

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: P226231

Luminaire Tested: **LD2B05D010 EU2B05WW8030 2LBSW\***

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P226231  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P14828)  
Test Lab: INNOVATION CENTER (G1)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LD2B05D010 EU2B05WW8030 2LBSW\*  
Description: 500 Lumen, 2inch Portfolio LED Downlight  
WALL WASH OPTIC  
WALL WASH LENSED TRIM  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 549.7 lumens  
Efficiency: N/A  
Efficacy: 75.3 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 0.79 / 1.02  
Luminous Opening: Rectangular (W 0.17' x L: 0.17' x H: 0')  
CIE Type: Direct

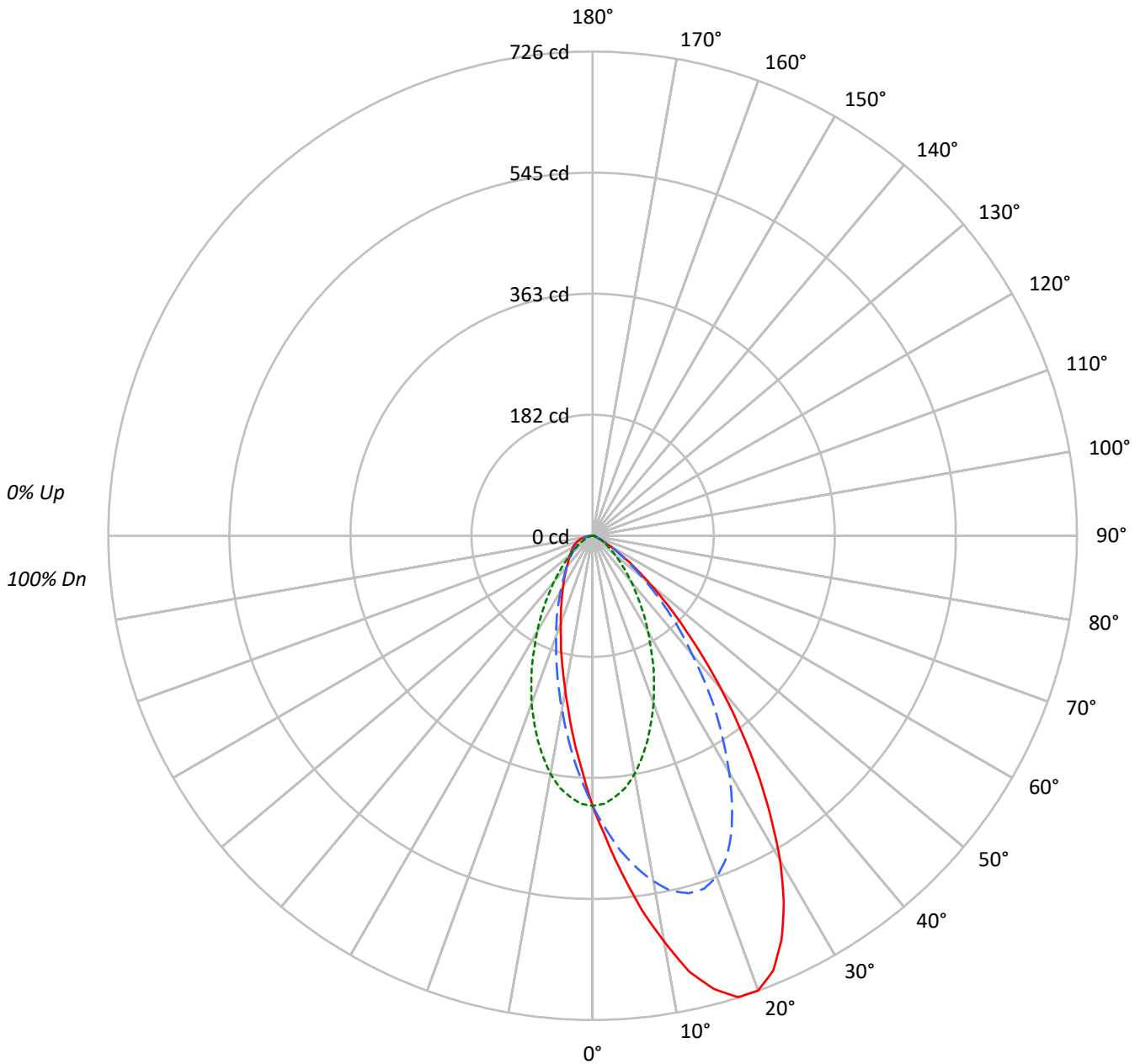
Input Watts (W): 7.3  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20				20				20				20				20				
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			
1	112	109	105	103	109	106	104	101	102	100	98	98	97	95	95	94	92	90			
2	105	99	94	90	102	97	92	89	94	90	87	91	87	85	88	85	83	81			
3	98	90	84	79	96	89	83	79	86	81	77	83	79	76	81	78	75	73			
4	92	83	76	71	90	81	75	70	79	74	69	77	72	69	75	71	68	66			
5	86	76	69	64	84	75	68	63	73	67	63	71	66	62	70	65	62	60			
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	56	55			
7	76	65	58	53	75	64	58	53	63	57	52	62	56	52	60	56	52	50			
8	72	60	53	49	70	60	53	49	59	53	48	58	52	48	57	52	48	46			
9	68	56	50	45	66	56	49	45	55	49	45	54	48	44	53	48	44	43			
10	64	53	46	42	63	52	46	42	51	46	41	51	45	41	50	45	41	40			

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

	0°	90°	180°
0°	156875	156875	156875
5°	197757	152692	120886
10°	242955	142658	92785
15°	282151	127401	72743
20°	299055	110182	57338
25°	286180	92102	47226
30°	251276	74425	39628
35°	202480	58682	34188
40°	150985	45508	30339
45°	104573	34346	27663
50°	67371	25490	26274
55°	39574	19314	25797
60°	21149	15881	26417
65°	9990	12465	26213
70°	4643	10759	26275
75°	6136	10177	28585
80°	6023	9146	27437
85°	6222	12000	24444



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	38.3	7.0
10°-20°	106.8	19.4
20°-30°	139.3	25.3
30°-40°	120.6	21.9
40°-50°	76.4	13.9
50°-60°	38.2	7.0
60°-70°	17.6	3.2
70°-80°	9.4	1.7
80°-90°	3.1	0.6
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°	284.4	51.7
0°-40°	405.0	73.7
0°-60°	519.6	94.5
