

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: P135527

Luminaire Tested: **LD6A10D010TE ERM6A10940 6LM111LI**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P135527  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P23399)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LD6A10D010TE ERM6A10940 6LM111LI  
Description: PORTFOLIO 6 INCH 50 DEGREE CUTOFF RECESSED SINGLE WALL WASH LUMINAIRE  
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: 1128.2 lumens  
Efficiency: N/A  
Efficacy: 80.6 lumens/watt  
Spacing Criteria (0/90/45): 0.85 / 0.93 / 0.89  
Luminous Opening: Circular (Dia: 0.46' x H: 0')  
CIE Type: Direct

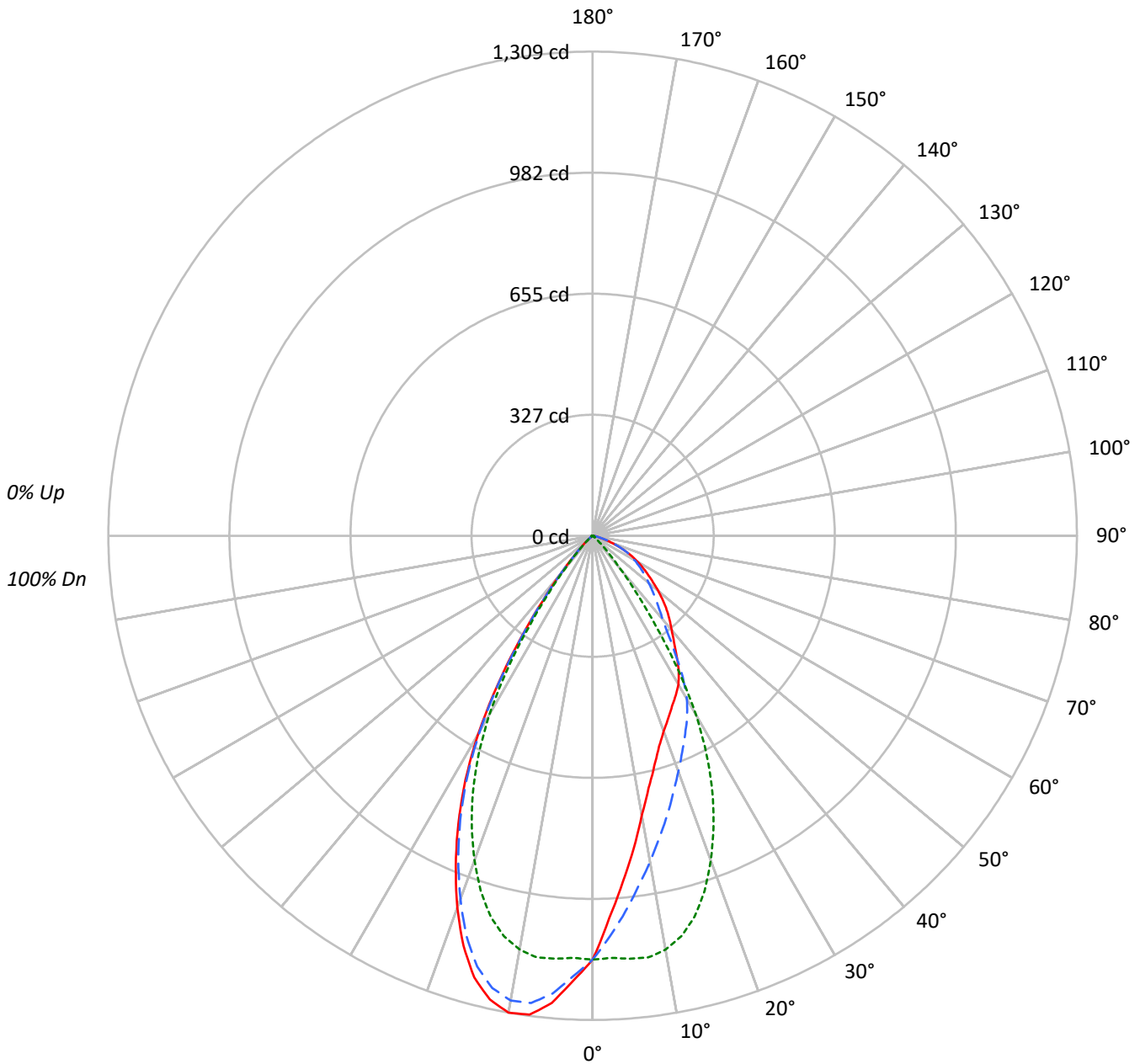
Input Watts (W): 14  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	113	110	107	104	110	107	105	103	103	101	100	100	98	97	96	95	94	92																			
2	106	101	96	93	104	99	95	91	96	92	89	93	90	88	90	88	86	84																			
3	100	93	87	83	98	92	86	82	89	85	81	86	83	80	84	81	78	77																			
4	95	86	80	75	93	85	79	75	83	78	74	81	76	73	79	75	72	71																			
5	89	80	74	69	88	79	73	69	77	72	68	75	71	67	74	70	67	65																			
6	84	75	68	63	83	74	68	63	72	67	63	71	66	62	69	65	62	60																			
7	80	70	63	59	78	69	63	59	68	62	58	67	62	58	65	61	58	56																			
8	76	65	59	55	74	65	59	54	64	58	54	63	58	54	62	57	54	52																			
9	72	62	55	51	71	61	55	51	60	55	51	59	54	50	58	54	50	49																			
10	68	58	52	48	67	58	52	48	57	51	48	56	51	47	55	51	47	46																			

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

	0°	90°	180°
0°	74766	74766	74766
5°	61436	75156	83028
10°	50785	75250	86717
15°	43504	71953	83489
20°	39004	64804	74239
25°	36583	55184	61886
30°	34955	42089	46594
35°	31515	23853	27007
40°	28283	9717	11429
45°	26129	3358	3866
50°	23466	1188	1259
55°	20735	705	614
60°	18333	613	509
65°	15098	479	355
70°	10072	439	305
75°	5495	403	176
80°	2931	864	0
85°	1198	1198	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	106.7	9.5
10°-20°	277.6	24.6
20°-30°	327.9	29.1
30°-40°	218.5	19.4
40°-50°	94.8	8.4
50°-60°	56.9	5.0
60°-70°	34.1	3.0
70°-80°	10.5	0.9
80°-90°	1.3	0.1
