

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: P252683

Luminaire Tested: **LE\_6B20D010 EC6B10209040 6LBDW1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P252683  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1712-453-9)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LE\_6B20D010 EC6B10209040 6LBDW1H  
Description: PORTFOLIO 6 INCH DOUBLE WALLWASH RECESSED DOWNLIGHT, WITH HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2063.7 lumens  
Efficiency: N/A  
Efficacy: 99.2 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.25 / 1.21  
Luminous Opening: Circular (Dia: 0.46' x H: 0')  
CIE Type: Direct

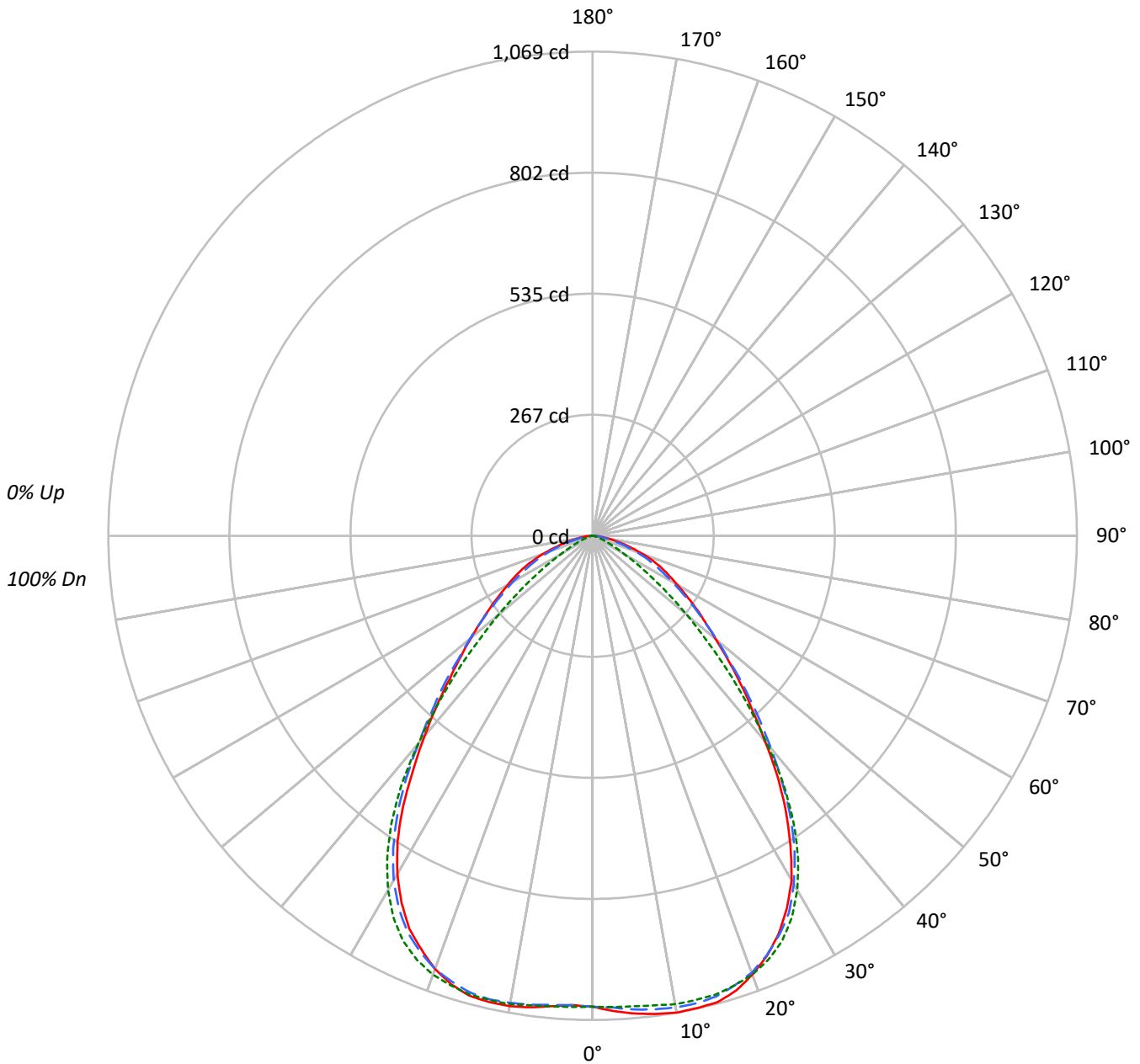
Input Watts (W): 20.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**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	104	101	109	105	102	99	101	98	96	97	95	93	94	92	91	89																			
2	103	96	91	86	101	95	89	85	91	87	83	88	84	81	85	82	80	78																			
3	95	87	80	75	93	85	79	74	82	77	73	80	75	71	77	74	70	68																			
4	89	78	71	65	87	77	70	65	75	69	64	73	67	63	71	66	62	61																			
5	82	71	64	58	80	70	63	58	68	62	57	66	61	56	65	60	56	54																			
6	77	65	57	52	75	64	57	51	63	56	51	61	55	51	59	54	50	48																			
7	72	60	52	47	70	59	52	46	58	51	46	56	50	46	55	50	45	44																			
8	67	55	47	42	66	54	47	42	53	47	42	52	46	42	51	45	41	40																			
9	63	51	43	38	62	50	43	38	49	43	38	48	42	38	47	42	38	36																			
10	59	47	40	35	58	47	40	35	46	39	35	45	39	35	44	39	35	33																			

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

	0°	90°	180°
0°	67837	67837	67837
5°	69347	68293	68293
10°	70825	69559	69858
15°	72013	70825	71020
20°	71573	71573	70663
25°	69869	71136	68919
30°	66143	68026	64922
35°	59263	61613	58100
40°	50350	50972	49098
45°	42608	38945	41113
50°	35970	27465	35524
55°	31621	17733	31279
60°	28027	10556	28210
65°	25873	6345	25873
70°	22432	3643	21898
75°	17796	2243	16662
80°	13225	1653	12736
85°	12052	1123	11079



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	100.1	4.9
10°-20°	296.3	14.4
20°-30°	445.6	21.6
