

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: P226236

Luminaire Tested: **LD2B05D010 EU2B05WW9027 2LBSW\***

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P226236  
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 EU2B05WW9027 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: 425.0 lumens  
Efficiency: N/A  
Efficacy: 58.2 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

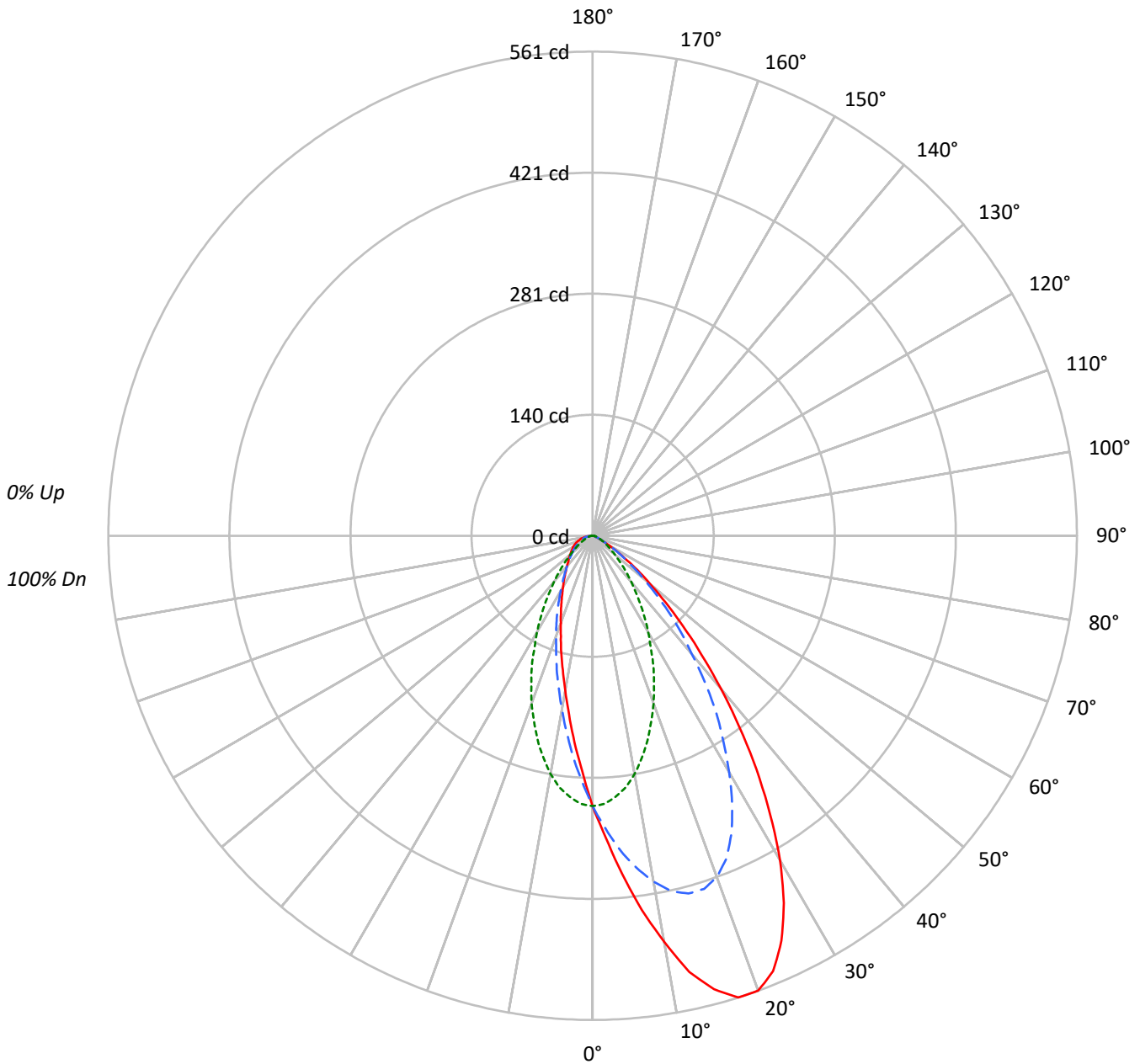
Input Watts (W): 7.3  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20									20									20									20									
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	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°	121278	121278	121278
5°	152886	118047	93474
10°	187850	110287	71742
15°	218149	98488	56222
20°	231206	85162	44312
25°	221259	71203	36499
30°	194293	57519	30638
35°	156517	45347	26433
40°	116753	35193	23462
45°	80854	26568	21364
50°	52125	19705	20308
55°	30592	14925	19922
60°	16346	12240	20452
65°	7699	9624	20256
70°	3624	8381	20272
75°	4789	7932	22150
80°	4684	7138	21191
85°	4889	9333	18666



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	29.6	7.0
10°-20°	82.6	19.4
20°-30°	107.7	25.3
30°-40°	93.3	21.9
40°-50°	59.0	13.9
50°-60°	29.6	7.0
60°-70°	13.6	3.2
70°-80°	7.3	1.7
80°-90°	2.4	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°	219.9	51.7
0°-40°	313.1	73.7
0°-60°	401.8	94.5
0°-90°	425.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	425.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	313	313	313	313	313	
5°	393	366	304	257	240	40
15°	544	429	246	160	140	153
25°	518	381	167	96	85	234
35°	331	249	96	58	56	206
45°	148	123	48	38	39	116
55°	45	42	22	25	30	43
65°	8	10	10	18	22	10
75°	3	3	5	10	15	3
85°	1	1	2	3	4	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°	313.1	313.1	313.1	313.1	313.1	313.1	313.1	313.1	313.1	313.1	313.1
2.5°	350.0	352.1	352.1	353.2	349.0	350.0	350.0	347.9	344.8	342.6	339.5
5°	393.2	393.2	392.2	393.2	390.1	388.0	389.0	384.8	376.4	372.2	365.8
7.5°	437.5	435.4	435.4	434.4	429.1	425.9	424.9	417.5	405.9	397.5	388.0
10°	477.6	477.6	475.5	473.4	466.0	461.8	458.6	447.0	434.4	420.7	407.0
