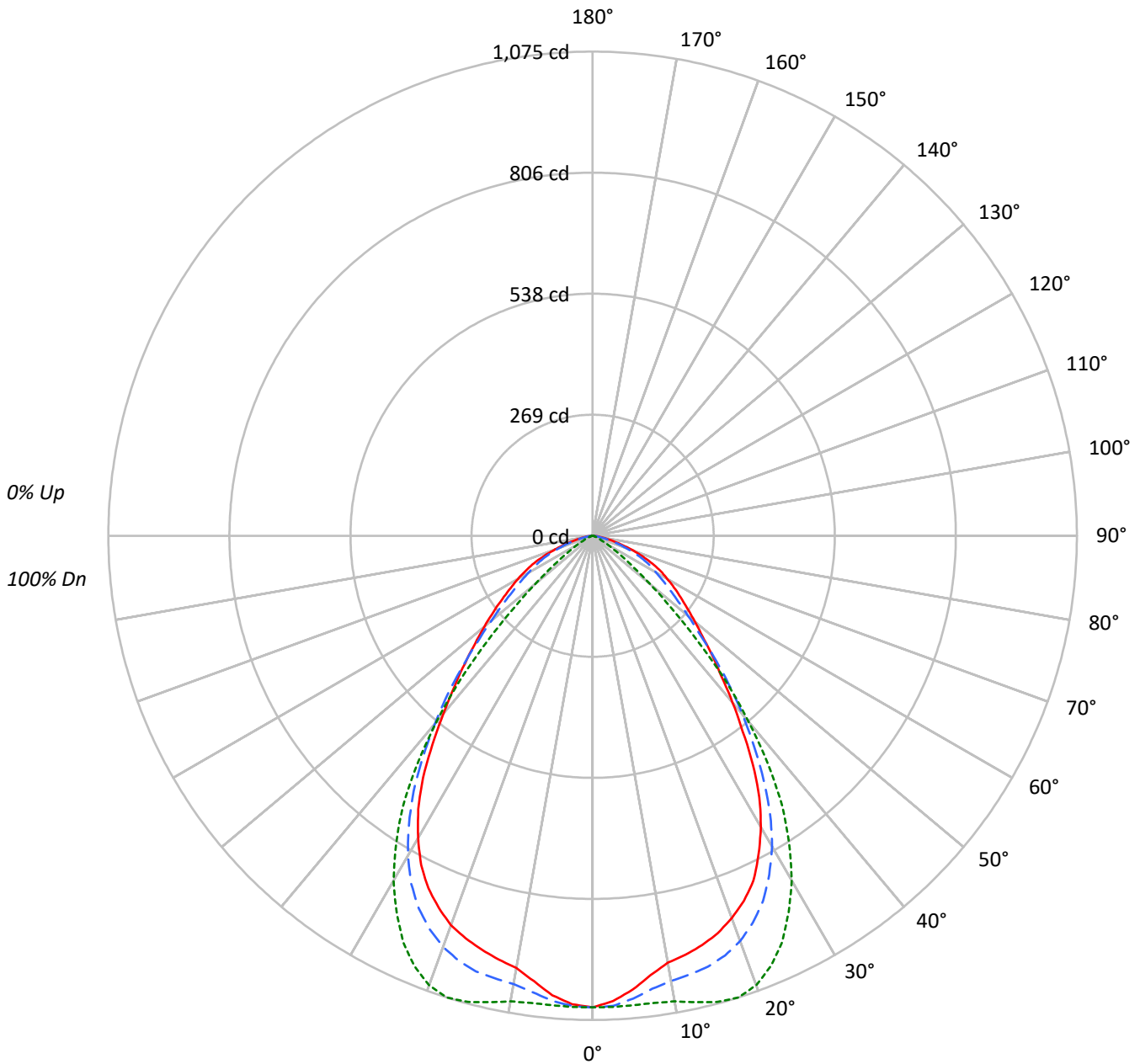
Input Watts (W): 20.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P252581

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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					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	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89								
2	104	97	92	87	101	95	91	86	92	88	84	89	86	83	86	83	81	79								
3	96	88	81	76	94	86	80	76	84	79	74	81	77	73	79	75	72	70								
4	90	80	73	67	88	79	72	67	76	70	66	74	69	65	72	68	64	62								
5	84	73	65	60	82	72	65	59	70	64	59	68	63	58	66	62	58	56								
6	78	67	59	54	76	66	59	53	64	58	53	63	57	53	61	56	52	50								
7	73	61	54	49	72	61	53	48	59	53	48	58	52	48	57	51	48	46								
8	69	57	49	44	67	56	49	44	55	48	44	54	48	44	53	47	43	42								
9	64	53	45	40	63	52	45	40	51	45	40	50	44	40	49	44	40	38								
10	61	49	42	37	60	48	42	37	48	41	37	47	41	37	46	41	37	35								

