

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: P135914

Luminaire Tested: **LD6A15D010TE ERM6A15835 6LM121H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P135914
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P23373)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LD6A15D010TE ERM6A15835 6LM121H
Description: PORTFOLIO 6 INCH 50 DEGREE CUTOFF RECESSED DOUBLE WALL WASH LUMINAIRE
SEMI-SPECULAR CLEAR TRIM AND SPECULAR CLEAR KICKER
Light Source: (1) HIGH LUMEN LED 3500K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1550.0 lumens
Efficiency: N/A
Efficacy: 68.6 lumens/watt
Spacing Criteria (0/90/45): 0.96 / 1.06 / 1.01
Luminous Opening: Circular (Dia: 0.46' x H: 0')
CIE Type: Direct

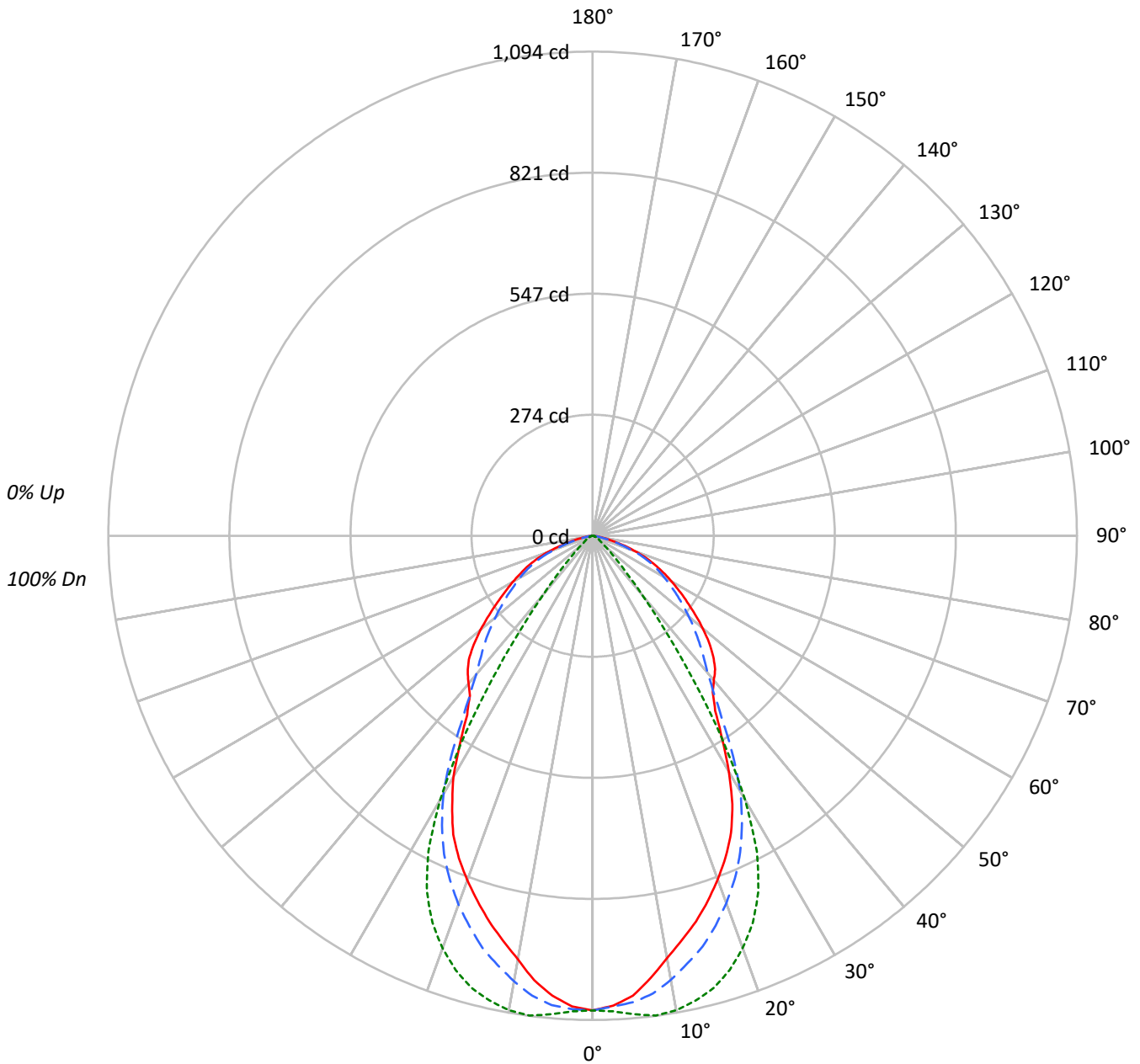
Input Watts (W): 22.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
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	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89																			
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79																			
3	96	88	81	76	94	86	80	75	84	78	74	81	77	73	79	75	72	70																			
4	90	80	73	67	88	79	72	67	76	71	66	74	69	65	72	68	64	62																			
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56																			
6	78	67	60	54	77	66	59	54	65	58	54	63	57	53	62	57	53	51																			
7	74	62	55	49	72	61	54	49	60	53	49	59	53	49	57	52	48	47																			
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	53	48	44	43																			
9	65	54	46	42	64	53	46	41	52	46	41	51	45	41	50	45	41	39																			
10	62	50	43	38	61	50	43	38	49	43	38	48	42	38	47	42	38	36																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	69964	69964	69964
5°	68319	71083	68319
10°	64174	72117	64392
15°	60943	71446	60943
20°	57361	68831	57472
25°	53291	63786	53643
30°	46375	51867	47347
35°	38444	31348	39352
40°	36281	14623	37115
45°	35568	6874	36472
50°	32885	3613	33545
55°	29664	2400	29846
60°	26840	1905	27062
65°	24005	1497	24761
70°	19781	1240	20391
75°	13057	807	13057
80°	7289	601	7289
85°	4866	0	3668



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.0	6.5
10°-20°	271.4	17.5
20°-30°	362.7	23.4
30°-40°	299.9	19.4
40°-50°	215.2	13.9
50°-60°	158.2	10.2
60°-70°	102.1	6.6
70°-80°	36.2	2.3