30°-40°	468.5	22.7
40°-50°	350.0	17.0
50°-60°	217.9	10.6
60°-70°	123.9	6.0
70°-80°	51.0	2.5
80°-90°	10.6	0.5
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°	841.9	40.8
0°-40°	1310.4	63.5
0°-60°	1878.3	91.0
0°-90°	2063.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2063.7	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1040	1040	1040	1040	1040	
5°	1059	1050	1043	1040	1043	101
15°	1066	1053	1049	1044	1052	300
25°	971	974	988	966	957	444
35°	744	763	774	752	730	462
45°	462	472	422	463	446	358
55°	278	272	156	268	275	250
65°	168	150	41	150	168	165
75°	71	56	9	54	66	77
85°	16	10	2	9	15	18
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1039.8	1039.8	1039.8	1039.8	1039.8	1039.8	1039.8	1039.8	1039.8	1039.8	1039.8
2.5°	1050.0	1048.6	1050.0	1047.1	1045.6	1045.6	1047.1	1044.1	1042.8	1044.1	1042.8
5°	1058.9	1056.0	1057.4	1056.0	1053.0	1053.0	1054.5	1050.0	1050.0	1051.5	1050.0
7.5°	1064.8	1064.8	1064.8	1061.9	1060.4	1058.9	1061.9	1057.4	1056.0	1056.0	1054.5
10°	1069.1	1067.8	1069.1	1066.2	1063.2	1061.9	1064.8	1061.9	1058.9	1061.9	1057.4
12.5°	1067.8	1067.8	1067.8	1066.2	1063.2	1061.9	1064.8	1060.4	1058.9	1060.4	1057.4
15°	1066.2	1061.9	1063.2	1061.9	1057.4	1057.4	1058.9	1054.5	1051.5	1056.0	1053.0
17.5°	1053.0	1050.0	1051.5	1048.6	1045.6	1044.1	1045.6	1044.1	1041.2	1044.1	1041.2
20°	1030.9	1030.9	1032.4	1029.5	1026.5	1025.0	1028.0	1025.0	1022.1	1026.5	1026.5
22.5°	1004.5	1004.5	1004.5	1003.0	1001.5	1001.5	1001.5	1000.0	998.6	1001.5	1003.0
25°	970.6	969.1	970.6	972.1	970.6	969.1	970.6	970.6	967.8	973.6	973.6
27.5°	928.0	928.0	930.9	929.5	929.5	928.0	930.9	930.9	929.5	933.9	938.2
30°	878.0	875.0	878.0	878.0	879.5	879.5	880.9	880.9	880.9	885.4	888.2
32.5°	813.2	814.8	819.1	817.8	816.2	820.6	820.6	823.6	825.0	828.0	829.5
35°	744.1	745.6	745.6	747.1	750.0	747.1	754.5	753.0	754.5	760.4	763.2
37.5°	670.6	666.2	673.6	670.6	672.1	672.1	675.0	676.5	680.9	688.2	688.2
40°	591.2	592.6	595.6	597.1	598.5	598.5	598.5	603.0	604.5	613.2	611.8
42.5°	522.1	522.1	525.0	526.5	526.5	526.5	526.5	530.9	533.9	536.8	539.8
45°	461.8	457.4	460.4	460.4	463.2	461.8	464.8	467.6	469.1	473.5	472.1
