

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: P226234

Luminaire Tested: **LD2B05D010 EU2B05WW8050 2LBSW\***

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P226234  
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 EU2B05WW8050 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: 574.8 lumens  
Efficiency: N/A  
Efficacy: 78.7 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

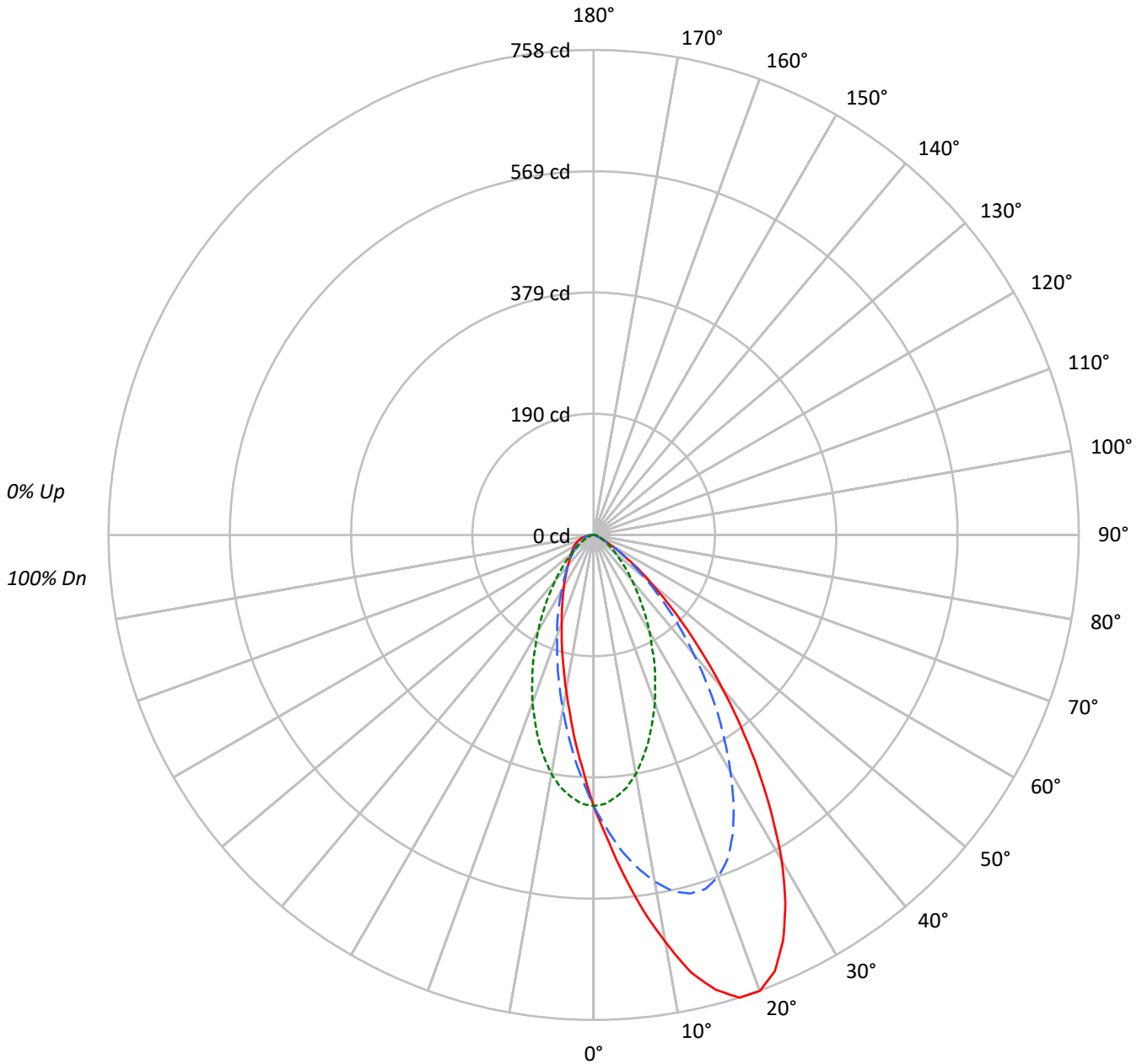
Input Watts (W): 7.3  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	164041	164041	164041
5°	206777	159652	126407
10°	254046	149187	97032
15°	295023	133216	76032
20°	312657	115211	59935
25°	299215	96291	49363
30°	262726	77780	41462
35°	211700	61330	35748
40°	157913	47581	31704
45°	109339	35935	28923
50°	70444	26635	27479
55°	41397	20192	26945
60°	22079	16578	27579
65°	10449	13107	27405
70°	4870	11325	27407
75°	6435	10626	29932
80°	6469	9592	28552
85°	6222	12888	25332