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	68313	68313	68313
5°	66276	68502	67068
10°	63756	69533	64558
15°	63530	72365	64266
20°	62700	73718	63873
25°	60827	71632	62130
30°	56274	66580	58368
35°	49371	58530	52254
40°	41135	45887	43818
45°	34618	30272	36979
50°	29982	16585	31819
55°	27128	8815	27810
60°	24948	4580	24948
65°	22616	2439	22060
70°	18236	1373	16862
75°	12503	907	11595
80°	8190	451	7289
85°	5390	898	4491



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CATALOG NUMBER: LE\_6B20D010 EC6B10209727 6LBDW1LI

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	97.6	5.4
10°-20°	282.4	15.6
20°-30°	417.2	23.0
30°-40°	421.4	23.2
40°-50°	290.4	16.0
50°-60°	166.8	9.2
60°-70°	97.1	5.4
70°-80°	35.4	2.0
80°-90°	5.4	0.3
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°	797.2	44.0
0°-40°	1218.6	67.2
0°-60°	1675.8	92.4
0°-90°	1813.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1813.7	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1047	1047	1047	1047	1047	
5°	1012	1031	1046	1036	1024	95
15°	941	990	1071	1001	952	265
25°	845	895	995	913	863	385
35°	620	662	735	692	656	385
45°	375	380	328	404	401	292
55°	238	209	78	218	244	215
65°	146	124	16	122	143	143
75°	50	40	4	39	46	56
85°	7	4	1	5	6	9
90°	0	0	0	0	0	



TEST NUMBER: P252581

CATALOG NUMBER: LE\_6B20D010 EC6B10209727 6LBDW1LI

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1
2.5°	1033.9	1035.0	1036.2	1035.0	1036.2	1041.1	1037.5	1039.9	1039.9	1041.1	1044.8
5°	1012.0	1012.0	1014.5	1013.2	1016.9	1021.8	1018.1	1021.8	1023.0	1025.4	1031.4
7.5°	984.2	984.2	985.4	985.4	990.2	995.1	992.8	997.5	1002.4	1007.2	1014.5
10°	962.4	964.9	964.9	966.0	970.9	977.0	975.8	981.8	986.6	993.9	1003.6
12.5°	952.8	954.0	954.0	956.4	961.2	967.2	966.0	972.1	979.4	987.9	997.5
15°	940.6	943.0	941.9	944.2	949.1	955.1	954.0	960.0	968.5	977.0	990.2
17.5°	924.9	926.1	927.4	927.4	932.1	937.0	937.0	943.0	952.8	962.4	977.0
20°	903.1	905.5	905.5	906.8	910.4	917.6	916.4	922.5	932.1	941.9	957.6
22.5°	877.6	878.9	878.9	880.1	886.1	889.8	891.0	895.9	904.4	915.2	929.8
25°	845.0	846.2	845.0	848.6	851.0	858.4	855.9	862.0	871.6	880.1	894.6
27.5°	797.8	800.2	800.2	801.4	807.5	813.5	813.5	819.6	828.0	834.1	848.6
30°	747.0	750.6	747.0	753.0	755.4	760.2	763.9	767.5	774.8	783.2	796.6
32.5°	688.9	687.6	688.9	691.2	698.5	702.1	704.6	708.2	715.5	722.8	733.6
35°	619.9	622.2	623.5	628.2	628.2	634.4	635.6	638.0	648.9	653.8	662.2
37.5°	547.2	549.6	550.9	553.2	558.1	560.5	564.1	567.8	575.0	583.5	588.4
40°	483.0	483.0	484.2	486.6	490.2	491.5	495.1	500.0	504.9	512.1	516.9
42.5°	422.5	423.8	422.5	424.9	428.5	433.4	432.1	438.2	439.5	444.2	447.9
45°	375.2	375.2	372.9	375.2	375.2	380.1	378.9	381.4	380.1	382.5	380.1
47.5°	330.5	331.8	330.5	331.8	331.8	331.8	332.9	330.5	331.8	328.1	320.8
50°	295.4	296.6	294.1	295.4	294.1	293.0	294.1	290.5	289.4	284.5	277.2
52.5°	265.1	263.9	262.8	262.8	262.8	261.5	260.2	256.6	253.0	248.1	239.8
55°	238.5	237.2	236.1	236.1	233.6	232.4	232.4	228.8	225.1	219.1	209.4
57.5°	214.2	213.1	211.9	211.9	210.6	208.2	208.2	204.6	199.8	192.5	184.0
60°	191.2	191.2	191.2	190.1	190.1	187.6	187.6	184.0	179.1	171.9	162.2
62.5°	170.8	169.5	169.5	169.5	169.5	168.2	167.1	164.6	159.8	152.5	144.0
65°	146.5	146.5	146.5	146.5	145.2	145.2	145.2	141.6	139.2	132.0	123.5
67.5°	119.9	119.9	119.9	119.9	118.6	119.9	119.9	117.4	115.0	107.8	100.5
70°	95.6	94.4	93.2	94.4	93.2	93.2	94.4	92.0	90.8	84.8	77.5
72.5°	70.2	71.4	70.2	70.2	70.2	69.0	70.2	69.0	66.6	61.8	56.9
75°	49.6	50.9	50.9	49.6	49.6	49.6	48.4	48.4	46.0	42.4	40.0
77.5°	33.9	33.9	33.9	33.9	32.6	32.6	32.6	31.5	30.2	27.9	25.4
80°	21.8	21.8	21.8	21.8	20.6	20.6	20.6	19.4	19.4	17.0	14.5
82.5°	13.4	13.4	13.4	13.4	13.4	13.4	12.1	12.1	10.9	9.6	8.5
85°	7.2	7.2	7.2	7.2	7.2	7.2	7.2	6.0	6.0	4.9	3.6
87.5°	2.4	2.4	3.6	3.6	3.6	3.6	3.6	3.6	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