47.5°	404.4	403.0	404.4	405.9	404.4	405.9	407.4	408.9	410.4	410.4	410.4
50°	354.4	354.4	355.9	357.4	357.4	357.4	357.4	358.9	358.9	361.8	358.9
52.5°	313.2	314.8	314.8	313.2	314.8	314.8	316.2	316.2	314.8	314.8	310.2
55°	278.0	276.5	278.0	276.5	278.0	278.0	276.5	276.5	275.0	273.5	272.1
57.5°	244.1	244.1	244.1	244.1	242.6	244.1	242.6	241.2	241.2	238.2	233.9
60°	214.8	214.8	214.8	214.8	214.8	213.2	214.8	213.2	210.2	207.4	201.5
62.5°	189.8	188.2	189.8	188.2	188.2	186.8	186.8	185.2	182.4	179.4	173.5
65°	167.6	169.1	167.6	167.6	166.1	164.8	164.8	163.2	158.9	155.9	150.0
67.5°	144.1	142.6	142.6	142.6	141.1	141.1	141.1	138.2	135.2	130.9	125.0
70°	117.6	117.6	117.6	116.1	116.1	114.8	114.8	113.2	110.2	107.4	100.0
72.5°	92.6	92.6	92.6	89.8	91.1	89.8	89.8	86.8	85.2	80.9	76.5
75°	70.6	70.6	69.1	69.1	67.6	66.1	66.1	64.8	63.2	60.2	55.9
77.5°	51.5	51.5	51.5	50.0	48.5	47.0	47.0	45.6	44.1	42.6	39.8
80°	35.2	35.2	35.2	35.2	33.9	32.4	32.4	30.9	30.9	29.4	26.5
82.5°	23.5	23.5	23.5	23.5	22.0	22.0	22.0	20.6	19.1	19.1	16.1
85°	16.1	16.1	14.8	14.8	14.8	14.8	13.2	13.2	11.8	10.2	10.2
87.5°	8.9	8.9	8.9	8.9	7.4	7.4	7.4	7.4	5.9	5.9	4.4
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):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1039.8	1039.8	1039.8	1039.8	1039.8	1039.8	1039.8	1039.8	1039.8	1039.8	1039.8
2.5°	1047.1	1047.1	1045.6	1041.2	1042.8	1041.2	1042.8	1041.2	1036.9	1041.2	1036.9
5°	1053.0	1054.5	1051.5	1045.6	1047.1	1045.6	1045.6	1044.1	1039.8	1042.8	1039.8
7.5°	1058.9	1057.4	1056.0	1050.0	1051.5	1050.0	1050.0	1047.1	1042.8	1045.6	1041.2
10°	1061.9	1061.9	1058.9	1053.0	1053.0	1051.5	1053.0	1051.5	1045.6	1050.0	1047.1
12.5°	1061.9	1060.4	1060.4	1053.0	1054.5	1053.0	1054.5	1051.5	1047.1	1050.0	1048.6
15°	1057.4	1057.4	1056.0	1048.6	1050.0	1050.0	1051.5	1048.6	1044.1	1048.6	1045.6
17.5°	1048.6	1048.6	1047.1	1041.2	1044.1	1044.1	1045.6	1042.8	1038.2	1041.2	1041.2
20°	1030.9	1032.4	1032.4	1028.0	1030.9	1030.9	1032.4	1030.9	1029.5	1030.9	1028.0
22.5°	1010.4	1013.2	1013.2	1008.9	1011.9	1011.9	1016.2	1014.8	1011.9	1013.2	1011.9
25°	979.5	982.4	985.4	982.4	985.4	985.4	989.8	988.2	985.4	988.2	983.9