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	40.0	7.0
10°-20°	111.7	19.4
20°-30°	145.7	25.3
30°-40°	126.1	21.9
40°-50°	79.8	13.9
50°-60°	40.0	7.0
60°-70°	18.4	3.2
70°-80°	9.9	1.7
80°-90°	3.2	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°	297.4	51.7
0°-40°	423.5	73.7
0°-60°	543.3	94.5
0°-90°	574.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	574.8	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	424	424	424	424	424	
5°	532	495	411	348	325	54
15°	736	580	332	217	190	207
25°	700	515	225	130	116	317
35°	448	336	130	78	76	278
45°	200	167	66	51	53	157
55°	61	57	30	34	40	59
65°	11	13	14	24	30	13
75°	4	4	7	14	20	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°	423.5	423.5	423.5	423.5	423.5	423.5	423.5	423.5	423.5	423.5	423.5
2.5°	473.4	476.2	476.2	477.6	471.9	473.4	473.4	470.5	466.2	463.4	459.1
5°	531.8	531.8	530.4	531.8	527.6	524.7	526.1	520.4	509.0	503.3	494.8
7.5°	591.7	588.9	588.9	587.4	580.3	576.0	574.6	564.6	548.9	537.5	524.7
10°	645.9	645.9	643.0	640.2	630.2	624.5	620.2	604.5	587.4	568.9	550.4
12.5°	700.1	697.2	692.9	687.2	673.0	667.3	660.2	641.6	616.0	594.6	570.3
15°	735.7	737.1	730.0	722.9	707.2	698.6	690.1	667.3	637.3	610.2	580.3
17.5°	758.5	757.1	750.0	741.4	724.3	714.3	704.4	677.3	645.9	613.1	580.3
20°	758.5	758.5	750.0	741.4	722.9	711.5	701.5	673.0	638.8	604.5	568.9
22.5°	738.6	735.7	730.0	721.5	702.9	692.9	681.5	653.0	617.4	584.6	547.5
25°	700.1	700.1	692.9	683.0	667.3	655.9	645.9	617.4	583.2	550.4	514.7
27.5°	648.7	647.3	640.2	633.1	616.0	607.4	597.4	570.3	540.4	510.4	473.4
30°	587.4	584.6	581.7	570.3	558.9	551.8	543.2	519.0	489.1	460.5	427.7
32.5°	517.6	521.8	514.7	507.6	497.6	490.5	483.4	464.8	437.7	412.1	380.7
35°	447.7	450.6	446.3	440.6	430.6	426.3	419.2	403.5	383.5	359.3	336.5
37.5°	377.8	377.8	377.8	373.6	367.9	363.6	359.3	345.0	327.9	309.4	288.0
40°	312.3	316.5	310.8	309.4	305.1	303.7	299.4	289.4	275.2	262.3	242.4
42.5°	252.4	252.4	253.8	250.9	249.5	246.7	243.8	238.1	228.1	216.7	203.9
45°	199.6	201.0	202.5	198.2	198.2	198.2	196.8	191.1	182.5	175.4	166.8
47.5°	155.4	155.4	156.8	155.4	155.4	155.4	152.6	152.6	146.9	139.7	132.6
50°	116.9	118.3	119.8	119.8	119.8	118.3	118.3	115.5	112.6	109.8	102.7
52.5°	88.4	88.4	87.0	88.4	88.4	88.4	88.4	87.0	85.5	82.7	78.4
55°	61.3	61.3	62.7	62.7	62.7	64.2	64.2	64.2	62.7	61.3	57.0
57.5°	42.8	42.8	42.8	44.2	45.6	45.6	45.6	45.6	44.2	42.8	41.3
60°	28.5	28.5	28.5	29.9	29.9	29.9	29.9	31.4	29.9	29.9	28.5
62.5°	18.5	18.5	18.5	18.5	18.5	20.0	20.0	20.0	20.0	20.0	18.5
65°	11.4	11.4	11.4	11.4	11.4	11.4	12.8	12.8	12.8	12.8	12.8
67.5°	7.1	7.1	7.1	7.1	7.1	8.6	8.6	8.6	8.6	8.6	8.6
70°	4.3	4.3	4.3	4.3	5.7	5.7	5.7	5.7	5.7	5.7	5.7
72.5°	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
