

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: P136988

Luminaire Tested: **LDSQ6A15D010TE ESQ6A15827 6LSQLWW1LI**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P136988  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P23675)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDSQ6A15D010TE ESQ6A15827 6LSQLWW1LI  
Description: PORTFOLIO LED SQUARE 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: 1143.0 lumens  
Efficiency: N/A  
Efficacy: 50.6 lumens/watt  
Spacing Criteria (0/90/45): 1.03 / 1.06 / 1.13  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
CIE Type: Direct

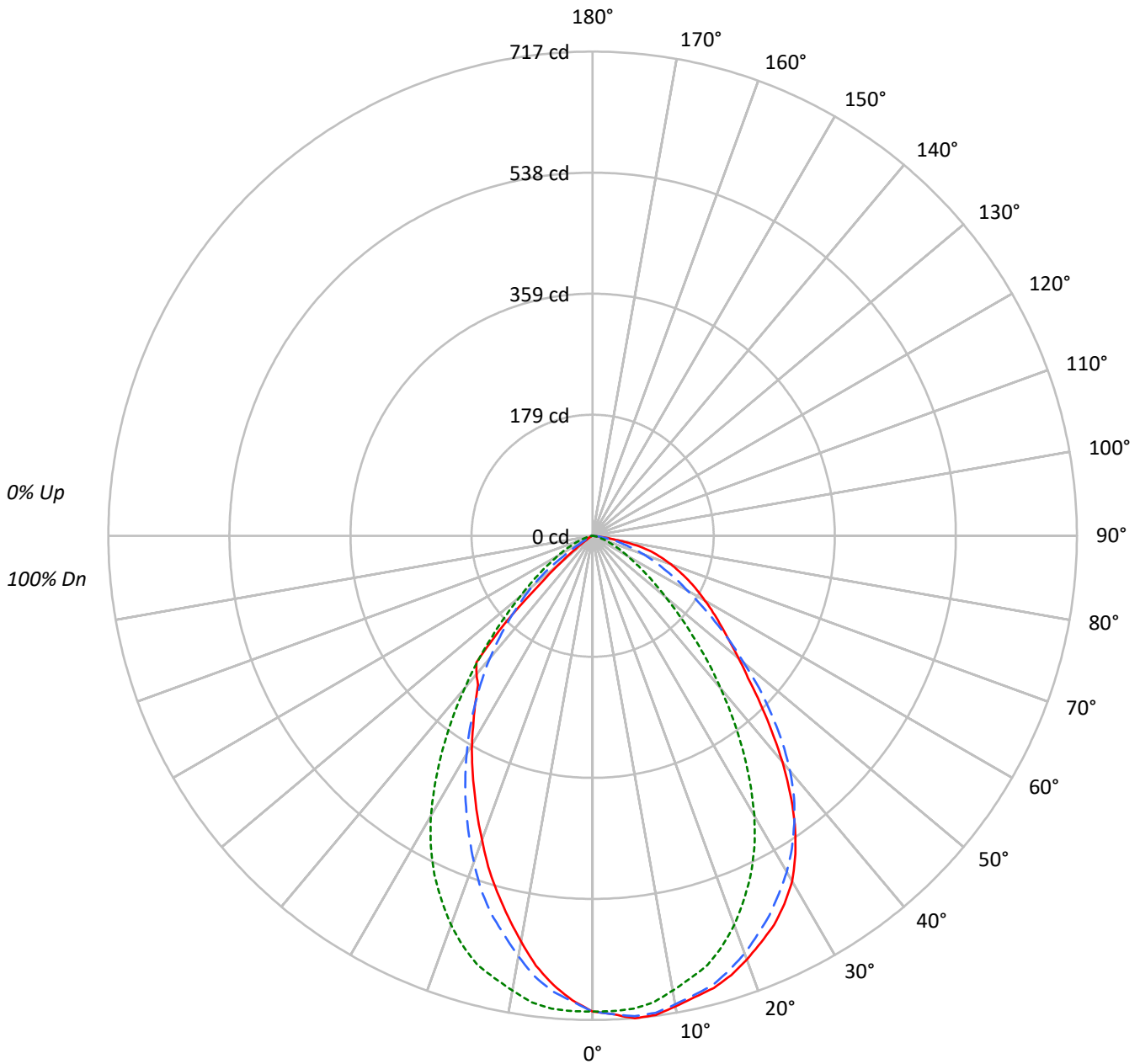
Input Watts (W): 22.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				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	111	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89				89
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79				79
3	96	88	81	76	94	86	80	75	83	78	74	81	76	73	78	75	71	70				70
4	89	80	72	67	87	78	71	66	76	70	65	74	69	65	72	67	64	62				62
5	83	72	65	59	81	71	64	59	69	63	58	68	62	58	66	61	57	55				55
6	78	66	59	53	76	65	58	53	64	57	53	62	57	52	61	56	52	50				50
7	73	61	53	48	71	60	53	48	59	52	48	58	52	47	56	51	47	45				45
8	68	56	49	44	67	56	49	44	55	48	43	53	47	43	52	47	43	41				41
9	64	52	45	40	63	52	45	40	51	44	40	50	44	40	49	43	39	38				38
10	61	49	42	37	59	48	41	37	47	41	37	46	41	37	46	40	36	35				35

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

	0°	90°	180°
0°	30333	30333	30333
5°	31002	30379	28858
10°	30941	29891	26669
15°	30904	29334	24338
20°	30593	28101	21938
25°	30200	26319	19701
30°	29372	23804	17754
35°	27437	20367	15905
40°	24567	16558	15029
45°	21354	12775	11210
50°	18876	9438	4073
55°	17430	6974	961
60°	16542	5098	551
65°	15985	3749	326
70°	15522	2618	201
75°	14922	1597	266
80°	9124	793	397
85°	0	0	790



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	65.8	5.8
10°-20°	178.8	15.6
20°-30°	246.3	21.6
30°-40°	253.1	22.1
40°-50°	197.7	17.3
50°-60°	111.2	9.7
60°-70°	60.5	5.3
70°-80°	27.0	2.4
80°-90°	2.5	0.2
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°	490.9	42.9
0°-40°	744.0	65.1
0°-60°	1053.0	92.1