12.5°	517.7	515.5	512.4	508.2	497.6	493.4	488.1	474.4	455.4	439.6	421.7
15°	544.0	545.1	539.8	534.5	522.9	516.6	510.3	493.4	471.3	451.2	429.1
17.5°	560.9	559.8	554.6	548.2	535.6	528.2	520.8	500.8	477.6	453.3	429.1
20°	560.9	560.9	554.6	548.2	534.5	526.1	518.7	497.6	472.3	447.0	420.7
22.5°	546.1	544.0	539.8	533.5	519.8	512.4	503.9	482.9	456.5	432.3	404.8
25°	517.7	517.7	512.4	505.0	493.4	485.0	477.6	456.5	431.2	407.0	380.6
27.5°	479.7	478.6	473.4	468.1	455.4	449.1	441.7	421.7	399.6	377.4	350.0
30°	434.4	432.3	430.1	421.7	413.3	408.0	401.7	383.8	361.6	340.5	316.3
32.5°	382.7	385.9	380.6	375.3	367.9	362.7	357.4	343.7	323.7	304.7	281.5
35°	331.0	333.2	330.0	325.8	318.4	315.2	310.0	298.4	283.6	265.7	248.8
37.5°	279.4	279.4	279.4	276.2	272.0	268.8	265.7	255.1	242.5	228.8	213.0
40°	230.9	234.1	229.8	228.8	225.6	224.6	221.4	214.0	203.5	194.0	179.2
42.5°	186.6	186.6	187.7	185.6	184.5	182.4	180.3	176.1	168.7	160.3	150.8
45°	147.6	148.7	149.7	146.5	146.5	146.5	145.5	141.3	134.9	129.7	123.4
47.5°	114.9	114.9	116.0	114.9	114.9	114.9	112.8	112.8	108.6	103.3	98.0
50°	86.5	87.5	88.6	88.6	88.6	87.5	87.5	85.4	83.3	81.2	75.9
52.5°	65.4	65.4	64.3	65.4	65.4	65.4	65.4	64.3	63.3	61.1	58.0
55°	45.3	45.3	46.4	46.4	46.4	47.4	47.4	47.4	46.4	45.3	42.2
57.5°	31.6	31.6	31.6	32.7	33.7	33.7	33.7	33.7	32.7	31.6	30.6
60°	21.1	21.1	21.1	22.1	22.1	22.1	22.1	23.2	22.1	22.1	21.1
62.5°	13.7	13.7	13.7	13.7	13.7	14.8	14.8	14.8	14.8	14.8	13.7
65°	8.4	8.4	8.4	8.4	8.4	8.4	9.5	9.5	9.5	9.5	9.5
67.5°	5.3	5.3	5.3	5.3	5.3	6.3	6.3	6.3	6.3	6.3	6.3
70°	3.2	3.2	3.2	3.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
72.5°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
75°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
77.5°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	3.2	3.2	3.2
80°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
82.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	2.1	2.1	1.1
85°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
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°	313.1	313.1	313.1	313.1	313.1	313.1	313.1	313.1	313.1	313.1	313.1
2.5°	339.5	335.3	333.2	327.9	326.8	322.6	322.6	318.4	313.1	311.0	305.7