27.5°	944.1	945.6	948.6	945.6	950.0	948.6	953.0	951.5	947.1	951.5	950.0
30°	894.1	900.0	904.5	900.0	904.5	904.5	907.4	905.9	904.5	903.0	903.0
32.5°	838.2	844.1	844.1	842.8	845.6	845.6	847.1	844.1	842.8	844.1	845.6
35°	769.1	772.1	775.0	773.6	775.0	776.5	775.0	776.5	772.1	773.6	773.6
37.5°	694.1	697.1	697.1	692.6	695.6	695.6	692.6	692.6	689.8	692.6	686.8
40°	614.8	611.8	613.2	610.4	607.4	607.4	605.9	600.0	597.1	598.5	600.0
42.5°	536.8	536.8	532.4	525.0	517.6	517.6	513.2	510.4	504.5	507.4	505.9
45°	470.6	463.2	457.4	445.6	441.2	438.2	430.9	423.5	420.6	422.1	420.6
47.5°	407.4	401.5	386.8	370.6	366.2	361.8	353.0	344.1	341.2	338.2	338.2
50°	354.4	344.1	328.0	310.2	303.0	295.6	283.9	275.0	269.1	270.6	270.6
52.5°	305.9	294.1	275.0	253.0	244.1	235.2	225.0	214.8	210.2	208.9	208.9
55°	263.2	250.0	230.9	205.9	198.5	188.2	175.0	163.2	157.4	155.9	158.9
57.5°	225.0	213.2	191.1	166.1	157.4	147.1	133.9	123.5	116.1	114.8	116.1
60°	194.1	178.0	158.9	135.2	123.5	114.8	100.0	91.1	83.9	80.9	82.4
62.5°	163.2	148.5	129.4	105.9	97.1	88.2	75.0	64.8	58.9	57.4	58.9
65°	139.8	125.0	107.4	86.8	78.0	69.1	57.4	47.0	42.6	41.1	42.6
67.5°	116.1	103.0	88.2	69.1	61.8	54.4	42.6	35.2	29.4	28.0	29.4
70°	94.1	82.4	67.6	54.4	47.0	41.1	32.4	25.0	20.6	19.1	20.6
72.5°	70.6	61.8	51.5	39.8	35.2	30.9	23.5	17.6	14.8	13.2	14.8
75°	51.5	44.1	36.8	28.0	25.0	22.0	16.1	11.8	10.2	8.9	10.2
77.5°	35.2	30.9	25.0	19.1	16.1	14.8	10.2	8.9	7.4	5.9	5.9
80°	23.5	20.6	16.1	13.2	11.8	10.2	7.4	5.9	4.4	4.4	4.4
82.5°	14.8	11.8	10.2	7.4	5.9	5.9	4.4	3.0	3.0	3.0	3.0
85°	8.9	7.4	5.9	4.4	3.0	3.0	1.5	1.5	1.5	1.5	1.5
87.5°	4.4	3.0	3.0	1.5	1.5	1.5	1.5	1.5	0.0	0.0	1.5
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):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1039.8	1039.8	1039.8	1039.8	1039.8	1039.8	1039.8	1039.8	1039.8	1039.8	1039.8
2.5°	1039.8	1036.9	1036.9	1038.2	1039.8	1041.2	1038.2	1036.9	1036.9	1041.2	1038.2
5°	1039.8	1038.2	1038.2	1038.2	1041.2	1042.8	1039.8	1038.2	1039.8	1044.1	1042.8
7.5°	1044.1	1041.2	1042.8	1042.8	1044.1	1047.1	1044.1	1042.8	1044.1	1048.6	1045.6
10°	1047.1	1044.1	1045.6	1044.1	1048.6	1050.0	1047.1	1045.6	1047.1	1053.0	1051.5
