

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: P135524

Luminaire Tested: **LD6A10D010TE ERM6A10927 6LM111LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P135524
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 ERM6A10927 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 2700K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1029.0 lumens
Efficiency: N/A
Efficacy: 73.5 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

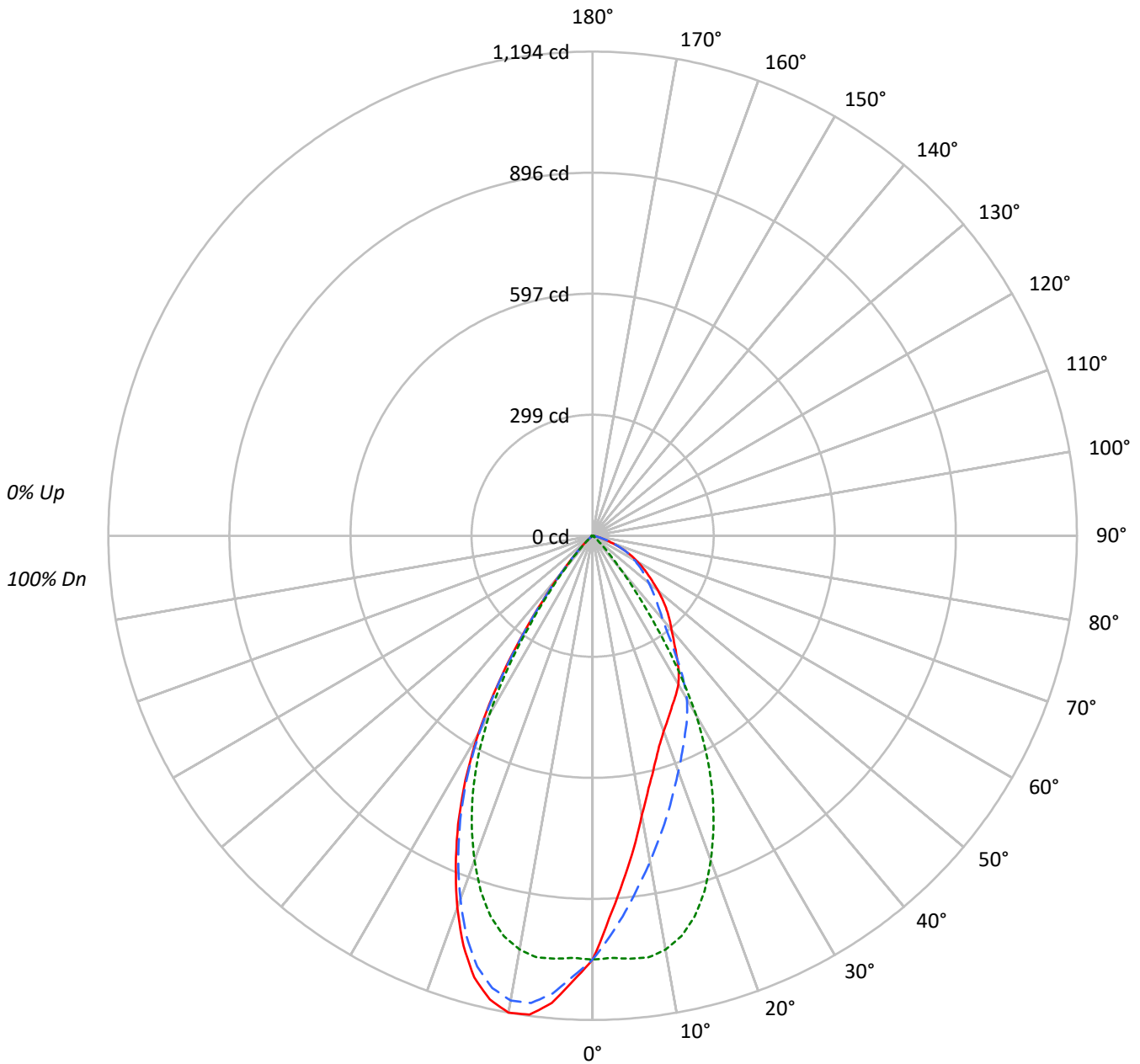
Input Watts (W): 14
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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			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			100
1	113	110	107	104	110	107	105	103	103	101	100	100	98	97	96	95	94	92			92
2	106	101	96	93	104	99	95	91	96	92	89	93	90	88	90	88	86	84			84
3	100	93	87	83	98	92	86	82	89	85	81	86	83	80	84	81	78	77			77
4	95	86	80	75	93	85	79	75	83	78	74	81	76	73	79	75	72	71			71
5	89	80	74	69	88	79	73	69	77	72	68	75	71	67	74	70	67	65			65
6	84	75	68	63	83	74	68	63	72	67	63	71	66	62	69	65	62	60			60
7	80	70	63	59	78	69	63	59	68	62	58	67	62	58	65	61	58	56			56
8	76	65	59	55	74	65	59	54	64	58	54	63	58	54	62	57	54	52			52
9	72	62	55	51	71	61	55	51	60	55	51	59	54	50	58	54	50	49			49
10	68	58	52	48	67	58	52	48	57	51	48	56	51	47	55	51	47	46			46

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	68196	68196	68196
5°	56040	68555	75739
10°	46320	68639	79099
15°	39674	65631	76154
20°	35575	59111	67713
25°	33372	50332	56451
30°	31881	38390	42496
35°	28752	21759	24634
40°	25797	8857	10433
45°	23832	3063	3524
50°	21406	1076	1147
55°	18916	648	569
60°	16715	548	470
65°	13755	432	324
70°	9175	401	267
75°	4991	353	176
80°	2668	789	0
85°	1048	1048	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.3	9.5
10°-20°	253.2	24.6
20°-30°	299.1	29.1
30°-40°	199.3	19.4
40°-50°	86.5	8.4
50°-60°	51.9	5.0
60°-70°	31.1	3.0
70°-80°	9.5	0.9
80°-90°	1.2	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°	649.6	63.1
0°-40°	848.9	82.5
0°-60°	987.2	95.9