0°-90°	1143.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1143.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	704	704	704	704	704	
5°	717	714	703	677	668	68
15°	693	688	658	580	546	195
25°	636	620	554	444	415	292
35°	522	520	388	303	303	324
45°	351	375	210	173	184	272
55°	232	221	93	53	13	209
65°	157	117	37	5	3	156
75°	90	46	10	2	2	90
85°	0	2	0	2	2	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°	704.5	704.5	704.5	704.5	704.5	704.5	704.5	704.5	704.5	704.5	704.5
2.5°	709.3	714.1	712.5	715.7	717.3	717.3	717.3	710.9	712.5	709.3	709.3
5°	717.3	720.5	718.9	722.1	723.7	723.7	723.7	717.3	718.9	714.1	714.1
7.5°	715.7	718.9	717.3	720.5	723.7	723.7	722.1	717.3	717.3	712.5	712.5
10°	707.7	710.9	710.9	712.5	715.7	715.7	714.1	709.3	709.3	704.5	704.5
12.5°	699.7	704.5	702.9	706.1	707.7	707.7	707.7	701.3	701.3	696.5	696.5
15°	693.3	698.1	696.5	699.7	701.3	701.3	699.7	694.9	693.3	688.5	688.5
17.5°	682.1	686.9	683.7	686.9	690.1	688.5	686.9	682.1	680.5	674.1	674.1
20°	667.7	670.9	669.3	670.9	674.1	674.1	672.5	666.1	664.5	658.1	656.5
22.5°	651.7	654.9	653.3	654.9	658.1	656.5	654.9	648.5	645.3	638.9	637.3
25°	635.7	638.9	637.3	638.9	642.1	640.5	637.3	630.9	627.7	619.7	618.1
27.5°	614.9	618.1	616.5	619.7	622.9	621.3	618.1	611.6	606.8	597.2	595.6
30°	590.8	594.0	592.4	594.0	597.2	597.2	594.0	589.2	584.4	574.8	570.0
32.5°	558.8	563.6	562.0	566.8	570.0	570.0	570.0	563.6	558.8	549.2	542.8
35°	522.0	526.8	525.2	530.0	534.8	538.0	539.6	536.4	533.2	520.4	512.4
37.5°	480.4	485.2	483.6	490.0	496.4	501.2	504.4	502.8	501.2	490.0	480.4
40°	437.1	440.3	440.3	445.1	454.7	461.1	465.9	465.9	464.3	454.7	446.7
42.5°	392.3	397.1	397.1	403.5	411.5	419.5	422.7	425.9	427.5	416.3	408.3
45°	350.7	353.9	353.9	358.7	368.3	376.3	381.1	384.3	385.9	374.7	366.7
47.5°	312.2	315.4	317.0	323.4	328.2	334.6	339.4	341.1	342.7	334.6	325.0
50°	281.8	283.4	285.0	289.8	293.0	297.8	301.0	302.6	302.6	291.4	283.4
52.5°	254.6	256.2	256.2	261.0	264.2	267.4	267.4	267.4	265.8	256.2	243.4
55°	232.2	233.8	233.8	237.0	238.6	240.2	238.6	235.4	232.2	221.0	208.2
57.5°	211.4	213.0	213.0	214.6	214.6	214.6	211.4	208.2	201.7	188.9	177.7
60°	192.1	193.7	193.7	195.3	195.3	193.7	188.9	182.5	174.5	161.7	150.5
