

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: P136995

Luminaire Tested: **LDSQ6A15D010TE ESQ6A15940 6LSQLWW1LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136995
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 ESQ6A15940 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 4000K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1154.1 lumens
Efficiency: N/A
Efficacy: 51.1 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

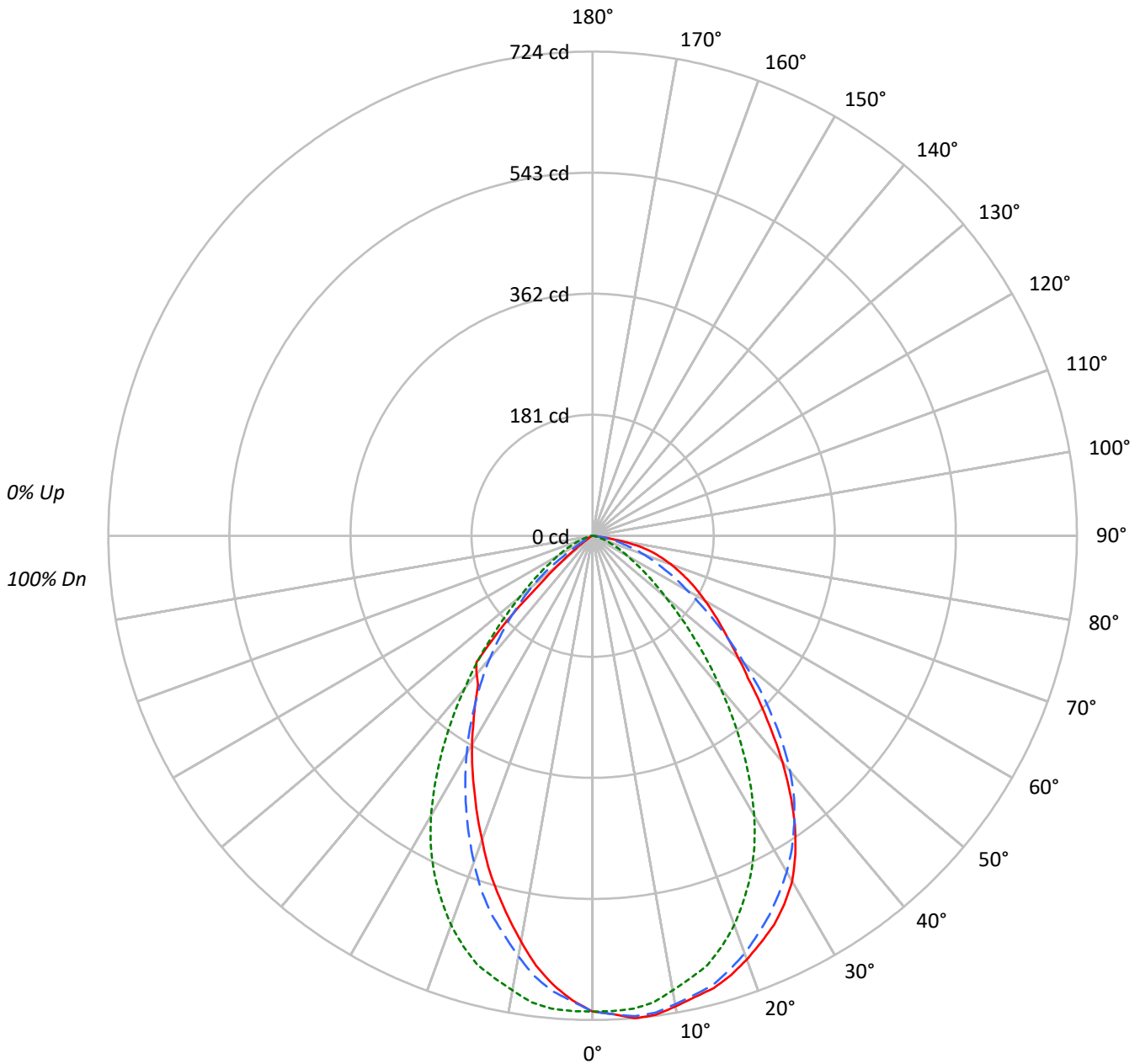
Input Watts (W): 22.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	83	78	74	81	76	73	78	75	71	70																			
4	89	80	72	67	87	78	71	66	76	70	65	74	69	65	72	67	64	62																			
5	83	72	65	59	81	71	64	59	69	63	58	68	62	58	66	61	57	55																			
6	78	66	59	53	76	65	58	53	64	57	53	62	57	52	61	56	52	50																			
7	73	61	53	48	71	60	53	48	59	52	48	58	52	47	56	51	47	45																			
8	68	56	49	44	67	56	49	44	55	48	43	53	47	43	52	47	43	41																			
9	64	52	45	40	63	52	45	40	51	44	40	50	44	40	49	43	39	38																			
10	61	49	42	37	59	48	41	37	47	41	37	46	41	37	46	40	36	35																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	30625	30625	30625
5°	31304	30673	29139
10°	31242	30180	26931
15°	31207	29615	24574
20°	30891	28371	22144
25°	30490	26570	19891
30°	29656	24028	17923
35°	27700	20562	16063
40°	24803	16721	15170
45°	21555	12890	11319
50°	19057	9532	4113
55°	17595	7041	968
60°	16706	5149	551
65°	16138	3790	326
70°	15673	2644	214
75°	15055	1614	283
80°	9224	793	422
85°	0	0	840



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.4	5.8
10°-20°	180.5	15.6
20°-30°	248.7	21.6
30°-40°	255.6	22.1
40°-50°	199.6	17.3
50°-60°	112.3	9.7
60°-70°	61.1	5.3
70°-80°	27.3	2.4
80°-90°	2.6	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°	495.6	42.9
0°-40°	751.2	65.1
0°-60°	1063.1	92.1
0°-90°	1154.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1154.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	711	711	711	711	711	
5°	724	721	710	684	674	69
15°	700	695	664	585	551	197
25°	642	626	559	448	419	295
