

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: P136959

Luminaire Tested: **LDSQ6A10D010TE ESQ6A10840 6LSQLWW1LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136959
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: LDSQ6A10D010TE ESQ6A10840 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: 922.5 lumens
Efficiency: N/A
Efficacy: 65.9 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

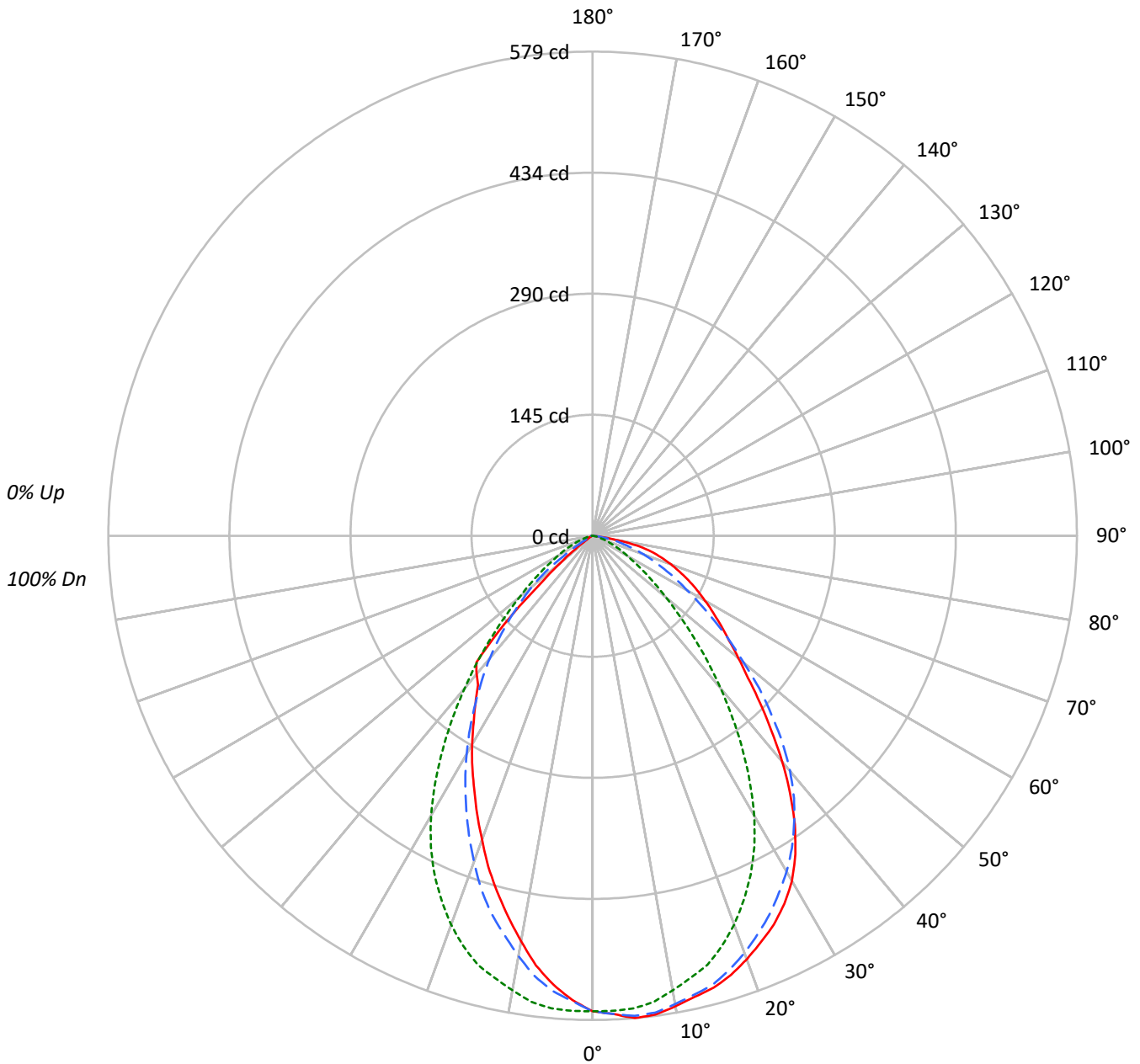
Input Watts (W): 14
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
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°	24481	24481	24481
5°	25020	24519	23291
10°	24973	24125	21523
15°	24939	23674	19644
20°	24692	22676	17704
25°	24371	21240	15900
30°	23705	19210	14328
35°	22144	16436	12835
40°	19829	13366	12129
45°	17232	10309	9048
50°	15232	7616	3289
55°	14067	5630	773
60°	13356	4116	448
65°	12898	3026	265
70°	12526	2115	164
75°	12044	1298	216
80°	7364	645	322
85°	0	0	642