62.5°	174.5	176.1	176.1	176.1	176.1	172.9	166.5	158.5	148.9	139.3	128.1
65°	156.9	158.5	156.9	158.5	156.9	152.1	144.1	136.1	126.5	116.9	107.3
67.5°	139.3	140.9	139.3	139.3	136.1	131.3	123.3	115.3	107.3	97.7	88.1
70°	123.3	123.3	121.7	120.1	115.3	110.5	102.5	96.1	88.1	80.1	72.1
72.5°	105.7	107.3	104.1	100.9	96.1	89.7	83.3	76.9	70.5	62.4	56.0
75°	89.7	89.7	84.9	81.7	76.9	72.1	65.6	59.2	52.8	46.4	41.6
77.5°	67.2	67.2	62.4	60.8	56.0	52.8	46.4	41.6	36.8	33.6	28.8
80°	36.8	36.8	35.2	33.6	32.0	30.4	27.2	25.6	22.4	19.2	16.0
82.5°	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	8.0	6.4
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6	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):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	704.5	704.5	704.5	704.5	704.5	704.5	704.5	704.5	704.5	704.5	704.5
2.5°	707.7	710.9	706.1	710.9	709.3	699.7	709.3	704.5	701.3	704.5	699.7
5°	712.5	714.1	709.3	714.1	710.9	701.3	707.7	702.9	699.7	701.3	694.9
7.5°	710.9	712.5	707.7	710.9	706.1	696.5	702.9	696.5	691.7	691.7	683.7
10°	702.9	704.5	698.1	701.3	696.5	685.3	691.7	683.7	678.9	675.7	667.7
12.5°	694.9	694.9	690.1	691.7	686.9	675.7	678.9	670.9	664.5	661.3	650.1
15°	685.3	685.3	680.5	682.1	675.7	664.5	667.7	658.1	650.1	645.3	632.5
17.5°	670.9	670.9	664.5	666.1	658.1	646.9	650.1	637.3	629.3	621.3	608.4
20°	651.7	650.1	643.7	643.7	635.7	622.9	626.1	613.3	602.0	594.0	579.6
22.5°	632.5	629.3	622.9	621.3	611.6	597.2	598.8	584.4	573.2	563.6	547.6
25°	610.0	605.2	597.2	594.0	584.4	570.0	570.0	554.0	542.8	530.0	514.0
27.5°	587.6	581.2	570.0	565.2	552.4	536.4	534.8	518.8	506.0	493.2	475.5
30°	560.4	552.4	538.0	531.6	517.2	499.6	494.8	478.8	464.3	449.9	435.5
32.5°	530.0	520.4	504.4	494.8	477.2	457.9	453.1	433.9	421.1	406.7	390.7
35°	498.0	485.2	467.5	454.7	435.5	416.3	406.7	387.5	374.7	360.3	347.5
37.5°	464.3	448.3	427.5	413.1	390.7	373.1	360.3	341.1	328.2	315.4	304.2
40°	429.1	409.9	387.5	368.3	345.9	328.2	313.8	294.6	283.4	272.2	262.6
42.5°	390.7	369.9	345.9	325.0	301.0	283.4	267.4	251.4	240.2	229.0	221.0
45°	349.1	328.2	302.6	281.8	257.8	240.2	225.8	209.8	200.1	190.5	184.1
47.5°	305.8	286.6	261.0	240.2	217.8	201.7	187.3	172.9	163.3	156.9	152.1