35°	527	525	391	306	306	327
45°	354	378	212	175	186	275
55°	234	223	94	53	13	211
65°	158	118	37	5	3	157
75°	90	47	10	2	2	91
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°	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3
2.5°	716.2	721.1	719.4	722.6	724.3	724.3	724.3	717.8	719.4	716.2	716.2
5°	724.3	727.5	725.8	729.2	730.7	730.7	730.7	724.3	725.8	721.1	721.1
7.5°	722.6	725.8	724.3	727.5	730.7	730.7	729.2	724.3	724.3	719.4	719.4
10°	714.6	717.8	717.8	719.4	722.6	722.6	721.1	716.2	716.2	711.3	711.3
12.5°	706.5	711.3	709.7	712.9	714.6	714.6	714.6	708.1	708.1	703.3	703.3
15°	700.1	704.8	703.3	706.5	708.1	708.1	706.5	701.6	700.1	695.2	695.2
17.5°	688.7	693.5	690.3	693.5	696.7	695.2	693.5	688.7	687.1	680.6	680.6
20°	674.2	677.4	675.7	677.4	680.6	680.6	679.0	672.5	670.9	664.4	662.8
22.5°	658.0	661.2	659.6	661.2	664.4	662.8	661.2	654.7	651.5	645.1	643.4
25°	641.8	645.1	643.4	645.1	648.3	646.6	643.4	637.0	633.7	625.6	624.1
27.5°	620.8	624.1	622.4	625.6	628.9	627.3	624.1	617.5	612.7	603.0	601.4
30°	596.5	599.8	598.2	599.8	603.0	603.0	599.8	595.0	590.1	580.4	575.5
32.5°	564.2	569.1	567.4	572.3	575.5	575.5	575.5	569.1	564.2	554.5	548.1
35°	527.0	531.9	530.2	535.1	540.0	543.2	544.8	541.5	538.3	525.4	517.3
37.5°	485.0	489.9	488.2	494.7	501.2	506.0	509.2	507.7	506.0	494.7	485.0
40°	441.3	444.6	444.6	449.4	459.1	465.6	470.4	470.4	468.8	459.1	451.0
42.5°	396.1	400.9	400.9	407.4	415.5	423.6	426.8	430.0	431.7	420.3	412.2
45°	354.0	357.3	357.3	362.1	371.8	379.9	384.8	388.0	389.6	378.3	370.2
47.5°	315.3	318.5	320.1	326.6	331.4	337.9	342.7	344.4	345.9	337.9	328.2
50°	284.5	286.2	287.7	292.6	295.8	300.7	303.9	305.6	305.6	294.3	286.2
52.5°	257.1	258.7	258.7	263.5	266.7	269.9	269.9	269.9	268.4	258.7	245.7
55°	234.4	236.1	236.1	239.3	240.8	242.5	240.8	237.6	234.4	223.1	210.2
57.5°	213.4	215.1	215.1	216.6	216.6	216.6	213.4	210.2	203.7	190.7	179.4
60°	194.0	195.6	195.6	197.3	197.3	195.6	190.7	184.3	176.2	163.3	152.0
62.5°	176.2	177.8	177.8	177.8	177.8	174.6	168.2	160.1	150.3	140.6	129.3
65°	158.4	160.1	158.4	160.1	158.4	153.6	145.5	137.4	127.7	118.0	108.3