TEST NUMBER: P252581

CATALOG NUMBER: LE\_6B20D010 EC6B10209727 6LBDW1LI

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1
2.5°	1042.4	1043.5	1043.5	1043.5	1047.1	1048.4	1044.8	1041.1	1048.4	1047.1	1049.6
5°	1030.2	1033.9	1036.2	1037.5	1041.1	1043.5	1039.9	1038.8	1044.8	1046.0	1047.1
7.5°	1015.8	1021.8	1027.8	1030.2	1035.0	1037.5	1036.2	1036.2	1043.5	1046.0	1046.0
10°	1006.0	1014.5	1021.8	1027.8	1033.9	1037.5	1037.5	1038.8	1047.1	1049.6	1052.0
12.5°	1003.6	1014.5	1024.1	1032.6	1037.5	1043.5	1044.8	1048.4	1056.9	1060.5	1060.5
15°	997.5	1012.0	1024.1	1035.0	1042.4	1049.6	1052.0	1059.2	1069.0	1071.4	1073.8
17.5°	986.6	1001.1	1015.8	1029.0	1038.8	1044.8	1052.0	1059.2	1071.4	1075.0	1076.2
20°	967.2	984.2	998.8	1012.0	1021.8	1030.2	1037.5	1046.0	1056.9	1061.8	1062.9
22.5°	938.2	955.1	969.8	984.2	993.9	1001.1	1008.4	1018.1	1029.0	1033.9	1033.9
25°	903.1	918.9	934.6	945.5	955.1	963.6	967.2	978.1	989.0	995.1	995.1
27.5°	858.4	872.9	887.4	899.5	905.5	912.8	918.9	928.5	937.0	941.9	946.8
30°	801.4	816.0	829.2	841.4	848.6	855.9	862.0	869.2	877.6	883.8	885.0
32.5°	739.6	751.8	765.1	777.2	784.5	786.9	793.0	800.2	807.5	812.2	813.5
35°	671.9	680.4	688.9	699.8	707.0	707.0	713.0	717.9	724.0	734.9	732.4
37.5°	592.0	604.1	610.1	613.8	618.6	623.5	624.6	630.8	638.0	640.4	644.0
40°	516.9	520.5	524.2	524.2	529.0	529.0	529.0	530.2	537.5	538.8	543.5
42.5°	441.9	441.9	438.2	434.6	435.9	434.6	428.5	428.5	432.1	437.0	437.0
45°	371.6	363.1	352.2	343.8	337.8	335.4	328.1	328.1	326.9	328.1	332.9
47.5°	312.4	297.8	279.6	262.8	256.6	251.8	240.9	236.1	233.6	234.9	237.2
50°	262.8	247.0	226.4	205.8	194.9	188.9	175.5	167.1	165.9	163.4	168.2
52.5°	226.4	207.0	185.2	161.0	150.1	140.4	125.9	118.6	113.8	113.8	115.0
55°	194.9	174.4	150.1	125.9	115.0	107.8	93.2	83.5	78.8	77.5	81.1
57.5°	168.2	148.9	124.8	100.5	89.6	81.1	66.6	58.1	54.5	52.0	53.2
60°	147.8	128.4	104.1	81.1	71.4	61.8	49.6	40.0	35.1	35.1	36.4
62.5°	128.4	110.1	88.4	66.6	58.1	49.6	36.4	27.9	24.2	23.0	24.2
65°	109.0	92.0	73.9	55.8	47.2	40.0	29.0	21.8	17.0	15.8	17.0
67.5°	88.4	75.0	59.4	44.8	37.5	31.5	21.8	15.8	12.1	10.9	12.1
70°	69.0	56.9	44.8	32.6	27.9	23.0	15.8	12.1	8.5	7.2	8.5
72.5°	49.6	41.1	31.5	23.0	19.4	15.8	10.9	8.5	6.0	4.9	6.0
75°	33.9	27.9	20.6	14.5	12.1	10.9	7.2	4.9	3.6	3.6	3.6
77.5°	21.8	17.0	13.4	9.6	7.2	6.0	3.6	2.4	2.4	2.4	2.4
80°	12.1	9.6	7.2	4.9	3.6	3.6	2.4	2.4	1.2	1.2	1.2
82.5°	7.2	4.9	3.6	2.4	2.4	1.2	1.2	1.2	1.2	1.2	1.2
85°	3.6	2.4	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
87.5°	1.2	1.2	1.2	1.2	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: P252581