12.5°	1048.6	1047.1	1047.1	1045.6	1050.0	1051.5	1048.6	1047.1	1048.6	1053.0	1051.5
15°	1045.6	1044.1	1044.1	1044.1	1047.1	1050.0	1045.6	1044.1	1044.1	1048.6	1047.1
17.5°	1039.8	1036.9	1036.9	1036.9	1038.2	1039.8	1035.4	1033.9	1032.4	1036.9	1035.4
20°	1029.5	1026.5	1023.6	1023.6	1025.0	1025.0	1022.1	1017.8	1017.8	1019.1	1016.2
22.5°	1010.4	1008.9	1005.9	1004.5	1007.4	1005.9	1000.0	995.6	994.1	995.6	992.8
25°	983.9	980.9	979.5	978.0	979.5	978.0	972.1	966.2	966.2	966.2	961.9
27.5°	947.1	944.1	942.8	942.8	944.1	941.2	935.4	929.5	926.5	926.5	922.1
30°	900.0	900.0	898.6	897.1	895.6	895.6	886.8	880.9	878.0	879.5	876.5
32.5°	842.8	841.2	839.8	835.4	836.8	835.4	828.0	823.6	819.1	816.2	814.8
35°	769.1	769.1	767.8	767.8	767.8	766.2	758.9	754.5	751.5	750.0	745.6
37.5°	688.2	686.8	685.4	685.4	685.4	685.4	680.9	676.5	676.5	675.0	672.1
40°	597.1	598.5	600.0	598.5	603.0	607.4	601.5	598.5	597.1	601.5	595.6
42.5°	508.9	507.4	514.8	516.2	516.2	523.5	525.0	526.5	525.0	528.0	528.0
45°	423.5	422.1	429.4	432.4	439.8	448.5	453.0	460.4	463.2	466.2	463.2
47.5°	342.6	348.5	354.4	361.8	367.6	382.4	391.2	398.5	401.5	405.9	405.9
50°	275.0	280.9	291.2	297.1	304.4	322.1	336.8	347.1	353.0	357.4	355.9
52.5°	211.8	222.1	235.2	241.2	251.5	272.1	288.2	300.0	307.4	311.8	313.2
55°	163.2	172.1	185.2	194.1	204.4	226.5	247.1	260.2	267.6	273.5	276.5
57.5°	120.6	130.9	145.6	153.0	164.8	189.8	207.4	223.5	232.4	239.8	241.2
60°	88.2	98.5	111.8	120.6	132.4	157.4	178.0	192.6	203.0	208.9	211.8
62.5°	63.2	73.5	86.8	95.6	105.9	128.0	148.5	163.2	173.5	180.9	185.2
65°	45.6	55.9	69.1	76.5	85.2	105.9	125.0	139.8	150.0	158.9	161.8
67.5°	33.9	41.1	53.0	60.2	69.1	85.2	101.5	114.8	125.0	132.4	135.2
70°	25.0	30.9	41.1	45.6	51.5	66.1	79.4	91.1	100.0	105.9	108.9
72.5°	17.6	22.0	29.4	33.9	38.2	50.0	60.2	69.1	75.0	80.9	83.9
75°	11.8	14.8	20.6	23.5	26.5	35.2	42.6	50.0	54.4	58.9	60.2
77.5°	7.4	10.2	14.8	16.1	19.1	23.5	29.4	33.9	36.8	39.8	42.6
80°	4.4	5.9	8.9	10.2	11.8	16.1	19.1	22.0	25.0	28.0	29.4
82.5°	3.0	4.4	5.9	5.9	7.4	8.9	11.8	14.8	16.1	17.6	19.1
85°	1.5	1.5	3.0	3.0	4.4	4.4	5.9	7.4	8.9	10.2	11.8
87.5°	1.5	1.5	1.5	1.5	3.0	3.0	4.4	4.4	4.4	5.9	5.9