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.1	5.8
10°-20°	144.3	15.6
20°-30°	198.8	21.6
30°-40°	204.3	22.1
40°-50°	159.5	17.3
50°-60°	89.8	9.7
60°-70°	48.8	5.3
70°-80°	21.8	2.4
80°-90°	2.0	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°	396.2	42.9
0°-40°	600.5	65.1
0°-60°	849.8	92.1
0°-90°	922.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	922.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	569	569	569	569	569	
5°	579	576	567	547	539	55
15°	560	556	531	468	441	158
25°	513	500	447	358	335	236
35°	421	420	313	244	244	261
45°	283	302	169	140	149	220
55°	187	178	75	43	10	169
65°	127	94	30	4	3	126
75°	72	38	8	1	1	73
85°	0	1	0	1	1	6
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°	568.6	568.6	568.6	568.6	568.6	568.6	568.6	568.6	568.6	568.6	568.6
2.5°	572.5	576.3	575.1	577.6	578.9	578.9	578.9	573.8	575.1	572.5	572.5
5°	578.9	581.5	580.2	582.8	584.1	584.1	584.1	578.9	580.2	576.3	576.3
7.5°	577.6	580.2	578.9	581.5	584.1	584.1	582.8	578.9	578.9	575.1	575.1
10°	571.2	573.8	573.8	575.1	577.6	577.6	576.3	572.5	572.5	568.6	568.6
12.5°	564.7	568.6	567.3	569.9	571.2	571.2	571.2	566.0	566.0	562.1	562.1
15°	559.5	563.4	562.1	564.7	566.0	566.0	564.7	560.8	559.5	555.7	555.7
17.5°	550.5	554.4	551.8	554.4	557.0	555.7	554.4	550.5	549.2	544.0	544.0
20°	538.9	541.5	540.2	541.5	544.0	544.0	542.7	537.6	536.3	531.1	529.8
22.5°	525.9	528.5	527.2	528.5	531.1	529.8	528.5	523.4	520.8	515.6	514.3
25°	513.0	515.6	514.3	515.6	518.2	516.9	514.3	509.1	506.6	500.1	498.8
27.5°	496.2	498.8	497.5	500.1	502.7	501.4	498.8	493.6	489.8	482.0	480.7
30°	476.8	479.4	478.1	479.4	482.0	482.0	479.4	475.5	471.7	463.9	460.0
32.5°	451.0	454.9	453.6	457.5	460.0	460.0	460.0	454.9	451.0	443.2	438.1
35°	421.3	425.2	423.9	427.7	431.6	434.2	435.5	432.9	430.3	420.0	413.5
37.5°	387.7	391.6	390.3	395.4	400.6	404.5	407.1	405.8	404.5	395.4	387.7
40°	352.8	355.4	355.4	359.2	367.0	372.2	376.0	376.0	374.8	367.0	360.5
42.5°	316.6	320.5	320.5	325.6	332.1	338.6	341.2	343.7	345.0	336.0	329.5
45°	283.0	285.6	285.6	289.5	297.2	303.7	307.6	310.1	311.4	302.4	295.9
47.5°	252.0	254.6	255.9	261.0	264.9	270.1	274.0	275.2	276.5	270.1	262.3
50°	227.4	228.7	230.0	233.9	236.5	240.4	242.9	244.2	244.2	235.2	228.7
52.5°	205.5	206.8	206.8	210.6	213.2	215.8	215.8	215.8	214.5	206.8	196.4
55°	187.4	188.7	188.7	191.3	192.5	193.8	192.5	190.0	187.4	178.3	168.0
57.5°	170.6	171.9	171.9	173.2	173.2	173.2	170.6	168.0	162.8	152.5	143.4
60°	155.1	156.4	156.4	157.7	157.7	156.4	152.5	147.3	140.9	130.5	121.5
62.5°	140.9	142.1	142.1	142.1	142.1	139.6	134.4	127.9	120.2	112.4	103.4
65°	126.6	127.9	126.6	127.9	126.6	122.8	116.3	109.8	102.1	94.3	86.6
67.5°	112.4	113.7	112.4	112.4	109.8	106.0	99.5	93.0	86.6	78.8	71.1
70°	99.5	99.5	98.2	96.9	93.0	89.2	82.7	77.5	71.1	64.6	58.2
72.5°	85.3	86.6	84.0	81.4	77.5	72.4	67.2	62.0	56.9	50.4	45.2
75°	72.4	72.4	68.5	65.9	62.0	58.2	53.0	47.8	42.6	37.5	33.6
77.5°	54.3	54.3	50.4	49.1	45.2	42.6	37.5	33.6	29.7	27.1	23.3
80°	29.7	29.7	28.4	27.1	25.8	24.6	22.0	20.7	18.1	15.5	12.9
82.5°	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	6.5	5.2
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	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°	568.6	568.6	568.6	568.6	568.6	568.6	568.6	568.6	568.6	568.6	568.6
2.5°	571.2	573.8	569.9	573.8	572.5	564.7	572.5	568.6	566.0	568.6	564.7
5°	575.1	576.3	572.5	576.3	573.8	566.0	571.2	567.3	564.7	566.0	560.8
7.5°	573.8	575.1	571.2	573.8	569.9	562.1	567.3	562.1	558.3	558.3	551.8
10°	567.3	568.6	563.4	566.0	562.1	553.1	558.3	551.8	547.9	545.3	538.9
12.5°	560.8	560.8	557.0	558.3	554.4	545.3	547.9	541.5	536.3	533.7	524.7
15°	553.1	553.1	549.2	550.5	545.3	536.3	538.9	531.1	524.7	520.8	510.4
17.5°	541.5	541.5	536.3	537.6	531.1	522.1	524.7	514.3	507.9	501.4	491.1
20°	525.9	524.7	519.5	519.5	513.0	502.7	505.3	494.9	485.9	479.4	467.8
22.5°	510.4	507.9	502.7	501.4	493.6	482.0	483.3	471.7	462.6	454.9	441.9