75°	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
77.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	4.3	4.3	4.3
80°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
82.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	2.9	2.9	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°	423.5	423.5	423.5	423.5	423.5	423.5	423.5	423.5	423.5	423.5	423.5
2.5°	459.1	453.4	450.6	443.4	442.0	436.3	436.3	430.6	423.5	420.6	413.5
5°	489.1	477.6	471.9	459.1	454.8	446.3	442.0	430.6	419.2	410.6	400.7
7.5°	514.7	497.6	486.2	469.1	462.0	449.1	440.6	426.3	410.6	397.8	383.5
10°	534.7	511.9	494.8	471.9	463.4	447.7	434.9	414.9	395.0	379.3	362.2
12.5°	547.5	520.4	496.2	469.1	457.7	440.6	422.0	399.2	376.4	356.5	337.9
15°	553.2	520.4	491.9	459.1	446.3	427.7	406.4	379.3	353.6	332.2	312.3
17.5°	548.9	510.4	480.5	443.4	429.2	407.8	383.5	355.0	327.9	305.1	285.2
20°	534.7	494.8	460.5	422.0	406.4	385.0	357.9	329.4	302.3	279.5	258.1
22.5°	510.4	469.1	433.4	395.0	379.3	357.9	329.4	300.8	273.8	250.9	231.0
25°	480.5	436.3	400.7	363.6	346.5	327.9	299.4	270.9	245.2	225.3	205.3
27.5°	440.6	402.1	366.4	329.4	313.7	296.6	268.1	242.4	216.7	196.8	179.7
30°	397.8	360.7	330.8	295.1	280.9	263.8	239.5	213.9	192.5	173.9	158.3
32.5°	355.0	319.4	290.9	260.9	248.1	231.0	209.6	186.8	166.8	151.1	138.3
35°	310.8	280.9	253.8	225.3	215.3	201.0	181.1	161.1	144.0	129.7	116.9
37.5°	266.6	242.4	218.1	195.3	183.9	172.5	154.0	136.9	121.2	109.8	99.8
40°	226.7	205.3	185.4	164.0	154.0	145.4	129.7	115.5	104.1	94.1	85.5
42.5°	188.2	171.1	154.0	136.9	128.3	121.2	108.4	95.5	85.5	78.4	71.3
45°	154.0	141.2	126.9	111.2	106.9	98.4	88.4	79.8	71.3	65.6	59.9
47.5°	124.0	112.6	101.2	89.8	85.5	79.8	71.3	64.2	58.5	54.2	49.9
50°	97.0	88.4	81.3	71.3	68.4	62.7	57.0	51.3	47.1	44.2	41.3
52.5°	74.1	67.0	61.3	55.6	52.8	49.9	44.2	41.3	38.5	37.1	35.6
55°	54.2	49.9	45.6	41.3	39.9	37.1	34.2	31.4	29.9	29.9	29.9
57.5°	38.5	35.6	32.8	29.9	29.9	28.5	27.1	25.7	24.2	24.2	24.2
60°	27.1	25.7	24.2	22.8	21.4	21.4	20.0	21.4	20.0	21.4	21.4
62.5°	18.5	17.1	17.1	15.7	15.7	15.7	15.7	15.7	17.1	17.1	18.5
65°	11.4	11.4	11.4	11.4	11.4	11.4	12.8	12.8	12.8	14.3	14.3
67.5°	8.6	8.6	8.6	10.0	10.0	10.0	10.0	11.4	11.4	11.4	12.8
70°	5.7	7.1	7.1	7.1	7.1	7.1	8.6	8.6	8.6	10.0	10.0
72.5°	5.7	5.7	5.7	5.7	5.7	5.7	7.1	7.1	7.1	8.6	8.6
75°	4.3	5.7	5.7	5.7	5.7	5.7	5.7	7.1	7.1	7.1	8.6
77.5°	4.3	4.3	4.3	4.3	4.3	4.3	4.3	5.7	5.7	5.7	5.7
80°	2.9	2.9	2.9	4.3	4.3	4.3	4.3	4.3	4.3	4.3	5.7
82.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	4.3
85°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	2.9	1.4	2.9	2.9
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°	423.5	423.5	423.5	423.5	423.5	423.5	423.5	423.5	423.5	423.5	423.5
2.5°	410.6	406.4	407.8	399.2	400.7	395.0	392.1	387.8	385.0	380.7	382.1