0°-90°	549.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	549.7	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	405	405	405	405	405	
5°	509	473	393	333	311	52
15°	704	555	318	207	181	198
25°	670	492	216	124	110	303
35°	428	322	124	75	72	266
45°	191	160	63	49	50	150
55°	59	54	29	33	38	56
65°	11	12	14	23	29	13
75°	4	4	7	14	19	4
85°	1	1	3	4	6	1
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	405.0	405.0	405.0	405.0	405.0	405.0	405.0	405.0	405.0	405.0	405.0
2.5°	452.7	455.5	455.5	456.8	451.4	452.7	452.7	450.0	445.9	443.2	439.1
5°	508.6	508.6	507.3	508.6	504.5	501.8	503.2	497.7	486.8	481.4	473.2
7.5°	565.9	563.2	563.2	561.8	555.0	550.9	549.5	540.0	525.0	514.1	501.8
10°	617.7	617.7	615.0	612.3	602.7	597.3	593.2	578.2	561.8	544.1	526.4
12.5°	669.6	666.8	662.7	657.3	643.6	638.2	631.4	613.6	589.1	568.6	545.5
15°	703.6	705.0	698.2	691.4	676.4	668.2	660.0	638.2	609.5	583.6	555.0
17.5°	725.5	724.1	717.3	709.1	692.7	683.2	673.6	647.7	617.7	586.4	555.0
20°	725.5	725.5	717.3	709.1	691.4	680.5	670.9	643.6	610.9	578.2	544.1
22.5°	706.4	703.6	698.2	690.0	672.3	662.7	651.8	624.5	590.5	559.1	523.6
25°	669.6	669.6	662.7	653.2	638.2	627.3	617.7	590.5	557.7	526.4	492.3
27.5°	620.5	619.1	612.3	605.5	589.1	580.9	571.4	545.5	516.8	488.2	452.7
30°	561.8	559.1	556.4	545.5	534.5	527.7	519.5	496.4	467.7	440.5	409.1
32.5°	495.0	499.1	492.3	485.5	475.9	469.1	462.3	444.5	418.6	394.1	364.1
35°	428.2	430.9	426.8	421.4	411.8	407.7	400.9	385.9	366.8	343.6	321.8
37.5°	361.4	361.4	361.4	357.3	351.8	347.7	343.6	330.0	313.6	295.9	275.5
40°	298.6	302.7	297.3	295.9	291.8	290.5	286.4	276.8	263.2	250.9	231.8
42.5°	241.4	241.4	242.7	240.0	238.6	235.9	233.2	227.7	218.2	207.3	195.0
45°	190.9	192.3	193.6	189.5	189.5	189.5	188.2	182.7	174.5	167.7	159.5
47.5°	148.6	148.6	150.0	148.6	148.6	148.6	145.9	145.9	140.5	133.6	126.8
50°	111.8	113.2	114.5	114.5	114.5	113.2	113.2	110.5	107.7	105.0	98.2
52.5°	84.5	84.5	83.2	84.5	84.5	84.5	84.5	83.2	81.8	79.1	75.0
55°	58.6	58.6	60.0	60.0	60.0	61.4	61.4	61.4	60.0	58.6	54.5
57.5°	40.9	40.9	40.9	42.3	43.6	43.6	43.6	43.6	42.3	40.9	39.5
60°	27.3	27.3	27.3	28.6	28.6	28.6	28.6	30.0	28.6	28.6	27.3
62.5°	17.7	17.7	17.7	17.7	17.7	19.1	19.1	19.1	19.1	19.1	17.7
65°	10.9	10.9	10.9	10.9	10.9	10.9	12.3	12.3	12.3	12.3	12.3
67.5°	6.8	6.8	6.8	6.8	6.8	8.2	8.2	8.2	8.2	8.2	8.2
70°	4.1	4.1	4.1	4.1	5.5	5.5	5.5	5.5	5.5	5.5	5.5
72.5°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