25°	492.3	488.5	482.0	479.4	471.7	460.0	460.0	447.1	438.1	427.7	414.8
27.5°	474.3	469.1	460.0	456.2	445.8	432.9	431.6	418.7	408.4	398.0	383.8
30°	452.3	445.8	434.2	429.0	417.4	403.2	399.3	386.4	374.8	363.1	351.5
32.5°	427.7	420.0	407.1	399.3	385.1	369.6	365.7	350.2	339.9	328.2	315.3
35°	401.9	391.6	377.3	367.0	351.5	336.0	328.2	312.7	302.4	290.8	280.4
37.5°	374.8	361.8	345.0	333.4	315.3	301.1	290.8	275.2	264.9	254.6	245.5
40°	346.3	330.8	312.7	297.2	279.1	264.9	253.3	237.8	228.7	219.7	211.9
42.5°	315.3	298.5	279.1	262.3	242.9	228.7	215.8	202.9	193.8	184.8	178.3
45°	281.7	264.9	244.2	227.4	208.1	193.8	182.2	169.3	161.5	153.8	148.6
47.5°	246.8	231.3	210.6	193.8	175.7	162.8	151.2	139.6	131.8	126.6	122.8
50°	213.2	197.7	179.6	162.8	146.0	134.4	124.1	113.7	107.3	102.1	98.2
52.5°	182.2	168.0	151.2	137.0	121.5	109.8	100.8	93.0	86.6	81.4	77.5
55°	155.1	142.1	126.6	113.7	100.8	90.5	82.7	75.0	69.8	63.3	59.4
57.5°	130.5	118.9	106.0	94.3	81.4	73.7	67.2	59.4	54.3	50.4	45.2
60°	111.1	100.8	87.9	77.5	67.2	60.7	54.3	47.8	43.9	38.8	34.9
62.5°	93.0	84.0	73.7	63.3	54.3	49.1	43.9	38.8	33.6	29.7	25.8
65°	77.5	68.5	59.4	50.4	43.9	38.8	34.9	29.7	25.8	22.0	18.1
67.5°	63.3	55.6	46.5	40.1	34.9	31.0	27.1	22.0	19.4	15.5	12.9
70°	50.4	43.9	36.2	31.0	27.1	23.3	19.4	16.8	12.9	10.3	7.8
72.5°	38.8	33.6	27.1	23.3	20.7	16.8	14.2	11.6	9.0	7.8	5.2
75°	28.4	23.3	19.4	16.8	14.2	11.6	9.0	7.8	6.5	3.9	2.6
77.5°	19.4	15.5	12.9	10.3	9.0	7.8	5.2	5.2	3.9	2.6	1.3
80°	11.6	7.8	6.5	5.2	3.9	3.9	2.6	2.6	1.3	1.3	0.0
82.5°	3.9	2.6	1.3	1.3	1.3	1.3	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°	568.6	568.6	568.6	568.6	568.6	568.6	568.6	568.6	568.6	568.6	568.6
2.5°	559.5	562.1	559.5	562.1	562.1	557.0	558.3	558.3	554.4	554.4	555.7
5°	554.4	554.4	551.8	553.1	553.1	546.6	546.6	546.6	541.5	540.2	540.2
7.5°	545.3	544.0	538.9	538.9	537.6	531.1	528.5	527.2	522.1	520.8	519.5
10°	531.1	528.5	522.1	520.8	518.2	510.4	506.6	504.0	498.8	496.2	496.2
12.5°	515.6	513.0	505.3	502.7	497.5	488.5	484.6	482.0	474.3	470.4	470.4
15°	500.1	496.2	487.2	482.0	476.8	467.8	462.6	458.7	451.0	447.1	445.8
17.5°	479.4	474.3	465.2	458.7	452.3	443.2	438.1	431.6	425.2	421.3	418.7
20°	454.9	448.4	436.8	431.6	425.2	414.8	408.4	404.5	396.7	392.8	391.6
22.5°	429.0	421.3	409.6	403.2	395.4	386.4	382.5	376.0	369.6	367.0	364.4
25°	400.6	394.1	381.2	374.8	367.0	358.0	354.1	348.9	343.7	342.4	338.6
27.5°	369.6	363.1	352.8	345.0	338.6	329.5	325.6	321.8	316.6	315.3	314.0
30°	337.3	330.8	320.5	314.0	307.6	301.1	297.2	293.3	289.5	289.5	289.5
32.5°	303.7	297.2	289.5	283.0	277.8	272.7	270.1	266.2	263.6	264.9	266.2
35°	268.8	264.9	257.2	253.3	249.4	244.2	242.9	240.4	237.8	239.1	239.1
37.5°	235.2	232.6	227.4	223.6	221.0	217.1	217.1	214.5	211.9	214.5	214.5
40°	202.9	200.3	196.4	195.1	192.5	191.3	190.0	190.0	188.7	191.3	196.4
42.5°	171.9	170.6	168.0	166.7	165.4	164.1	165.4	165.4	168.0	177.0	187.4
45°	143.4	143.4	140.9	140.9	139.6	139.6	140.9	144.7	152.5	162.8	164.1
47.5°	117.6	117.6	115.0	115.0	115.0	115.0	120.2	126.6	125.3	120.2	108.5
50°	94.3	93.0	91.7	91.7	91.7	94.3	96.9	89.2	78.8	67.2	60.7
52.5°	73.7	71.1	69.8	69.8	71.1	71.1	63.3	51.7	43.9	40.1	34.9
55°	55.6	53.0	50.4	50.4	49.1	42.6	33.6	29.7	23.3	20.7	18.1
57.5°	40.1	38.8	34.9	32.3	27.1	22.0	18.1	12.9	11.6	9.0	7.8
60°	29.7	27.1	23.3	19.4	15.5	11.6	7.8	6.5	6.5	5.2	5.2
62.5°	22.0	19.4	15.5	11.6	7.8	5.2	5.2	5.2	3.9	3.9	3.9
65°	15.5	12.9	9.0	6.5	3.9	3.9	3.9	3.9	3.9	2.6	2.6
67.5°	10.3	7.8	3.9	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
70°	6.5	3.9	1.3	2.6	1.3	1.3	2.6	2.6	2.6	2.6	1.3
72.5°	2.6	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
75°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
77.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
80°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3
85°	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3	1.3	1.3
87.5°	0.0	0.0	0.0	0.0	0.0	1.3	1.3	0.0	0.0	0.0	1.3
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: P136959