50°	264.2	245.0	222.6	201.7	180.9	166.5	153.7	140.9	132.9	126.5	121.7
52.5°	225.8	208.2	187.3	169.7	150.5	136.1	124.9	115.3	107.3	100.9	96.1
55°	192.1	176.1	156.9	140.9	124.9	112.1	102.5	92.9	86.5	78.5	73.7
57.5°	161.7	147.3	131.3	116.9	100.9	91.3	83.3	73.7	67.2	62.4	56.0
60°	137.7	124.9	108.9	96.1	83.3	75.3	67.2	59.2	54.4	48.0	43.2
62.5°	115.3	104.1	91.3	78.5	67.2	60.8	54.4	48.0	41.6	36.8	32.0
65°	96.1	84.9	73.7	62.4	54.4	48.0	43.2	36.8	32.0	27.2	22.4
67.5°	78.5	68.9	57.6	49.6	43.2	38.4	33.6	27.2	24.0	19.2	16.0
70°	62.4	54.4	44.8	38.4	33.6	28.8	24.0	20.8	16.0	12.8	9.6
72.5°	48.0	41.6	33.6	28.8	25.6	20.8	17.6	14.4	11.2	9.6	6.4
75°	35.2	28.8	24.0	20.8	17.6	14.4	11.2	9.6	8.0	4.8	3.2
77.5°	24.0	19.2	16.0	12.8	11.2	9.6	6.4	6.4	4.8	3.2	1.6
80°	14.4	9.6	8.0	6.4	4.8	4.8	3.2	3.2	1.6	1.6	0.0
82.5°	4.8	3.2	1.6	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0
85°	0.0	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):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	704.5	704.5	704.5	704.5	704.5	704.5	704.5	704.5	704.5	704.5	704.5
2.5°	693.3	696.5	693.3	696.5	696.5	690.1	691.7	691.7	686.9	686.9	688.5
5°	686.9	686.9	683.7	685.3	685.3	677.3	677.3	677.3	670.9	669.3	669.3
7.5°	675.7	674.1	667.7	667.7	666.1	658.1	654.9	653.3	646.9	645.3	643.7
10°	658.1	654.9	646.9	645.3	642.1	632.5	627.7	624.5	618.1	614.9	614.9
12.5°	638.9	635.7	626.1	622.9	616.5	605.2	600.4	597.2	587.6	582.8	582.8
15°	619.7	614.9	603.6	597.2	590.8	579.6	573.2	568.4	558.8	554.0	552.4
17.5°	594.0	587.6	576.4	568.4	560.4	549.2	542.8	534.8	526.8	522.0	518.8
20°	563.6	555.6	541.2	534.8	526.8	514.0	506.0	501.2	491.6	486.8	485.2
22.5°	531.6	522.0	507.6	499.6	490.0	478.8	473.9	465.9	457.9	454.7	451.5
25°	496.4	488.4	472.3	464.3	454.7	443.5	438.7	432.3	425.9	424.3	419.5
27.5°	457.9	449.9	437.1	427.5	419.5	408.3	403.5	398.7	392.3	390.7	389.1
30°	417.9	409.9	397.1	389.1	381.1	373.1	368.3	363.5	358.7	358.7	358.7
32.5°	376.3	368.3	358.7	350.7	344.3	337.8	334.6	329.8	326.6	328.2	329.8
35°	333.0	328.2	318.6	313.8	309.0	302.6	301.0	297.8	294.6	296.2	296.2
37.5°	291.4	288.2	281.8	277.0	273.8	269.0	269.0	265.8	262.6	265.8	265.8
40°	251.4	248.2	243.4	241.8	238.6	237.0	235.4	235.4	233.8	237.0	243.4