0°-90°	1029.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1029.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1045	1045	1045	1045	1045	
5°	856	930	1047	1133	1156	77
15°	587	712	972	1100	1128	166
25°	464	539	699	772	784	214
35°	361	355	273	304	309	226
45°	258	219	33	38	38	199
55°	166	148	6	5	5	150
65°	89	88	3	2	2	88
75°	20	22	1	1	1	24
85°	1	2	1	0	0	2
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°	1045.3	1045.3	1045.3	1045.3	1045.3	1045.3	1045.3	1045.3	1045.3	1045.3	1045.3
2.5°	943.4	959.7	966.7	971.7	953.3	973.2	966.7	976.0	978.9	988.0	996.5
5°	855.7	871.3	879.0	884.7	870.5	893.2	892.5	904.5	914.4	930.0	940.6
7.5°	777.1	784.2	792.0	799.8	793.4	813.9	817.5	834.5	849.3	870.5	890.4
10°	699.2	706.3	714.1	722.6	719.8	740.3	748.1	767.2	787.0	815.4	836.6
12.5°	637.0	644.1	651.1	659.6	658.2	678.8	688.7	709.2	733.2	761.6	785.6
15°	587.4	593.8	600.9	606.5	608.0	627.1	637.6	657.5	683.0	712.0	736.8
17.5°	544.3	551.4	557.7	562.6	564.1	581.7	592.4	610.1	634.9	662.4	686.5
20°	512.4	518.8	524.5	529.4	529.4	544.9	554.2	570.4	592.4	617.9	638.4
22.5°	486.9	492.6	497.6	501.8	501.8	515.3	523.0	536.5	555.6	576.8	593.8
25°	463.6	469.3	473.5	477.0	476.4	489.0	495.4	505.4	521.6	539.3	552.1
27.5°	443.8	449.5	452.9	457.9	455.1	465.7	470.7	479.1	491.9	504.6	511.7
30°	423.2	428.9	432.5	436.7	433.8	443.0	445.9	450.1	458.6	465.0	465.7
32.5°	394.9	399.9	403.5	405.6	402.0	409.1	409.1	409.8	412.6	413.3	407.7
35°	361.0	364.4	367.3	368.0	363.8	368.0	367.3	362.3	361.0	355.3	344.0
37.5°	329.1	333.3	334.8	334.8	329.1	331.2	328.4	320.6	315.0	305.1	289.4
40°	302.9	306.4	307.2	306.4	300.8	301.5	297.2	288.1	280.3	268.2	248.4
42.5°	281.0	283.8	284.5	283.8	278.2	278.2	273.9	264.0	254.7	241.3	220.8
45°	258.3	261.2	262.5	261.2	256.2	256.2	251.3	242.1	232.8	218.7	198.2
47.5°	235.0	237.1	238.5	237.8	232.8	232.8	228.6	219.4	211.6	198.8	179.1
50°	210.9	213.7	215.2	214.4	210.2	210.2	206.6	198.2	191.8	180.5	162.8
52.5°	187.5	191.1	191.8	190.4	187.5	186.8	184.7	176.9	171.9	164.2	147.2
55°	166.3	169.2	169.2	169.2	165.6	164.9	163.5	157.2	154.3	147.9	133.8