75°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
77.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	4.1	4.1	4.1
80°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
82.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	2.7	2.7	1.4
85°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
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):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	405.0	405.0	405.0	405.0	405.0	405.0	405.0	405.0	405.0	405.0	405.0
2.5°	439.1	433.6	430.9	424.1	422.7	417.3	417.3	411.8	405.0	402.3	395.5
5°	467.7	456.8	451.4	439.1	435.0	426.8	422.7	411.8	400.9	392.7	383.2
7.5°	492.3	475.9	465.0	448.6	441.8	429.5	421.4	407.7	392.7	380.5	366.8
10°	511.4	489.5	473.2	451.4	443.2	428.2	415.9	396.8	377.7	362.7	346.4
12.5°	523.6	497.7	474.5	448.6	437.7	421.4	403.6	381.8	360.0	340.9	323.2
15°	529.1	497.7	470.5	439.1	426.8	409.1	388.6	362.7	338.2	317.7	298.6
17.5°	525.0	488.2	459.5	424.1	410.5	390.0	366.8	339.5	313.6	291.8	272.7
20°	511.4	473.2	440.5	403.6	388.6	368.2	342.3	315.0	289.1	267.3	246.8
22.5°	488.2	448.6	414.5	377.7	362.7	342.3	315.0	287.7	261.8	240.0	220.9
25°	459.5	417.3	383.2	347.7	331.4	313.6	286.4	259.1	234.5	215.5	196.4
27.5°	421.4	384.5	350.5	315.0	300.0	283.6	256.4	231.8	207.3	188.2	171.8
30°	380.5	345.0	316.4	282.3	268.6	252.3	229.1	204.5	184.1	166.4	151.4
32.5°	339.5	305.5	278.2	249.5	237.3	220.9	200.5	178.6	159.5	144.5	132.3
35°	297.3	268.6	242.7	215.5	205.9	192.3	173.2	154.1	137.7	124.1	111.8
37.5°	255.0	231.8	208.6	186.8	175.9	165.0	147.3	130.9	115.9	105.0	95.5
40°	216.8	196.4	177.3	156.8	147.3	139.1	124.1	110.5	99.5	90.0	81.8
42.5°	180.0	163.6	147.3	130.9	122.7	115.9	103.6	91.4	81.8	75.0	68.2
45°	147.3	135.0	121.4	106.4	102.3	94.1	84.5	76.4	68.2	62.7	57.3
47.5°	118.6	107.7	96.8	85.9	81.8	76.4	68.2	61.4	55.9	51.8	47.7
50°	92.7	84.5	77.7	68.2	65.5	60.0	54.5	49.1	45.0	42.3	39.5
52.5°	70.9	64.1	58.6	53.2	50.5	47.7	42.3	39.5	36.8	35.5	34.1
55°	51.8	47.7	43.6	39.5	38.2	35.5	32.7	30.0	28.6	28.6	28.6
57.5°	36.8	34.1	31.4	28.6	28.6	27.3	25.9	24.5	23.2	23.2	23.2
60°	25.9	24.5	23.2	21.8	20.5	20.5	19.1	20.5	19.1	20.5	20.5
62.5°	17.7	16.4	16.4	15.0	15.0	15.0	15.0	15.0	16.4	16.4	17.7
65°	10.9	10.9	10.9	10.9	10.9	10.9	12.3	12.3	12.3	13.6	13.6
67.5°	8.2	8.2	8.2	9.5	9.5	9.5	9.5	10.9	10.9	10.9	12.3
70°	5.5	6.8	6.8	6.8	6.8	6.8	8.2	8.2	8.2	9.5	9.5