42.5°	213.0	211.4	208.2	206.6	205.0	203.3	205.0	205.0	208.2	219.4	232.2
45°	177.7	177.7	174.5	174.5	172.9	172.9	174.5	179.3	188.9	201.7	203.3
47.5°	145.7	145.7	142.5	142.5	142.5	142.5	148.9	156.9	155.3	148.9	134.5
50°	116.9	115.3	113.7	113.7	113.7	116.9	120.1	110.5	97.7	83.3	75.3
52.5°	91.3	88.1	86.5	86.5	88.1	88.1	78.5	64.0	54.4	49.6	43.2
55°	68.9	65.6	62.4	62.4	60.8	52.8	41.6	36.8	28.8	25.6	22.4
57.5°	49.6	48.0	43.2	40.0	33.6	27.2	22.4	16.0	14.4	11.2	9.6
60°	36.8	33.6	28.8	24.0	19.2	14.4	9.6	8.0	8.0	6.4	6.4
62.5°	27.2	24.0	19.2	14.4	9.6	6.4	6.4	6.4	4.8	4.8	4.8
65°	19.2	16.0	11.2	8.0	4.8	4.8	4.8	4.8	4.8	3.2	3.2
67.5°	12.8	9.6	4.8	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
70°	8.0	4.8	1.6	3.2	1.6	1.6	3.2	3.2	3.2	3.2	1.6
72.5°	3.2	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
75°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
77.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
80°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6	1.6
85°	0.0	0.0	0.0	0.0	1.6	1.6	1.6	1.6	1.6	1.6	1.6
87.5°	0.0	0.0	0.0	0.0	0.0	1.6	1.6	0.0	0.0	0.0	1.6
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°	704.5	704.5	704.5	704.5
2.5°	685.3	685.3	686.9	688.5
5°	666.1	667.7	667.7	667.7
7.5°	640.5	640.5	642.1	642.1
10°	608.4	608.4	610.0	610.0
12.5°	578.0	576.4	578.0	578.0
15°	547.6	546.0	546.0	546.0
17.5°	514.0	512.4	512.4	514.0
20°	480.4	478.8	478.8	478.8
22.5°	446.7	446.7	446.7	446.7
25°	416.3	414.7	414.7	414.7
27.5°	385.9	385.9	385.9	385.9
30°	355.5	355.5	357.1	357.1
32.5°	328.2	328.2	328.2	328.2
35°	296.2	299.4	301.0	302.6
37.5°	267.4	272.2	277.0	278.6
40°	249.8	259.4	265.8	267.4
42.5°	241.8	249.8	253.0	254.6
45°	198.5	190.5	185.7	184.1
47.5°	121.7	110.5	104.1	102.5
50°	70.5	65.6	62.4	60.8
52.5°	38.4	33.6	32.0	32.0
55°	19.2	16.0	14.4	12.8
57.5°	8.0	8.0	8.0	8.0
60°	6.4	6.4	6.4	6.4
62.5°	4.8	4.8	4.8	4.8
65°	3.2	3.2	3.2	3.2
67.5°	3.2	3.2	3.2	3.2
70°	1.6	1.6	1.6	1.6
72.5°	1.6	1.6	1.6	1.6
75°	1.6	1.6	1.6	1.6
77.5°	1.6	1.6	1.6	1.6
80°	1.6	1.6	1.6	1.6
82.5°	1.6	1.6	0.0	1.6
85°	1.6	1.6	1.6	1.6
87.5°	0.0	1.6	0.0	1.6
90°	0.0	0.0	0.0	0.0



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















(END OF REPORT)