5°	361.6	353.2	349.0	339.5	336.3	330.0	326.8	318.4	310.0	303.6	296.3
7.5°	380.6	367.9	359.5	346.9	341.6	332.1	325.8	315.2	303.6	294.1	283.6
10°	395.4	378.5	365.8	349.0	342.6	331.0	321.6	306.8	292.0	280.4	267.8
12.5°	404.8	384.8	366.9	346.9	338.4	325.8	312.1	295.2	278.3	263.6	249.9
15°	409.1	384.8	363.7	339.5	330.0	316.3	300.5	280.4	261.5	245.6	230.9
17.5°	405.9	377.4	355.3	327.9	317.3	301.5	283.6	262.5	242.5	225.6	210.9
20°	395.4	365.8	340.5	312.1	300.5	284.7	264.6	243.5	223.5	206.6	190.8
22.5°	377.4	346.9	320.5	292.0	280.4	264.6	243.5	222.5	202.4	185.6	170.8
25°	355.3	322.6	296.3	268.8	256.2	242.5	221.4	200.3	181.3	166.6	151.8
27.5°	325.8	297.3	271.0	243.5	231.9	219.3	198.2	179.2	160.3	145.5	132.8
30°	294.1	266.7	244.6	218.2	207.7	195.0	177.1	158.1	142.3	128.6	117.0
32.5°	262.5	236.2	215.1	192.9	183.4	170.8	155.0	138.1	123.4	111.8	102.3
35°	229.8	207.7	187.7	166.6	159.2	148.7	133.9	119.1	106.5	95.9	86.5
37.5°	197.2	179.2	161.3	144.4	136.0	127.6	113.9	101.2	89.6	81.2	73.8
40°	167.6	151.8	137.1	121.2	113.9	107.5	95.9	85.4	77.0	69.6	63.3
42.5°	139.2	126.5	113.9	101.2	94.9	89.6	80.1	70.6	63.3	58.0	52.7
45°	113.9	104.4	93.8	82.2	79.1	72.7	65.4	59.0	52.7	48.5	44.3
47.5°	91.7	83.3	74.9	66.4	63.3	59.0	52.7	47.4	43.2	40.1	36.9
50°	71.7	65.4	60.1	52.7	50.6	46.4	42.2	38.0	34.8	32.7	30.6
52.5°	54.8	49.6	45.3	41.1	39.0	36.9	32.7	30.6	28.5	27.4	26.4
55°	40.1	36.9	33.7	30.6	29.5	27.4	25.3	23.2	22.1	22.1	22.1
57.5°	28.5	26.4	24.2	22.1	22.1	21.1	20.0	19.0	17.9	17.9	17.9
60°	20.0	19.0	17.9	16.9	15.8	15.8	14.8	15.8	14.8	15.8	15.8
62.5°	13.7	12.7	12.7	11.6	11.6	11.6	11.6	11.6	12.7	12.7	13.7
65°	8.4	8.4	8.4	8.4	8.4	8.4	9.5	9.5	9.5	10.5	10.5
67.5°	6.3	6.3	6.3	7.4	7.4	7.4	7.4	8.4	8.4	8.4	9.5
70°	4.2	5.3	5.3	5.3	5.3	5.3	6.3	6.3	6.3	7.4	7.4
72.5°	4.2	4.2	4.2	4.2	4.2	4.2	5.3	5.3	5.3	6.3	6.3
75°	3.2	4.2	4.2	4.2	4.2	4.2	4.2	5.3	5.3	5.3	6.3
77.5°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	4.2	4.2	4.2	4.2
80°	2.1	2.1	2.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2	4.2
82.5°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	3.2
85°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	2.1	1.1	2.1	2.1