80°-90°	4.2	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°	734.1	47.4
0°-40°	1034.1	66.7
0°-60°	1407.5	90.8
0°-90°	1550.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1550.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1072	1072	1072	1072	1072	
5°	1043	1058	1085	1064	1043	97
15°	902	961	1058	964	902	253
25°	740	789	886	794	745	336
35°	483	512	394	517	494	311
45°	386	340	74	345	395	294
55°	261	232	21	235	262	234
65°	156	144	10	146	160	153
75°	52	42	3	42	52	59
85°	6	3	0	3	5	8
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°	1072.4	1072.4	1072.4	1072.4	1072.4	1072.4	1072.4	1072.4	1072.4	1072.4	1072.4
2.5°	1062.7	1054.6	1061.1	1054.6	1056.2	1062.7	1064.3	1067.5	1069.2	1064.3	1064.3
5°	1043.2	1035.1	1043.2	1036.8	1040.0	1048.1	1049.7	1056.2	1059.4	1057.8	1061.1
7.5°	1007.6	1001.1	1009.2	1004.4	1009.2	1020.6	1025.4	1033.5	1040.0	1043.2	1048.1
10°	968.7	962.2	970.3	965.5	973.6	986.5	991.4	1001.1	1010.8	1018.9	1027.0
12.5°	934.7	928.2	933.1	931.5	939.6	950.9	959.0	970.3	981.7	989.8	1001.1
15°	902.3	895.8	902.3	899.1	905.5	918.5	926.6	937.9	950.9	960.6	973.6
17.5°	865.1	858.6	863.4	861.8	868.3	879.6	887.7	899.1	912.0	923.4	936.3
20°	826.2	819.7	824.6	821.3	827.8	840.8	847.2	860.2	871.5	882.9	894.2
22.5°	785.7	779.2	785.7	780.8	790.5	798.6	805.1	818.1	827.8	839.1	848.9
25°	740.3	733.8	738.7	735.5	741.9	751.7	756.5	769.5	777.6	788.9	798.6
27.5°	683.6	675.5	685.2	678.8	686.9	695.0	699.8	711.2	720.9	730.6	738.7
30°	615.6	609.1	618.8	614.0	623.7	630.2	636.6	648.0	656.1	667.4	669.0
32.5°	544.3	541.1	549.2	545.9	555.6	562.1	567.0	578.3	584.8	591.3	586.4
35°	482.7	479.5	487.6	486.0	494.1	498.9	503.8	510.3	510.3	511.9	498.9
37.5°	445.5	443.9	450.3	448.7	455.2	460.1	460.1	461.7	458.4	450.3	430.9
40°	426.0	424.4	429.3	427.7	432.5	434.1	432.5	429.3	419.6	403.4	377.4
42.5°	409.8	406.6	409.8	408.2	411.5	413.1	408.2	403.4	390.4	371.0	340.2
45°	385.5	382.3	387.2	383.9	387.2	387.2	382.3	375.8	361.2	340.2	307.8
47.5°	356.4	353.1	358.0	354.8	358.0	358.0	353.1	346.7	332.1	311.0	278.6
50°	324.0	320.7	324.0	322.4	325.6	327.2	320.7	315.9	302.9	283.5	251.1
52.5°	291.6	288.4	291.6	291.6	293.2	293.2	288.4	285.1	273.8	256.0	226.8
55°	260.8	257.6	262.4	260.8	262.4	262.4	257.6	254.3	246.2	231.7	204.1