67.5°	140.6	142.3	140.6	140.6	137.4	132.5	124.5	116.4	108.3	98.6	88.9
70°	124.5	124.5	122.9	121.2	116.4	111.5	103.4	97.0	88.9	80.9	72.8
72.5°	106.7	108.3	105.1	101.9	97.0	90.5	84.1	77.6	71.1	63.1	56.5
75°	90.5	90.5	85.7	82.4	77.6	72.8	66.3	59.8	53.3	46.9	42.0
77.5°	67.9	67.9	63.1	61.4	56.5	53.3	46.9	42.0	37.2	34.0	29.1
80°	37.2	37.2	35.6	34.0	32.3	30.8	27.4	25.9	22.7	19.4	16.2
82.5°	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	8.1	6.4
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	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°	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3
2.5°	714.6	717.8	712.9	717.8	716.2	706.5	716.2	711.3	708.1	711.3	706.5
5°	719.4	721.1	716.2	721.1	717.8	708.1	714.6	709.7	706.5	708.1	701.6
7.5°	717.8	719.4	714.6	717.8	712.9	703.3	709.7	703.3	698.4	698.4	690.3
10°	709.7	711.3	704.8	708.1	703.3	691.9	698.4	690.3	685.5	682.3	674.2
12.5°	701.6	701.6	696.7	698.4	693.5	682.3	685.5	677.4	670.9	667.7	656.4
15°	691.9	691.9	687.1	688.7	682.3	670.9	674.2	664.4	656.4	651.5	638.6
17.5°	677.4	677.4	670.9	672.5	664.4	653.2	656.4	643.4	635.3	627.3	614.3
20°	658.0	656.4	649.9	649.9	641.8	628.9	632.1	619.2	607.9	599.8	585.2
22.5°	638.6	635.3	628.9	627.3	617.5	603.0	604.6	590.1	578.8	569.1	552.9
25°	616.0	611.1	603.0	599.8	590.1	575.5	575.5	559.3	548.1	535.1	519.0
27.5°	593.3	586.9	575.5	570.7	557.8	541.5	540.0	523.8	510.9	497.9	480.1
30°	565.9	557.8	543.2	536.8	522.2	504.4	499.6	483.3	468.8	454.2	439.8
32.5°	535.1	525.4	509.2	499.6	481.8	462.3	457.6	438.1	425.2	410.7	394.5
35°	502.8	489.9	472.1	459.1	439.8	420.3	410.7	391.2	378.3	363.7	350.8
37.5°	468.8	452.7	431.7	417.1	394.5	376.7	363.7	344.4	331.4	318.5	307.2
40°	433.2	413.9	391.2	371.8	349.2	331.4	316.8	297.5	286.2	274.8	265.2
42.5°	394.5	373.5	349.2	328.2	303.9	286.2	269.9	253.8	242.5	231.2	223.1
45°	352.5	331.4	305.6	284.5	260.3	242.5	227.9	211.7	202.1	192.4	185.9
47.5°	308.8	289.4	263.5	242.5	219.8	203.7	189.2	174.6	164.9	158.4	153.6
50°	266.7	247.4	224.7	203.7	182.7	168.2	155.2	142.3	134.2	127.7	122.9
52.5°	227.9	210.2	189.2	171.4	152.0	137.4	126.1	116.4	108.3	101.9	97.0