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°	712.2	63.1
0°-40°	930.7	82.5
0°-60°	1082.3	95.9
0°-90°	1128.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1128.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1146	1146	1146	1146	1146	
5°	938	1020	1148	1242	1268	85
15°	644	781	1065	1206	1236	182
25°	508	591	767	847	860	235
35°	396	390	300	333	339	248
45°	283	240	36	42	42	218
55°	182	162	6	5	5	164
65°	98	97	3	2	2	96
75°	22	24	2	1	1	26
85°	2	2	2	0	0	3
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°	1146.0	1146.0	1146.0	1146.0	1146.0	1146.0	1146.0	1146.0	1146.0	1146.0	1146.0
2.5°	1034.3	1052.2	1059.9	1065.3	1045.1	1066.9	1059.9	1070.0	1073.1	1083.2	1092.5
5°	938.1	955.2	963.7	970.0	954.4	979.2	978.5	991.6	1002.5	1019.6	1031.2
7.5°	852.0	859.7	868.2	876.8	869.8	892.3	896.2	914.8	931.1	954.4	976.1
10°	766.6	774.4	783.0	792.2	789.1	811.6	820.1	841.1	862.8	893.9	917.2
12.5°	698.3	706.1	713.8	723.2	721.6	744.1	755.0	777.5	803.9	834.9	861.3
15°	644.1	651.0	658.8	665.0	666.6	687.5	699.1	720.8	748.8	780.6	807.7
17.5°	596.7	604.4	611.5	616.9	618.5	637.8	649.5	668.9	696.0	726.3	752.7
20°	561.8	568.8	574.9	580.4	580.4	597.4	607.5	625.4	649.5	677.4	699.9
22.5°	533.8	540.1	545.5	550.2	550.2	564.8	573.4	588.2	609.1	632.4	651.0
25°	508.2	514.4	519.1	523.0	522.3	536.2	543.2	554.0	571.8	591.3	605.2
27.5°	486.5	492.7	496.6	502.1	498.9	510.6	516.0	525.3	539.2	553.3	561.0
30°	464.0	470.2	474.1	478.7	475.6	485.7	488.8	493.5	502.8	509.8	510.6
32.5°	432.9	438.4	442.3	444.6	440.7	448.5	448.5	449.3	452.4	453.1	447.0
35°	395.7	399.6	402.7	403.5	398.9	403.5	402.7	397.3	395.7	389.5	377.1
37.5°	360.8	365.5	367.0	367.0	360.8	363.2	360.0	351.5	345.3	334.4	317.4
40°	332.1	336.0	336.7	336.0	329.7	330.6	325.9	315.8	307.3	294.0	272.4
42.5°	308.1	311.1	311.9	311.1	305.0	305.0	300.3	289.4	279.3	264.6	242.1
45°	283.2	286.3	287.9	286.3	280.9	280.9	275.5	265.4	255.3	239.8	217.3
47.5°	257.6	260.0	261.4	260.7	255.3	255.3	250.6	240.5	232.0	218.0	196.3
50°	231.2	234.4	235.9	235.1	230.4	230.4	226.6	217.3	210.3	197.8	178.5
52.5°	205.6	209.5	210.3	208.8	205.6	204.8	202.5	194.0	188.6	180.0	161.4
55°	182.3	185.4	185.4	185.4	181.6	180.8	179.3	172.2	169.2	162.2	146.7
57.5°	161.4	163.7	162.9	162.2	160.6	159.1	157.5	152.1	150.6	145.9	132.7