57.5°	231.7	230.0	233.3	231.7	231.7	231.7	228.4	226.8	220.3	207.4	184.7
60°	205.7	202.5	204.1	204.1	204.1	205.7	202.5	200.9	196.0	186.3	165.2
62.5°	179.8	178.2	179.8	178.2	178.2	179.8	178.2	176.6	173.3	165.2	147.4
65°	155.5	152.3	155.5	153.9	153.9	153.9	152.3	152.3	149.0	144.2	128.0
67.5°	129.6	128.0	129.6	128.0	126.4	126.4	124.7	124.7	123.1	119.9	105.3
70°	103.7	100.4	102.1	98.8	100.4	97.2	97.2	95.6	94.0	92.3	81.0
72.5°	76.1	74.5	74.5	71.3	71.3	69.7	68.0	68.0	66.4	66.4	58.3
75°	51.8	51.8	50.2	47.0	48.6	45.4	45.4	45.4	43.7	42.1	37.3
77.5°	34.0	32.4	32.4	30.8	30.8	27.5	29.2	27.5	27.5	25.9	22.7
80°	19.4	19.4	19.4	17.8	17.8	16.2	16.2	16.2	14.6	14.6	13.0
82.5°	11.3	11.3	11.3	9.7	9.7	9.7	9.7	8.1	8.1	8.1	6.5
85°	6.5	4.9	4.9	4.9	4.9	4.9	4.9	3.2	3.2	3.2	3.2
87.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1072.4	1072.4	1072.4	1072.4	1072.4	1072.4	1072.4	1072.4	1072.4	1072.4	1072.4
2.5°	1070.8	1069.2	1067.5	1074.0	1075.6	1070.8	1070.8	1075.6	1078.9	1070.8	1069.2
5°	1069.2	1070.8	1070.8	1078.9	1083.7	1080.5	1080.5	1085.4	1088.6	1078.9	1075.6
7.5°	1061.1	1065.9	1069.2	1080.5	1088.6	1087.0	1088.6	1093.5	1095.1	1085.4	1080.5
10°	1043.2	1049.7	1056.2	1070.8	1080.5	1082.1	1083.7	1088.6	1091.8	1078.9	1072.4
12.5°	1018.9	1028.7	1038.4	1054.6	1065.9	1067.5	1072.4	1075.6	1077.3	1065.9	1057.8
15°	991.4	1004.4	1014.1	1031.9	1044.9	1048.1	1053.0	1057.8	1057.8	1044.9	1036.8
17.5°	957.4	968.7	981.7	999.5	1014.1	1017.3	1023.8	1028.7	1028.7	1015.7	1004.4
20°	915.3	928.2	939.6	959.0	975.2	980.1	986.5	991.4	991.4	980.1	965.5
22.5°	871.5	884.5	895.8	913.6	929.8	934.7	939.6	946.0	944.4	934.7	921.7
25°	819.7	831.0	839.1	857.0	869.9	874.8	881.2	886.1	884.5	874.8	863.4
27.5°	756.5	764.6	766.2	777.6	788.9	793.8	798.6	803.5	801.9	793.8	784.1
30°	683.6	682.0	673.9	673.9	678.8	682.0	685.2	688.5	686.9	682.0	675.5
32.5°	591.3	579.9	558.9	547.5	542.7	542.7	542.7	545.9	544.3	542.7	542.7
35°	492.5	468.2	435.8	411.5	398.5	393.6	390.4	393.6	392.0	393.6	400.1
37.5°	411.5	375.8	332.1	299.7	278.6	268.9	262.4	264.1	264.1	268.9	280.3
40°	351.5	306.2	257.6	217.1	192.8	179.8	171.7	171.7	173.3	179.8	194.4
42.5°	306.2	256.0	202.5	163.6	134.5	121.5	113.4	111.8	113.4	121.5	136.1
45°	270.5	217.1	163.6	121.5	97.2	82.6	76.1	74.5	76.1	84.2	97.2
47.5°	239.8	186.3	136.1	94.0	69.7	58.3	51.8	50.2	53.5	59.9	71.3