55°	194.0	177.8	158.4	142.3	126.1	113.2	103.4	93.8	87.3	79.2	74.3
57.5°	163.3	148.7	132.5	118.0	101.9	92.2	84.1	74.3	67.9	63.1	56.5
60°	139.1	126.1	110.0	97.0	84.1	76.0	67.9	59.8	55.0	48.5	43.7
62.5°	116.4	105.1	92.2	79.2	67.9	61.4	55.0	48.5	42.0	37.2	32.3
65°	97.0	85.7	74.3	63.1	55.0	48.5	43.7	37.2	32.3	27.4	22.7
67.5°	79.2	69.5	58.2	50.1	43.7	38.8	34.0	27.4	24.2	19.4	16.2
70°	63.1	55.0	45.2	38.8	34.0	29.1	24.2	21.0	16.2	12.9	9.7
72.5°	48.5	42.0	34.0	29.1	25.9	21.0	17.8	14.6	11.3	9.7	6.4
75°	35.6	29.1	24.2	21.0	17.8	14.6	11.3	9.7	8.1	4.9	3.2
77.5°	24.2	19.4	16.2	12.9	11.3	9.7	6.4	6.4	4.9	3.2	1.7
80°	14.6	9.7	8.1	6.4	4.9	4.9	3.2	3.2	1.7	1.7	0.0
82.5°	4.9	3.2	1.7	1.7	1.7	1.7	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°	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3
2.5°	700.1	703.3	700.1	703.3	703.3	696.7	698.4	698.4	693.5	693.5	695.2
5°	693.5	693.5	690.3	691.9	691.9	683.8	683.8	683.8	677.4	675.7	675.7
7.5°	682.3	680.6	674.2	674.2	672.5	664.4	661.2	659.6	653.2	651.5	649.9
10°	664.4	661.2	653.2	651.5	648.3	638.6	633.7	630.5	624.1	620.8	620.8
12.5°	645.1	641.8	632.1	628.9	622.4	611.1	606.2	603.0	593.3	588.4	588.4
15°	625.6	620.8	609.5	603.0	596.5	585.2	578.8	573.9	564.2	559.3	557.8
17.5°	599.8	593.3	582.0	573.9	565.9	554.5	548.1	540.0	531.9	527.0	523.8
20°	569.1	561.0	546.4	540.0	531.9	519.0	510.9	506.0	496.3	491.4	489.9
22.5°	536.8	527.0	512.4	504.4	494.7	483.3	478.6	470.4	462.3	459.1	455.9
25°	501.2	493.1	476.9	468.8	459.1	447.8	443.0	436.5	430.0	428.4	423.6
27.5°	462.3	454.2	441.3	431.7	423.6	412.2	407.4	402.6	396.1	394.5	392.8
30°	421.9	413.9	400.9	392.8	384.8	376.7	371.8	367.0	362.1	362.1	362.1
32.5°	379.9	371.8	362.1	354.0	347.6	341.1	337.9	333.0	329.8	331.4	333.0
35°	336.3	331.4	321.7	316.8	312.0	305.6	303.9	300.7	297.5	299.0	299.0
37.5°	294.3	291.0	284.5	279.7	276.5	271.6	271.6	268.4	265.2	268.4	268.4
40°	253.8	250.6	245.7	244.2	240.8	239.3	237.6	237.6	236.1	239.3	245.7
42.5°	215.1	213.4	210.2	208.5	206.9	205.3	206.9	206.9	210.2	221.5	234.4
45°	179.4	179.4	176.2	176.2	174.6	174.6	176.2	181.1	190.7	203.7	205.3
47.5°	147.1	147.1	143.9	143.9	143.9	143.9	150.3	158.4	156.8	150.3	135.8