87.5°	0.0	0.0	0.0	1.1	0.0	1.1	1.1	1.1	1.1	1.1	1.1
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°	313.1	313.1	313.1	313.1	313.1	313.1	313.1	313.1	313.1	313.1	313.1
2.5°	303.6	300.5	301.5	295.2	296.3	292.0	289.9	286.8	284.7	281.5	282.5
5°	291.0	285.7	283.6	276.2	277.3	271.0	266.7	261.5	257.2	252.0	250.9
7.5°	275.2	266.7	263.6	256.2	255.1	246.7	241.4	235.1	229.8	224.6	222.5
10°	257.2	247.8	241.4	234.1	233.0	223.5	217.2	210.9	204.5	199.3	197.2
12.5°	238.3	227.7	220.3	211.9	209.8	201.4	194.0	187.7	181.3	176.1	172.9
15°	218.2	206.6	199.3	190.8	188.7	179.2	172.9	165.5	160.3	155.0	152.9
17.5°	198.2	186.6	178.2	170.8	168.7	159.2	151.8	146.5	140.2	137.1	133.9
20°	178.2	166.6	158.1	151.8	148.7	141.3	133.9	128.6	123.4	120.2	117.0
22.5°	158.1	147.6	140.2	133.9	131.8	124.4	118.1	112.8	109.6	105.4	103.3
25°	140.2	129.7	123.4	117.0	114.9	108.6	104.4	99.1	95.9	92.8	90.7
27.5°	123.4	113.9	107.5	102.3	101.2	95.9	90.7	87.5	84.3	82.2	81.2
30°	106.5	99.1	93.8	89.6	88.6	83.3	79.1	77.0	73.8	72.7	71.7
32.5°	93.8	86.5	82.2	78.0	77.0	72.7	70.6	67.5	65.4	64.3	64.3
35°	80.1	74.9	70.6	68.5	67.5	64.3	61.1	60.1	58.0	56.9	56.9
37.5°	68.5	64.3	61.1	58.0	58.0	55.9	53.8	52.7	51.7	51.7	50.6
40°	59.0	54.8	53.8	51.7	50.6	49.6	48.5	47.4	46.4	46.4	46.4
42.5°	49.6	47.4	45.3	44.3	44.3	43.2	42.2	42.2	41.1	42.2	42.2
45°	42.2	40.1	39.0	38.0	39.0	38.0	38.0	36.9	38.0	38.0	38.0
47.5°	35.8	34.8	33.7	33.7	33.7	33.7	33.7	33.7	33.7	34.8	34.8
50°	30.6	29.5	29.5	29.5	29.5	29.5	30.6	30.6	30.6	31.6	31.6
52.5°	25.3	25.3	25.3	25.3	26.4	26.4	27.4	27.4	28.5	28.5	29.5
55°	22.1	22.1	22.1	22.1	23.2	23.2	24.2	25.3	25.3	26.4	27.4
57.5°	19.0	19.0	20.0	20.0	21.1	21.1	22.1	23.2	23.2	24.2	25.3
60°	15.8	16.9	17.9	17.9	17.9	19.0	20.0	21.1	21.1	22.1	23.2
62.5°	13.7	14.8	15.8	15.8	15.8	16.9	17.9	19.0	19.0	20.0	21.1
65°	11.6	12.7	13.7	13.7	13.7	14.8	15.8	16.9	17.9	17.9	19.0
67.5°	10.5	10.5	11.6	11.6	12.7	13.7	13.7	14.8	15.8	16.9	17.9
70°	8.4	9.5	10.5	10.5	10.5	11.6	12.7	13.7	13.7	14.8	15.8
72.5°	7.4	7.4	8.4	8.4	9.5	10.5	10.5	11.6	12.7	12.7	13.7
75°	6.3	7.4	7.4	7.4	8.4	8.4	9.5	10.5	10.5	11.6	11.6
77.5°	5.3	5.3	6.3	6.3	6.3	7.4	7.4	8.4	8.4	9.5	9.5
80°	4.2	4.2	5.3	5.3	5.3	5.3	6.3	6.3	7.4	7.4	7.4