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: P252683

CATALOG NUMBER: LE\_6B20D010 EC6B10209040 6LBDW1H

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1039.8	1039.8	1039.8	1039.8	1039.8	1039.8	1039.8	1039.8
2.5°	1035.4	1039.8	1035.4	1038.2	1036.9	1036.9	1035.4	1036.9
5°	1039.8	1045.6	1039.8	1044.1	1041.2	1041.2	1041.2	1042.8
7.5°	1044.1	1050.0	1045.6	1050.0	1048.6	1047.1	1047.1	1050.0
10°	1048.6	1053.0	1050.0	1054.5	1053.0	1051.5	1051.5	1054.5
12.5°	1048.6	1054.5	1051.5	1056.0	1054.5	1053.0	1053.0	1054.5
15°	1044.1	1051.5	1047.1	1051.5	1050.0	1048.6	1048.6	1051.5
17.5°	1030.9	1036.9	1033.9	1036.9	1036.9	1035.4	1036.9	1038.2
20°	1013.2	1017.8	1014.8	1017.8	1017.8	1014.8	1016.2	1017.8
22.5°	988.2	992.8	989.8	992.8	991.2	989.8	989.8	988.2
25°	957.4	963.2	958.9	961.9	958.9	955.9	955.9	957.4
27.5°	919.1	923.6	917.8	920.6	917.8	914.8	914.8	913.2
30°	869.1	870.6	866.2	869.1	866.2	864.8	861.8	861.8
32.5°	808.9	810.4	805.9	805.9	803.0	803.0	797.1	801.5
35°	738.2	739.8	738.2	736.8	732.4	730.9	729.5	729.5
37.5°	664.8	664.8	660.4	658.9	655.9	653.0	654.5	650.0
40°	589.8	588.2	583.9	585.4	583.9	579.5	578.0	576.5
42.5°	519.1	519.1	514.8	516.2	513.2	511.8	507.4	508.9
45°	457.4	457.4	453.0	453.0	451.5	447.1	448.5	445.6
47.5°	401.5	401.5	400.0	400.0	395.6	394.1	394.1	394.1
50°	353.0	353.0	353.0	353.0	351.5	350.0	348.5	350.0
52.5°	311.8	314.8	313.2	313.2	311.8	310.2	308.9	308.9
55°	275.0	276.5	276.5	278.0	276.5	275.0	276.5	275.0
57.5°	242.6	245.6	245.6	245.6	245.6	245.6	244.1	242.6
60°	214.8	216.2	216.2	217.6	217.6	217.6	216.2	216.2
62.5°	186.8	189.8	191.1	191.1	192.6	191.1	191.1	191.1
65°	164.8	167.6	169.1	167.6	169.1	169.1	167.6	167.6
67.5°	138.2	141.1	141.1	141.1	141.1	142.6	141.1	141.1
70°	111.8	114.8	113.2	114.8	114.8	114.8	114.8	114.8
72.5°	85.2	86.8	88.2	88.2	89.8	88.2	88.2	88.2
75°	61.8	64.8	64.8	64.8	64.8	66.1	66.1	66.1
77.5°	44.1	45.6	45.6	47.0	47.0	47.0	47.0	48.5
80°	30.9	30.9	32.4	32.4	33.9	33.9	33.9	33.9
82.5°	20.6	22.0	22.0	22.0	22.0	22.0	22.0	22.0
85°	11.8	13.2	13.2	13.2	13.2	14.8	14.8	14.8
87.5°	7.4	7.4	7.4	7.4	7.4	7.4	5.9	5.9
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)