60°	140.5	142.7	142.0	141.2	139.6	138.2	136.6	132.7	132.7	129.6	118.7
62.5°	120.3	121.8	121.1	120.3	120.3	118.7	118.0	114.8	115.6	114.1	104.7
65°	97.8	100.1	99.3	99.3	100.1	100.1	99.3	97.8	97.8	97.0	89.2
67.5°	74.4	76.8	76.0	76.8	79.1	80.0	80.0	79.1	79.1	77.6	70.6
70°	52.8	54.3	54.3	55.1	57.4	58.2	60.5	58.2	58.2	56.6	51.2
72.5°	34.9	35.7	36.4	38.0	38.8	39.6	41.1	41.1	40.4	38.0	34.1
75°	21.8	22.5	22.5	23.3	24.1	24.8	26.3	25.6	24.8	24.1	20.9
77.5°	13.2	13.2	14.0	14.0	14.8	15.5	15.5	15.5	14.8	14.0	12.4
80°	7.8	7.8	7.8	8.5	8.5	8.5	8.5	8.5	8.5	7.8	7.0
82.5°	3.9	3.9	3.9	4.7	4.7	4.7	4.7	4.7	4.7	3.9	3.9
85°	1.6	1.6	1.6	2.3	2.3	2.3	2.3	2.3	2.3	2.3	1.6
87.5°	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.7	0.7	0.7
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°	1146.0	1146.0	1146.0	1146.0	1146.0	1146.0	1146.0	1146.0	1146.0	1146.0	1146.0
2.5°	1101.9	1101.9	1099.5	1113.4	1131.3	1128.2	1129.0	1142.2	1147.6	1157.0	1165.5
5°	1051.4	1059.9	1066.2	1088.7	1114.3	1118.9	1127.4	1147.6	1160.0	1175.6	1190.3
7.5°	1001.0	1018.8	1033.6	1063.0	1096.4	1108.9	1124.4	1150.0	1166.2	1187.2	1207.4
10°	948.9	973.8	995.6	1031.2	1070.0	1087.8	1107.3	1135.9	1157.7	1180.2	1202.7
12.5°	897.0	927.3	954.4	994.0	1035.1	1056.8	1078.6	1108.9	1132.1	1155.4	1178.6
15°	845.8	878.3	907.1	948.9	990.9	1013.4	1035.1	1065.3	1090.2	1111.9	1135.2
17.5°	789.1	825.6	852.0	891.6	931.9	954.4	978.5	1006.4	1028.2	1046.7	1069.3
20°	734.0	768.2	792.2	828.7	865.2	886.1	908.6	933.4	952.9	969.1	990.1
22.5°	680.5	710.7	733.3	766.6	794.5	812.4	831.8	853.6	870.6	883.8	902.4
25°	628.6	652.6	669.6	696.0	718.5	732.5	748.8	766.6	781.4	792.2	809.3
27.5°	576.5	592.8	599.0	615.3	629.3	644.8	653.3	667.3	680.5	689.1	703.7
30°	516.7	522.3	516.7	521.4	525.3	532.3	542.4	558.7	564.8	570.4	585.0
32.5°	442.3	438.4	420.5	413.6	408.9	415.9	417.4	429.9	433.8	438.4	450.0
35°	363.9	349.9	321.2	303.4	292.6	293.3	286.3	299.5	301.8	306.5	315.1
37.5°	297.2	274.7	237.4	212.6	196.3	192.4	183.9	191.7	192.4	195.5	201.8
40°	248.3	216.5	174.6	145.1	127.2	119.5	111.0	114.1	114.1	116.4	120.3
42.5°	214.2	180.0	132.7	100.9	81.5	72.2	65.2	65.2	65.2	65.9	68.3
45°	188.6	150.6	103.2	70.6	52.8	43.4	36.4	36.4	35.7	35.7	37.3