72.5°	5.5	5.5	5.5	5.5	5.5	5.5	6.8	6.8	6.8	8.2	8.2
75°	4.1	5.5	5.5	5.5	5.5	5.5	5.5	6.8	6.8	6.8	8.2
77.5°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	5.5	5.5	5.5	5.5
80°	2.7	2.7	2.7	4.1	4.1	4.1	4.1	4.1	4.1	4.1	5.5
82.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	4.1
85°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	2.7	1.4	2.7	2.7
87.5°	0.0	0.0	0.0	1.4	0.0	1.4	1.4	1.4	1.4	1.4	1.4
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):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	405.0	405.0	405.0	405.0	405.0	405.0	405.0	405.0	405.0	405.0	405.0
2.5°	392.7	388.6	390.0	381.8	383.2	377.7	375.0	370.9	368.2	364.1	365.5
5°	376.4	369.5	366.8	357.3	358.6	350.5	345.0	338.2	332.7	325.9	324.5
7.5°	355.9	345.0	340.9	331.4	330.0	319.1	312.3	304.1	297.3	290.5	287.7
10°	332.7	320.5	312.3	302.7	301.4	289.1	280.9	272.7	264.5	257.7	255.0
12.5°	308.2	294.5	285.0	274.1	271.4	260.5	250.9	242.7	234.5	227.7	223.6
15°	282.3	267.3	257.7	246.8	244.1	231.8	223.6	214.1	207.3	200.5	197.7
17.5°	256.4	241.4	230.5	220.9	218.2	205.9	196.4	189.5	181.4	177.3	173.2
20°	230.5	215.5	204.5	196.4	192.3	182.7	173.2	166.4	159.5	155.5	151.4
22.5°	204.5	190.9	181.4	173.2	170.5	160.9	152.7	145.9	141.8	136.4	133.6
25°	181.4	167.7	159.5	151.4	148.6	140.5	135.0	128.2	124.1	120.0	117.3
27.5°	159.5	147.3	139.1	132.3	130.9	124.1	117.3	113.2	109.1	106.4	105.0
30°	137.7	128.2	121.4	115.9	114.5	107.7	102.3	99.5	95.5	94.1	92.7
32.5°	121.4	111.8	106.4	100.9	99.5	94.1	91.4	87.3	84.5	83.2	83.2
35°	103.6	96.8	91.4	88.6	87.3	83.2	79.1	77.7	75.0	73.6	73.6
37.5°	88.6	83.2	79.1	75.0	75.0	72.3	69.5	68.2	66.8	66.8	65.5
40°	76.4	70.9	69.5	66.8	65.5	64.1	62.7	61.4	60.0	60.0	60.0
42.5°	64.1	61.4	58.6	57.3	57.3	55.9	54.5	54.5	53.2	54.5	54.5
45°	54.5	51.8	50.5	49.1	50.5	49.1	49.1	47.7	49.1	49.1	49.1
47.5°	46.4	45.0	43.6	43.6	43.6	43.6	43.6	43.6	43.6	45.0	45.0
50°	39.5	38.2	38.2	38.2	38.2	38.2	39.5	39.5	39.5	40.9	40.9
52.5°	32.7	32.7	32.7	32.7	34.1	34.1	35.5	35.5	36.8	36.8	38.2
55°	28.6	28.6	28.6	28.6	30.0	30.0	31.4	32.7	32.7	34.1	35.5
57.5°	24.5	24.5	25.9	25.9	27.3	27.3	28.6	30.0	30.0	31.4	32.7
60°	20.5	21.8	23.2	23.2	23.2	24.5	25.9	27.3	27.3	28.6	30.0
62.5°	17.7	19.1	20.5	20.5	20.5	21.8	23.2	24.5	24.5	25.9	27.3
65°	15.0	16.4	17.7	17.7	17.7	19.1	20.5	21.8	23.2	23.2	24.5
67.5°	13.6	13.6	15.0	15.0	16.4	17.7	17.7	19.1	20.5	21.8	23.2
70°	10.9	12.3	13.6	13.6	13.6	15.0	16.4	17.7	17.7	19.1	20.5