57.5°	147.2	149.4	148.6	147.9	146.5	145.0	143.7	138.7	137.3	133.0	121.0
60°	128.1	130.3	129.5	128.8	127.4	125.9	124.6	121.0	121.0	118.2	108.3
62.5°	109.7	111.1	110.4	109.7	109.7	108.3	107.6	104.7	105.5	104.0	95.6
65°	89.1	91.3	90.6	90.6	91.3	91.3	90.6	89.1	89.1	88.5	81.4
67.5°	67.9	70.0	69.4	70.0	72.2	72.9	72.9	72.2	72.2	70.8	64.4
70°	48.1	49.6	49.6	50.2	52.4	53.1	55.2	53.1	53.1	51.7	46.7
72.5°	31.9	32.6	33.2	34.7	35.3	36.1	37.5	37.5	36.8	34.7	31.1
75°	19.8	20.6	20.6	21.2	21.9	22.7	24.1	23.3	22.7	21.9	19.1
77.5°	12.0	12.0	12.8	12.8	13.4	14.1	14.1	14.1	13.4	12.8	11.3
80°	7.1	7.1	7.1	7.8	7.8	7.8	7.8	7.8	7.8	7.1	6.3
82.5°	3.6	3.6	3.6	4.2	4.2	4.2	4.2	4.2	4.2	3.6	3.6
85°	1.4	1.4	1.4	2.1	2.1	2.1	2.1	2.1	2.1	2.1	1.4
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°	1045.3	1045.3	1045.3	1045.3	1045.3	1045.3	1045.3	1045.3	1045.3	1045.3	1045.3
2.5°	1005.0	1005.0	1002.9	1015.6	1031.9	1029.1	1029.8	1041.8	1046.8	1055.2	1063.0
5°	959.0	966.7	972.4	993.0	1016.3	1020.5	1028.3	1046.8	1058.1	1072.2	1085.7
7.5°	913.0	929.3	942.7	969.6	1000.1	1011.4	1025.5	1048.9	1063.8	1082.9	1101.2
10°	865.6	888.3	908.1	940.6	976.0	992.3	1010.0	1036.1	1056.0	1076.4	1097.0
12.5°	818.1	845.8	870.5	906.6	944.2	964.0	983.7	1011.4	1032.6	1053.9	1075.1
15°	771.5	801.1	827.4	865.6	903.8	924.3	944.2	971.7	994.4	1014.2	1035.4
17.5°	719.8	753.0	777.1	813.2	850.0	870.5	892.5	917.9	937.7	954.7	975.3
20°	669.5	700.7	722.6	755.9	789.1	808.2	828.8	851.4	869.2	883.9	903.1
22.5°	620.7	648.3	668.9	699.2	724.8	741.0	758.7	778.6	794.1	806.1	823.1
25°	573.3	595.2	610.7	634.9	655.4	668.1	683.0	699.2	712.7	722.6	738.2
27.5°	525.8	540.7	546.4	561.3	574.0	588.2	596.0	608.6	620.7	628.5	642.0
30°	471.4	476.4	471.4	475.6	479.1	485.5	494.7	509.6	515.3	520.2	533.6
32.5°	403.5	399.9	383.6	377.2	373.0	379.3	380.8	392.1	395.7	399.9	410.5
35°	331.9	319.2	293.0	276.7	266.9	267.5	261.2	273.2	275.3	279.5	287.3
37.5°	271.1	250.5	216.6	193.9	179.1	175.5	167.7	174.8	175.5	178.4	184.1
40°	226.5	197.5	159.3	132.4	116.0	109.0	101.2	104.0	104.0	106.1	109.7