47.5°	167.6	129.6	81.5	52.0	34.1	25.6	20.9	19.4	18.6	19.4	20.2
50°	150.6	113.3	67.5	39.6	24.1	17.1	13.2	11.7	10.8	10.8	10.8
52.5°	135.8	100.1	56.6	31.9	18.6	12.4	9.3	7.8	7.0	7.0	7.0
55°	123.4	88.5	48.9	26.3	15.5	10.8	7.8	6.2	5.4	5.4	5.4
57.5°	111.0	78.4	41.9	22.5	13.2	9.3	7.0	5.4	4.7	4.7	4.7
60°	98.5	68.3	36.4	18.6	10.8	7.8	6.2	4.7	3.9	3.9	3.9
62.5°	86.1	58.2	30.3	15.5	9.3	7.0	4.7	3.9	3.9	3.1	3.1
65°	71.4	47.4	24.8	13.2	7.8	5.4	4.7	3.1	3.1	3.1	3.1
67.5°	55.9	36.4	18.6	10.1	6.2	4.7	3.9	3.1	2.3	2.3	2.3
70°	39.6	25.6	14.0	7.8	5.4	3.9	3.1	2.3	2.3	2.3	1.6
72.5°	26.3	17.1	10.1	6.2	4.7	3.1	2.3	2.3	1.6	1.6	1.6
75°	17.1	10.8	7.0	4.7	3.1	3.1	2.3	1.6	1.6	1.6	0.7
77.5°	10.1	7.0	4.7	3.1	2.3	2.3	2.3	2.3	2.3	1.6	0.7
80°	5.4	3.9	3.1	2.3	1.6	2.3	2.3	2.3	2.3	1.6	0.7
82.5°	3.1	2.3	1.6	1.6	1.6	1.6	1.6	2.3	2.3	1.6	0.7
85°	1.6	1.6	0.7	0.7	0.7	1.6	1.6	1.6	1.6	0.7	0.7
87.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	1.6	1.6	0.7	0.7
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°	1146.0	1146.0	1146.0	1146.0	1146.0	1146.0	1146.0	1146.0	1146.0	1146.0	1146.0
2.5°	1172.5	1177.1	1178.6	1181.0	1194.1	1191.1	1202.7	1202.7	1212.0	1206.6	1212.0
5°	1202.7	1212.8	1217.5	1223.7	1242.2	1242.2	1256.3	1258.6	1271.0	1267.1	1272.5
7.5°	1222.1	1234.5	1240.8	1250.8	1271.0	1274.1	1287.3	1291.2	1305.9	1303.6	1306.7
10°	1218.2	1231.4	1239.2	1250.0	1271.0	1275.7	1287.3	1294.3	1308.2	1305.1	1306.7
12.5°	1194.1	1206.6	1215.2	1225.2	1246.9	1252.3	1262.4	1270.2	1283.4	1281.1	1281.1
15°	1149.2	1163.1	1170.1	1178.6	1199.6	1205.8	1213.6	1219.7	1234.5	1233.0	1230.7
17.5°	1081.7	1094.8	1100.3	1107.3	1127.4	1134.5	1140.6	1145.3	1159.3	1158.5	1154.6
20°	999.4	1011.1	1015.7	1020.4	1038.2	1045.1	1049.8	1054.5	1066.2	1066.2	1060.7
22.5°	909.4	919.5	922.6	926.4	942.0	948.9	951.3	955.2	966.0	966.0	959.0
25°	814.0	822.5	824.1	827.1	840.3	846.6	847.3	849.6	860.5	860.5	853.6
27.5°	706.9	713.8	715.4	717.0	728.6	734.8	734.0	742.6	745.7	747.3	738.7
30°	586.6	598.3	592.0	599.0	602.9	609.1	606.8	615.3	617.6	620.0	609.1
32.5°	451.6	462.5	455.5	462.5	464.0	470.2	467.1	474.9	476.4	478.7	468.6
35°	316.6	325.2	318.9	321.2	326.6	332.9	329.0	336.0	337.5	338.3	330.6