CATALOG NUMBER: LE\_6B20D010 EC6B10209727 6LBDW1LI

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1
2.5°	1044.8	1046.0	1042.4	1047.1	1043.5	1048.4	1048.4	1043.5	1044.8	1042.4	1047.1
5°	1042.4	1042.4	1039.9	1043.5	1038.8	1043.5	1042.4	1033.9	1036.2	1031.4	1036.2
7.5°	1042.4	1039.9	1036.2	1039.9	1033.9	1037.5	1032.6	1024.1	1021.8	1015.8	1015.8
10°	1046.0	1042.4	1037.5	1038.8	1032.6	1033.9	1026.6	1014.5	1010.9	1003.6	1001.1
12.5°	1054.4	1050.8	1043.5	1046.0	1037.5	1037.5	1027.8	1013.2	1006.0	996.4	993.9
15°	1066.5	1060.5	1052.0	1053.2	1044.8	1039.9	1027.8	1010.9	1001.1	987.9	984.2
17.5°	1069.0	1062.9	1052.0	1052.0	1041.1	1035.0	1020.5	1001.1	989.0	975.8	968.5
20°	1055.6	1049.6	1037.5	1036.2	1026.6	1018.1	1002.4	983.0	970.9	956.4	950.4
22.5°	1027.8	1020.5	1009.6	1008.4	998.8	993.9	977.0	957.6	945.5	931.0	926.1
25°	986.6	983.0	972.1	970.9	962.4	956.4	941.9	923.6	912.8	898.2	893.4
27.5°	938.2	934.6	923.6	923.6	914.0	910.4	897.0	880.1	871.6	858.4	852.2
30°	880.1	875.2	869.2	868.0	859.5	855.9	843.8	828.0	819.6	808.6	806.2
32.5°	811.1	807.5	803.9	802.6	794.1	790.5	782.0	766.2	759.0	749.4	745.8
35°	731.2	728.8	725.1	724.0	720.2	716.6	708.2	696.1	692.5	685.2	681.6
37.5°	639.2	641.6	639.2	639.2	635.6	636.8	629.5	622.2	618.6	613.8	611.4
40°	539.9	544.8	548.4	548.4	547.2	552.0	550.9	544.8	543.5	541.1	539.9
42.5°	439.5	441.9	449.1	454.0	452.8	464.9	466.1	470.9	474.5	472.1	473.4
45°	334.1	341.4	351.1	355.9	362.0	377.8	386.1	395.9	404.4	409.1	408.0
47.5°	240.9	249.4	260.2	267.5	278.5	297.8	319.6	331.8	343.8	349.9	355.9
50°	174.4	182.8	196.1	207.0	214.2	240.9	263.9	279.6	293.0	301.5	307.5
52.5°	122.2	132.0	146.5	156.1	167.1	192.5	219.1	237.2	251.8	262.8	268.8
55°	84.8	95.6	109.0	118.6	130.8	157.4	182.8	202.1	217.9	227.6	234.9
57.5°	59.4	69.0	82.4	90.8	102.9	128.4	153.8	173.1	188.9	198.5	207.0
60°	40.0	49.6	63.0	71.4	81.1	106.5	129.5	150.1	164.6	174.4	182.8
62.5°	27.9	36.4	49.6	58.1	66.6	88.4	110.1	128.4	142.9	153.8	161.0
65°	21.8	29.0	40.0	47.2	55.8	73.9	92.0	107.8	122.2	133.1	138.0
67.5°	15.8	23.0	31.5	37.5	43.6	59.4	75.0	87.1	100.5	109.0	115.0
70°	10.9	15.8	23.0	27.9	32.6	44.8	56.9	67.8	77.5	83.5	88.4
72.5°	8.5	10.9	15.8	19.4	23.0	31.5	41.1	49.6	56.9	61.8	66.6
75°	4.9	7.2	10.9	13.4	15.8	21.8	27.9	33.9	38.8	42.4	44.8
77.5°	2.4	3.6	6.0	7.2	9.6	13.4	18.1	21.8	25.4	27.9	30.2
80°	2.4	2.4	3.6	3.6	4.9	7.2	9.6	12.1	14.5	17.0	18.1
82.5°	1.2	1.2	2.4	2.4	2.4	3.6	4.9	7.2	8.5	9.6	10.9
85°	1.2	1.2	1.2	1.2	1.2	2.4	2.4	3.6	4.9	6.0	6.0
87.5°	0.0	0.0	1.2	1.2	1.2	1.2	1.2	2.4	2.4	2.4	3.6
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: P252581