50°	118.0	116.4	114.8	114.8	114.8	118.0	121.2	111.5	98.6	84.1	76.0
52.5°	92.2	88.9	87.3	87.3	88.9	88.9	79.2	64.7	55.0	50.1	43.7
55°	69.5	66.3	63.1	63.1	61.4	53.3	42.0	37.2	29.1	25.9	22.7
57.5°	50.1	48.5	43.7	40.4	34.0	27.4	22.7	16.2	14.6	11.3	9.7
60°	37.2	34.0	29.1	24.2	19.4	14.6	9.7	8.1	8.1	6.4	6.4
62.5°	27.4	24.2	19.4	14.6	9.7	6.4	6.4	6.4	4.9	4.9	4.9
65°	19.4	16.2	11.3	8.1	4.9	4.9	4.9	4.9	4.9	3.2	3.2
67.5°	12.9	9.7	4.9	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
70°	8.1	4.9	1.7	3.2	1.7	1.7	3.2	3.2	3.2	3.2	1.7
72.5°	3.2	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
75°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
77.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
80°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	1.7
85°	0.0	0.0	0.0	0.0	1.7	1.7	1.7	1.7	1.7	1.7	1.7
87.5°	0.0	0.0	0.0	0.0	0.0	1.7	1.7	0.0	0.0	0.0	1.7
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: P136995

CATALOG NUMBER: LDSQ6A15D010TE ESQ6A15940 6LSQLWW1LI

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	711.3	711.3	711.3	711.3
2.5°	691.9	691.9	693.5	695.2
5°	672.5	674.2	674.2	674.2
7.5°	646.6	646.6	648.3	648.3
10°	614.3	614.3	616.0	616.0
12.5°	583.6	582.0	583.6	583.6
15°	552.9	551.3	551.3	551.3
17.5°	519.0	517.3	517.3	519.0
20°	485.0	483.3	483.3	483.3
22.5°	451.0	451.0	451.0	451.0
25°	420.3	418.7	418.7	418.7
27.5°	389.6	389.6	389.6	389.6
30°	358.9	358.9	360.5	360.5
32.5°	331.4	331.4	331.4	331.4
35°	299.0	302.3	303.9	305.6
37.5°	269.9	274.8	279.7	281.3
40°	252.2	261.9	268.4	269.9
42.5°	244.2	252.2	255.4	257.1
45°	200.5	192.4	187.5	185.9
47.5°	122.9	111.5	105.1	103.4
50°	71.1	66.3	63.1	61.4
52.5°	38.8	34.0	32.3	32.3
55°	19.4	16.2	14.6	12.9
57.5°	8.1	8.1	8.1	8.1
60°	6.4	6.4	6.4	6.4
62.5°	4.9	4.9	4.9	4.9
65°	3.2	3.2	3.2	3.2
67.5°	3.2	3.2	3.2	3.2
70°	1.7	1.7	1.7	1.7
72.5°	1.7	1.7	1.7	1.7
75°	1.7	1.7	1.7	1.7
77.5°	1.7	1.7	1.7	1.7
80°	1.7	1.7	1.7	1.7
82.5°	1.7	1.7	0.0	1.7
85°	1.7	1.7	1.7	1.7
87.5°	0.0	1.7	0.0	1.7
90°	0.0	0.0	0.0	0.0



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













(END OF REPORT)