37.5°	203.3	209.5	211.0	213.3	213.3	218.0	219.6	219.6	220.4	221.1	214.9
40°	121.8	126.5	127.2	126.5	128.8	132.7	133.5	132.7	133.5	134.2	130.4
42.5°	69.0	72.2	73.0	73.0	74.4	76.8	76.8	76.0	76.8	76.8	74.4
45°	38.0	39.6	40.4	39.6	40.4	41.9	41.9	41.9	41.9	41.9	41.1
47.5°	20.2	20.9	20.9	21.8	20.9	21.8	21.8	21.8	22.5	22.5	21.8
50°	10.8	11.7	11.7	11.7	11.7	12.4	12.4	12.4	12.4	12.4	11.7
52.5°	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
55°	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
57.5°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
60°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
62.5°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
65°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
67.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
70°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
72.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
75°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
77.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
80°	0.7	0.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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





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**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	1146.0	1146.0	1146.0	1146.0
2.5°	1214.3	1218.2	1212.8	1204.2
5°	1276.4	1281.1	1275.7	1267.8
7.5°	1310.5	1317.5	1311.4	1305.9
10°	1312.1	1319.1	1312.1	1309.0
12.5°	1286.5	1293.5	1285.8	1284.2
15°	1237.6	1243.1	1235.3	1236.1
17.5°	1162.4	1167.1	1159.3	1161.5
20°	1067.7	1072.3	1064.6	1069.3
22.5°	966.0	969.1	967.6	966.8
25°	859.7	862.1	855.1	859.7
27.5°	743.3	744.9	745.7	744.9
30°	614.5	615.3	610.7	618.5
32.5°	473.3	472.6	471.0	478.0
35°	332.9	332.9	332.9	339.1
37.5°	216.5	215.7	216.5	221.1
40°	131.1	130.4	131.1	134.2
42.5°	74.4	74.4	75.3	76.8
45°	41.9	41.1	41.1	41.9
47.5°	22.5	22.5	21.8	22.5
50°	12.4	12.4	11.7	12.4
52.5°	7.0	7.0	7.0	7.0
55°	5.4	5.4	5.4	5.4
57.5°	4.7	4.7	4.7	4.7
60°	3.9	3.9	3.9	3.9
62.5°	3.1	3.1	3.1	3.1
65°	2.3	3.1	2.3	2.3
67.5°	2.3	2.3	2.3	2.3
70°	1.6	1.6	1.6	1.6
72.5°	1.6	1.6	1.6	1.6
75°	0.7	0.7	0.7	0.7
77.5°	0.7	0.7	0.7	0.7
80°	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0
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)