72.5°	9.5	9.5	10.9	10.9	12.3	13.6	13.6	15.0	16.4	16.4	17.7
75°	8.2	9.5	9.5	9.5	10.9	10.9	12.3	13.6	13.6	15.0	15.0
77.5°	6.8	6.8	8.2	8.2	8.2	9.5	9.5	10.9	10.9	12.3	12.3
80°	5.5	5.5	6.8	6.8	6.8	6.8	8.2	8.2	9.5	9.5	9.5
82.5°	4.1	4.1	4.1	4.1	5.5	5.5	5.5	5.5	6.8	6.8	6.8
85°	2.7	2.7	2.7	2.7	2.7	4.1	4.1	4.1	4.1	4.1	5.5
87.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
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):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	405.0	405.0	405.0	405.0	405.0	405.0	405.0	405.0
2.5°	361.4	361.4	360.0	358.6	357.3	355.9	354.5	353.2
5°	320.5	321.8	316.4	315.0	315.0	312.3	313.6	310.9
7.5°	282.3	282.3	278.2	276.8	275.5	272.7	271.4	270.0
10°	248.2	246.8	244.1	242.7	240.0	238.6	238.6	235.9
12.5°	218.2	216.8	214.1	212.7	210.0	208.6	207.3	205.9
15°	192.3	190.9	188.2	186.8	185.5	182.7	182.7	181.4
17.5°	167.7	166.4	165.0	162.3	162.3	159.5	158.2	158.2
20°	148.6	147.3	144.5	143.2	143.2	141.8	141.8	139.1
22.5°	130.9	129.5	128.2	126.8	126.8	125.5	124.1	124.1
25°	115.9	114.5	113.2	113.2	111.8	110.5	110.5	110.5
27.5°	102.3	102.3	100.9	100.9	100.9	99.5	99.5	98.2
30°	91.4	91.4	90.0	90.0	90.0	88.6	90.0	88.6
32.5°	81.8	81.8	81.8	81.8	81.8	80.5	80.5	80.5
35°	73.6	73.6	73.6	73.6	73.6	72.3	73.6	72.3
37.5°	65.5	66.8	65.5	65.5	66.8	65.5	65.5	65.5
40°	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
42.5°	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5
45°	49.1	50.5	50.5	50.5	50.5	50.5	50.5	50.5
47.5°	46.4	46.4	46.4	46.4	47.7	46.4	47.7	47.7
50°	42.3	42.3	42.3	43.6	43.6	43.6	43.6	43.6
52.5°	39.5	39.5	39.5	39.5	40.9	40.9	40.9	40.9
55°	35.5	36.8	36.8	36.8	38.2	38.2	38.2	38.2
57.5°	34.1	34.1	34.1	35.5	35.5	35.5	36.8	35.5
60°	31.4	31.4	32.7	32.7	32.7	34.1	34.1	34.1
62.5°	28.6	30.0	30.0	30.0	30.0	31.4	31.4	31.4
65°	25.9	27.3	27.3	27.3	28.6	28.6	28.6	28.6
67.5°	23.2	24.5	24.5	25.9	25.9	25.9	25.9	25.9
70°	20.5	21.8	21.8	21.8	23.2	23.2	23.2	23.2
72.5°	19.1	19.1	19.1	20.5	20.5	20.5	21.8	20.5
75°	16.4	17.7	17.7	17.7	17.7	17.7	19.1	19.1
77.5°	13.6	13.6	13.6	13.6	15.0	15.0	15.0	15.0
80°	10.9	10.9	10.9	10.9	12.3	12.3	12.3	12.3
82.5°	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2
85°	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
87.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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















(END OF REPORT)