42.5°	195.4	164.2	121.0	92.0	74.4	65.8	59.5	59.5	59.5	60.1	62.2
45°	171.9	137.3	94.1	64.4	48.1	39.7	33.2	33.2	32.6	32.6	34.0
47.5°	152.8	118.2	74.4	47.5	31.1	23.3	19.1	17.7	17.0	17.7	18.4
50°	137.3	103.4	61.6	36.1	21.9	15.6	12.0	10.6	9.9	9.9	9.9
52.5°	123.8	91.3	51.7	29.0	17.0	11.3	8.5	7.1	6.3	6.3	6.3
55°	112.5	80.7	44.6	24.1	14.1	9.9	7.1	5.7	5.0	5.0	5.0
57.5°	101.2	71.5	38.2	20.6	12.0	8.5	6.3	5.0	4.2	4.2	4.2
60°	89.9	62.2	33.2	17.0	9.9	7.1	5.7	4.2	3.6	3.6	3.6
62.5°	78.6	53.1	27.6	14.1	8.5	6.3	4.2	3.6	3.6	2.8	2.8
65°	65.1	43.1	22.7	12.0	7.1	5.0	4.2	2.8	2.8	2.8	2.8
67.5°	50.9	33.2	17.0	9.2	5.7	4.2	3.6	2.8	2.1	2.1	2.1
70°	36.1	23.3	12.8	7.1	5.0	3.6	2.8	2.1	2.1	2.1	1.4
72.5°	24.1	15.6	9.2	5.7	4.2	2.8	2.1	2.1	1.4	1.4	1.4
75°	15.6	9.9	6.3	4.2	2.8	2.8	2.1	1.4	1.4	1.4	0.7
77.5°	9.2	6.3	4.2	2.8	2.1	2.1	2.1	2.1	2.1	1.4	0.7
80°	5.0	3.6	2.8	2.1	1.4	2.1	2.1	2.1	2.1	1.4	0.7
82.5°	2.8	2.1	1.4	1.4	1.4	1.4	1.4	2.1	2.1	1.4	0.7
85°	1.4	1.4	0.7	0.7	0.7	1.4	1.4	1.4	1.4	0.7	0.7
87.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	1.4	1.4	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°	1045.3	1045.3	1045.3	1045.3	1045.3	1045.3	1045.3	1045.3	1045.3	1045.3	1045.3
2.5°	1069.4	1073.7	1075.1	1077.2	1089.2	1086.4	1097.0	1097.0	1105.5	1100.6	1105.5
5°	1097.0	1106.2	1110.5	1116.1	1133.1	1133.1	1145.8	1148.0	1159.3	1155.8	1160.7
7.5°	1114.7	1126.0	1131.7	1140.9	1159.3	1162.1	1174.1	1177.7	1191.1	1189.0	1191.8
10°	1111.1	1123.2	1130.2	1140.2	1159.3	1163.6	1174.1	1180.5	1193.3	1190.5	1191.8
12.5°	1089.2	1100.6	1108.3	1117.6	1137.3	1142.3	1151.5	1158.6	1170.6	1168.5	1168.5
15°	1048.2	1060.9	1067.3	1075.1	1094.2	1099.9	1106.9	1112.6	1126.0	1124.6	1122.5
17.5°	986.6	998.6	1003.6	1010.0	1028.3	1034.8	1040.4	1044.7	1057.4	1056.7	1053.1
20°	911.6	922.2	926.4	930.7	947.0	953.3	957.6	961.8	972.4	972.4	967.5
22.5°	829.5	838.7	841.5	845.0	859.2	865.6	867.7	871.3	881.2	881.2	874.8
25°	742.4	750.2	751.7	754.5	766.5	772.1	772.9	775.0	784.9	784.9	778.6
27.5°	644.8	651.1	652.5	654.0	664.5	670.2	669.5	677.3	680.1	681.5	673.8