82.5°	3.2	3.2	3.2	3.2	4.2	4.2	4.2	4.2	5.3	5.3	5.3
85°	2.1	2.1	2.1	2.1	2.1	3.2	3.2	3.2	3.2	3.2	4.2
87.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
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: P226236

CATALOG NUMBER: LD2B05D010 EU2B05WW9027 2LBSW\*

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	313.1	313.1	313.1	313.1	313.1	313.1	313.1	313.1
2.5°	279.4	279.4	278.3	277.3	276.2	275.2	274.1	273.1
5°	247.8	248.8	244.6	243.5	243.5	241.4	242.5	240.4
7.5°	218.2	218.2	215.1	214.0	213.0	210.9	209.8	208.7
10°	191.9	190.8	188.7	187.7	185.6	184.5	184.5	182.4
12.5°	168.7	167.6	165.5	164.5	162.4	161.3	160.3	159.2
15°	148.7	147.6	145.5	144.4	143.4	141.3	141.3	140.2
17.5°	129.7	128.6	127.6	125.5	125.5	123.4	122.3	122.3
20°	114.9	113.9	111.8	110.7	110.7	109.6	109.6	107.5
22.5°	101.2	100.2	99.1	98.0	98.0	97.0	95.9	95.9
25°	89.6	88.6	87.5	87.5	86.5	85.4	85.4	85.4
27.5°	79.1	79.1	78.0	78.0	78.0	77.0	77.0	75.9
30°	70.6	70.6	69.6	69.6	69.6	68.5	69.6	68.5
32.5°	63.3	63.3	63.3	63.3	63.3	62.2	62.2	62.2
35°	56.9	56.9	56.9	56.9	56.9	55.9	56.9	55.9
37.5°	50.6	51.7	50.6	50.6	51.7	50.6	50.6	50.6
40°	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4
42.5°	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2
45°	38.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0
47.5°	35.8	35.8	35.8	35.8	36.9	35.8	36.9	36.9
50°	32.7	32.7	32.7	33.7	33.7	33.7	33.7	33.7
52.5°	30.6	30.6	30.6	30.6	31.6	31.6	31.6	31.6
55°	27.4	28.5	28.5	28.5	29.5	29.5	29.5	29.5
57.5°	26.4	26.4	26.4	27.4	27.4	27.4	28.5	27.4
60°	24.2	24.2	25.3	25.3	25.3	26.4	26.4	26.4
62.5°	22.1	23.2	23.2	23.2	23.2	24.2	24.2	24.2
65°	20.0	21.1	21.1	21.1	22.1	22.1	22.1	22.1
67.5°	17.9	19.0	19.0	20.0	20.0	20.0	20.0	20.0
70°	15.8	16.9	16.9	16.9	17.9	17.9	17.9	17.9
72.5°	14.8	14.8	14.8	15.8	15.8	15.8	16.9	15.8
75°	12.7	13.7	13.7	13.7	13.7	13.7	14.8	14.8
77.5°	10.5	10.5	10.5	10.5	11.6	11.6	11.6	11.6
80°	8.4	8.4	8.4	8.4	9.5	9.5	9.5	9.5
82.5°	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
85°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
87.5°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
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)