50°	213.8	162.0	111.8	74.5	53.5	42.1	37.3	35.6	37.3	43.7	53.5
52.5°	189.5	140.9	94.0	58.3	40.5	32.4	27.5	25.9	27.5	32.4	42.1
55°	170.1	124.7	81.0	48.6	32.4	25.9	22.7	21.1	22.7	25.9	34.0
57.5°	152.3	110.2	69.7	40.5	27.5	21.1	17.8	17.8	17.8	21.1	27.5
60°	136.1	97.2	59.9	34.0	22.7	17.8	14.6	14.6	14.6	17.8	22.7
62.5°	121.5	85.9	51.8	29.2	19.4	14.6	13.0	13.0	13.0	14.6	19.4
65°	103.7	72.9	43.7	24.3	16.2	13.0	11.3	9.7	11.3	13.0	16.2
67.5°	85.9	59.9	35.6	19.4	13.0	9.7	8.1	8.1	8.1	9.7	13.0
70°	66.4	47.0	27.5	14.6	9.7	8.1	6.5	6.5	6.5	8.1	9.7
72.5°	45.4	32.4	19.4	11.3	8.1	6.5	4.9	4.9	4.9	6.5	8.1
75°	29.2	21.1	13.0	8.1	4.9	4.9	3.2	3.2	3.2	4.9	4.9
77.5°	17.8	13.0	8.1	4.9	3.2	3.2	3.2	3.2	3.2	3.2	3.2
80°	9.7	8.1	4.9	3.2	3.2	1.6	1.6	1.6	1.6	1.6	1.6
82.5°	4.9	4.9	3.2	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
85°	1.6	1.6	1.6	1.6	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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1072.4	1072.4	1072.4	1072.4	1072.4	1072.4	1072.4	1072.4	1072.4	1072.4	1072.4
2.5°	1069.2	1072.4	1074.0	1067.5	1069.2	1070.8	1061.1	1062.7	1057.8	1067.5	1062.7
5°	1074.0	1075.6	1077.3	1067.5	1065.9	1064.3	1053.0	1051.3	1044.9	1053.0	1048.1
7.5°	1075.6	1072.4	1072.4	1057.8	1053.0	1048.1	1033.5	1028.7	1020.6	1023.8	1017.3
10°	1067.5	1061.1	1056.2	1038.4	1030.3	1022.2	1004.4	997.9	986.5	988.2	980.1
12.5°	1049.7	1041.6	1033.5	1014.1	1004.4	993.0	975.2	965.5	954.1	954.1	944.4
15°	1027.0	1017.3	1007.6	988.2	975.2	963.9	942.8	933.1	921.7	920.1	912.0
17.5°	994.6	983.3	973.6	950.9	937.9	925.0	905.5	894.2	882.9	882.9	873.2
20°	955.8	942.8	931.5	910.4	897.4	886.1	863.4	853.7	844.0	842.4	834.3
22.5°	910.4	897.4	887.7	868.3	853.7	842.4	822.9	814.8	805.1	803.5	793.8
25°	853.7	842.4	832.7	816.5	803.5	793.8	776.0	766.2	759.8	759.8	751.7
27.5°	777.6	767.9	766.2	753.3	743.6	737.1	722.5	716.0	707.9	707.9	698.2
30°	675.5	677.1	683.6	680.4	677.1	673.9	660.9	659.3	649.6	648.0	636.6
32.5°	550.8	562.1	579.9	589.7	594.5	597.8	594.5	591.3	583.2	581.6	568.6
35°	417.9	440.6	469.8	489.2	505.4	516.8	521.6	521.6	518.4	516.8	505.4
37.5°	302.9	336.9	375.8	408.2	434.1	455.2	464.9	471.4	471.4	471.4	466.5
40°	221.9	262.4	307.8	349.9	382.3	409.8	424.4	435.8	439.0	443.9	440.6
42.5°	165.2	209.0	257.6	306.2	343.4	374.2	393.6	406.6	414.7	419.6	419.6