CATALOG NUMBER: LDSQ6A10D010TE ESQ6A10840 6LSQLWW1LI

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	568.6	568.6	568.6	568.6
2.5°	553.1	553.1	554.4	555.7
5°	537.6	538.9	538.9	538.9
7.5°	516.9	516.9	518.2	518.2
10°	491.1	491.1	492.3	492.3
12.5°	466.5	465.2	466.5	466.5
15°	441.9	440.7	440.7	440.7
17.5°	414.8	413.5	413.5	414.8
20°	387.7	386.4	386.4	386.4
22.5°	360.5	360.5	360.5	360.5
25°	336.0	334.7	334.7	334.7
27.5°	311.4	311.4	311.4	311.4
30°	286.9	286.9	288.2	288.2
32.5°	264.9	264.9	264.9	264.9
35°	239.1	241.7	242.9	244.2
37.5°	215.8	219.7	223.6	224.9
40°	201.6	209.3	214.5	215.8
42.5°	195.1	201.6	204.2	205.5
45°	160.2	153.8	149.9	148.6
47.5°	98.2	89.2	84.0	82.7
50°	56.9	53.0	50.4	49.1
52.5°	31.0	27.1	25.8	25.8
55°	15.5	12.9	11.6	10.3
57.5°	6.5	6.5	6.5	6.5
60°	5.2	5.2	5.2	5.2
62.5°	3.9	3.9	3.9	3.9
65°	2.6	2.6	2.6	2.6
67.5°	2.6	2.6	2.6	2.6
70°	1.3	1.3	1.3	1.3
72.5°	1.3	1.3	1.3	1.3
75°	1.3	1.3	1.3	1.3
77.5°	1.3	1.3	1.3	1.3
80°	1.3	1.3	1.3	1.3
82.5°	1.3	1.3	0.0	1.3
85°	1.3	1.3	1.3	1.3
87.5°	0.0	1.3	0.0	1.3
90°	0.0	0.0	0.0	0.0



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













(END OF REPORT)