30°	535.1	545.7	540.1	546.4	549.9	555.6	553.5	561.3	563.4	565.5	555.6
32.5°	411.9	421.8	415.5	421.8	423.2	428.9	426.0	433.1	434.6	436.7	427.5
35°	288.8	296.5	290.9	293.0	298.0	303.6	300.1	306.4	307.9	308.5	301.5
37.5°	185.4	191.1	192.5	194.6	194.6	198.8	200.3	200.3	201.0	201.7	196.1
40°	111.1	115.4	116.0	115.4	117.5	121.0	121.7	121.0	121.7	122.5	118.9
42.5°	63.0	65.8	66.6	66.6	67.9	70.0	70.0	69.4	70.0	70.0	67.9
45°	34.7	36.1	36.8	36.1	36.8	38.2	38.2	38.2	38.2	38.2	37.5
47.5°	18.4	19.1	19.1	19.8	19.1	19.8	19.8	19.8	20.6	20.6	19.8
50°	9.9	10.6	10.6	10.6	10.6	11.3	11.3	11.3	11.3	11.3	10.6
52.5°	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
55°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
57.5°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
60°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
62.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
65°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
67.5°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
70°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
72.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
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°	1045.3	1045.3	1045.3	1045.3
2.5°	1107.7	1111.1	1106.2	1098.4
5°	1164.2	1168.5	1163.6	1156.5
7.5°	1195.4	1201.8	1196.1	1191.1
10°	1196.8	1203.1	1196.8	1194.0
12.5°	1173.5	1179.8	1172.7	1171.4
15°	1128.9	1133.8	1126.8	1127.5
17.5°	1060.2	1064.4	1057.4	1059.5
20°	973.9	978.1	971.1	975.3
22.5°	881.2	883.9	882.6	881.8
25°	784.2	786.3	779.9	784.2
27.5°	678.0	679.4	680.1	679.4
30°	560.5	561.3	557.0	564.1
32.5°	431.7	431.0	429.6	436.0
35°	303.6	303.6	303.6	309.3
37.5°	197.5	196.7	197.5	201.7
40°	119.6	118.9	119.6	122.5
42.5°	67.9	67.9	68.7	70.0
45°	38.2	37.5	37.5	38.2
47.5°	20.6	20.6	19.8	20.6
50°	11.3	11.3	10.6	11.3
52.5°	6.3	6.3	6.3	6.3
55°	5.0	5.0	5.0	5.0
57.5°	4.2	4.2	4.2	4.2
60°	3.6	3.6	3.6	3.6
62.5°	2.8	2.8	2.8	2.8
65°	2.1	2.8	2.1	2.1
67.5°	2.1	2.1	2.1	2.1
70°	1.4	1.4	1.4	1.4
72.5°	1.4	1.4	1.4	1.4
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)