45°	126.4	170.1	220.3	272.2	311.0	345.0	364.5	379.1	387.2	393.6	393.6
47.5°	97.2	139.3	189.5	241.4	281.9	315.9	335.3	348.3	356.4	362.9	362.9
50°	76.1	115.0	163.6	213.8	254.3	286.7	304.5	317.5	324.0	328.8	330.5
52.5°	61.6	97.2	144.2	192.8	230.0	259.2	273.8	285.1	291.6	294.8	296.4
55°	50.2	84.2	128.0	171.7	207.4	234.9	247.9	256.0	260.8	264.1	264.1
57.5°	42.1	72.9	113.4	155.5	189.5	210.6	221.9	228.4	231.7	234.9	234.9
60°	35.6	63.2	100.4	139.3	170.1	189.5	197.6	202.5	205.7	207.4	207.4
62.5°	30.8	53.5	87.5	123.1	150.7	168.5	175.0	178.2	179.8	179.8	181.4
65°	25.9	45.4	74.5	106.9	129.6	145.8	150.7	152.3	152.3	153.9	155.5
67.5°	19.4	35.6	59.9	87.5	106.9	119.9	124.7	124.7	124.7	124.7	126.4
70°	16.2	27.5	45.4	66.4	82.6	92.3	95.6	95.6	95.6	95.6	97.2
72.5°	11.3	19.4	32.4	47.0	59.9	66.4	66.4	68.0	66.4	66.4	69.7
75°	8.1	13.0	21.1	30.8	37.3	42.1	43.7	43.7	43.7	43.7	45.4
77.5°	4.9	8.1	13.0	17.8	24.3	25.9	27.5	27.5	27.5	27.5	29.2
80°	3.2	4.9	8.1	11.3	13.0	14.6	16.2	16.2	16.2	16.2	16.2
82.5°	1.6	3.2	4.9	4.9	6.5	8.1	8.1	8.1	8.1	8.1	9.7
85°	0.0	1.6	1.6	3.2	3.2	3.2	3.2	3.2	3.2	3.2	4.9
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°	1072.4	1072.4	1072.4	1072.4
2.5°	1053.0	1064.3	1056.2	1064.3
5°	1036.8	1046.5	1036.8	1043.2
7.5°	1004.4	1012.5	1002.7	1012.5
10°	965.5	973.6	963.9	972.0
12.5°	929.8	936.3	926.6	936.3
15°	897.4	903.9	894.2	902.3
17.5°	860.2	865.1	857.0	865.1
20°	821.3	826.2	819.7	827.8
22.5°	782.4	788.9	780.8	788.9
25°	738.7	743.6	735.5	745.2
27.5°	686.9	690.1	682.0	686.9
30°	623.7	625.3	618.8	628.5
32.5°	557.3	557.3	547.5	557.3
35°	495.7	494.1	487.6	494.1
37.5°	456.8	456.8	452.0	455.2
40°	434.1	435.8	429.3	435.8
42.5°	414.7	417.9	413.1	417.9
45°	390.4	393.6	388.8	395.3
47.5°	359.6	362.9	359.6	364.5
50°	325.6	328.8	325.6	330.5
52.5°	291.6	294.8	291.6	294.8
55°	260.8	262.4	259.2	262.4
57.5°	231.7	233.3	230.0	233.3
60°	204.1	207.4	204.1	207.4
62.5°	179.8	181.4	181.4	183.1
65°	153.9	160.4	158.8	160.4
67.5°	128.0	132.8	132.8	134.5
70°	98.8	102.1	105.3	106.9
72.5°	69.7	74.5	76.1	77.8
75°	45.4	50.2	50.2	51.8
77.5°	29.2	32.4	32.4	32.4
80°	17.8	19.4	17.8	19.4
82.5°	9.7	9.7	9.7	11.3
85°	4.9	4.9	4.9	4.9
87.5°	1.6	1.6	1.6	1.6
90°	0.0	0.0	0.0	0.0



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













(END OF REPORT)