CATALOG NUMBER: LE\_6B20D010 EC6B10209727 6LBDW1LI

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1
2.5°	1043.5	1046.0	1044.8	1047.1	1043.5	1042.4	1044.8	1041.1
5°	1030.2	1031.4	1030.2	1030.2	1027.8	1025.4	1027.8	1024.1
7.5°	1009.6	1009.6	1006.0	1006.0	1001.1	998.8	998.8	997.5
10°	992.8	989.0	985.4	986.6	979.4	977.0	975.8	974.5
12.5°	984.2	981.8	975.8	975.8	968.5	966.0	964.9	963.6
15°	974.5	969.8	964.9	963.6	957.6	955.1	954.0	951.5
17.5°	957.6	954.0	947.9	947.9	941.9	940.6	938.2	937.0
20°	939.4	934.6	929.8	929.8	922.5	922.5	918.9	920.0
22.5°	914.0	910.4	905.5	905.5	899.5	898.2	894.6	893.4
25°	883.8	878.9	875.2	874.0	869.2	866.8	865.6	863.1
27.5°	843.8	840.1	836.5	834.1	828.0	826.9	823.2	824.4
30°	794.1	791.8	790.5	788.1	780.9	778.4	778.4	774.8
32.5°	739.6	736.0	733.6	730.0	724.0	722.8	719.1	720.2
35°	673.1	668.2	664.6	665.9	658.6	657.4	654.9	656.1
37.5°	604.1	599.2	594.4	593.2	587.1	587.1	583.5	583.5
40°	532.6	527.9	525.4	525.4	518.1	519.4	515.8	514.5
42.5°	468.5	463.6	462.5	461.2	457.6	456.4	452.8	454.0
45°	408.0	406.8	406.8	404.4	400.8	399.5	400.8	400.8
47.5°	354.8	355.9	354.8	354.8	352.2	354.8	352.2	353.5
50°	309.9	312.4	312.4	312.4	311.1	312.4	312.4	313.5
52.5°	272.4	276.0	274.8	276.0	274.8	277.2	276.0	277.2
55°	239.8	242.1	243.4	244.5	244.5	244.5	244.5	244.5
57.5°	209.4	213.1	214.2	215.5	215.5	217.9	215.5	215.5
60°	185.2	188.9	190.1	191.2	191.2	192.5	190.1	191.2
62.5°	163.4	167.1	167.1	168.2	168.2	168.2	165.9	167.1
65°	141.6	142.9	144.0	144.0	142.9	142.9	141.6	142.9
67.5°	117.4	118.6	117.4	117.4	116.2	116.2	113.8	115.0
70°	90.8	90.8	92.0	90.8	89.6	90.8	89.6	88.4
72.5°	67.8	67.8	67.8	66.6	66.6	65.4	66.6	66.6
75°	46.0	46.0	47.2	47.2	47.2	47.2	46.0	46.0
77.5°	30.2	30.2	30.2	30.2	31.5	30.2	30.2	30.2
80°	19.4	19.4	20.6	20.6	19.4	19.4	19.4	19.4
82.5°	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1
85°	7.2	7.2	7.2	7.2	6.0	6.0	6.0	6.0
87.5°	3.6	3.6	3.6	3.6	3.6	3.6	2.4	2.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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















(END OF REPORT)