5°	393.5	386.4	383.5	373.6	375.0	366.4	360.7	353.6	347.9	340.8	339.3
7.5°	372.1	360.7	356.5	346.5	345.0	333.6	326.5	318.0	310.8	303.7	300.8
10°	347.9	335.1	326.5	316.5	315.1	302.3	293.7	285.2	276.6	269.5	266.6
12.5°	322.2	308.0	298.0	286.6	283.7	272.3	262.3	253.8	245.2	238.1	233.8
15°	295.1	279.5	269.5	258.1	255.2	242.4	233.8	223.9	216.7	209.6	206.7
17.5°	268.1	252.4	241.0	231.0	228.1	215.3	205.3	198.2	189.6	185.4	181.1
20°	241.0	225.3	213.9	205.3	201.0	191.1	181.1	173.9	166.8	162.5	158.3
22.5°	213.9	199.6	189.6	181.1	178.2	168.2	159.7	152.6	148.3	142.6	139.7
25°	189.6	175.4	166.8	158.3	155.4	146.9	141.2	134.0	129.7	125.5	122.6
27.5°	166.8	154.0	145.4	138.3	136.9	129.7	122.6	118.3	114.1	111.2	109.8
30°	144.0	134.0	126.9	121.2	119.8	112.6	106.9	104.1	99.8	98.4	97.0
32.5°	126.9	116.9	111.2	105.5	104.1	98.4	95.5	91.3	88.4	87.0	87.0
35°	108.4	101.2	95.5	92.7	91.3	87.0	82.7	81.3	78.4	77.0	77.0
37.5°	92.7	87.0	82.7	78.4	78.4	75.6	72.7	71.3	69.9	69.9	68.4
40°	79.8	74.1	72.7	69.9	68.4	67.0	65.6	64.2	62.7	62.7	62.7
42.5°	67.0	64.2	61.3	59.9	59.9	58.5	57.0	57.0	55.6	57.0	57.0
45°	57.0	54.2	52.8	51.3	52.8	51.3	51.3	49.9	51.3	51.3	51.3
47.5°	48.5	47.1	45.6	45.6	45.6	45.6	45.6	45.6	45.6	47.1	47.1
50°	41.3	39.9	39.9	39.9	39.9	39.9	41.3	41.3	41.3	42.8	42.8
52.5°	34.2	34.2	34.2	34.2	35.6	35.6	37.1	37.1	38.5	38.5	39.9
55°	29.9	29.9	29.9	29.9	31.4	31.4	32.8	34.2	34.2	35.6	37.1
57.5°	25.7	25.7	27.1	27.1	28.5	28.5	29.9	31.4	31.4	32.8	34.2
60°	21.4	22.8	24.2	24.2	24.2	25.7	27.1	28.5	28.5	29.9	31.4
62.5°	18.5	20.0	21.4	21.4	21.4	22.8	24.2	25.7	25.7	27.1	28.5
65°	15.7	17.1	18.5	18.5	18.5	20.0	21.4	22.8	24.2	24.2	25.7
67.5°	14.3	14.3	15.7	15.7	17.1	18.5	18.5	20.0	21.4	22.8	24.2
70°	11.4	12.8	14.3	14.3	14.3	15.7	17.1	18.5	18.5	20.0	21.4
72.5°	10.0	10.0	11.4	11.4	12.8	14.3	14.3	15.7	17.1	17.1	18.5
75°	8.6	10.0	10.0	10.0	11.4	11.4	12.8	14.3	14.3	15.7	15.7
77.5°	7.1	7.1	8.6	8.6	8.6	10.0	10.0	11.4	11.4	12.8	12.8
80°	5.7	5.7	7.1	7.1	7.1	7.1	8.6	8.6	10.0	10.0	10.0
82.5°	4.3	4.3	4.3	4.3	5.7	5.7	5.7	5.7	7.1	7.1	7.1
85°	2.9	2.9	2.9	2.9	2.9	4.3	4.3	4.3	4.3	4.3	5.7
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





TEST NUMBER: P226234

CATALOG NUMBER: LD2B05D010 EU2B05WW8050 2LBSW\*

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	423.5	423.5	423.5	423.5	423.5	423.5	423.5	423.5
2.5°	377.8	377.8	376.4	375.0	373.6	372.1	370.7	369.3
5°	335.1	336.5	330.8	329.4	329.4	326.5	327.9	325.1
7.5°	295.1	295.1	290.9	289.4	288.0	285.2	283.7	282.3
10°	259.5	258.1	255.2	253.8	250.9	249.5	249.5	246.7
12.5°	228.1	226.7	223.9	222.4	219.6	218.1	216.7	215.3
15°	201.0	199.6	196.8	195.3	193.9	191.1	191.1	189.6
17.5°	175.4	173.9	172.5	169.7	169.7	166.8	165.4	165.4
20°	155.4	154.0	151.1	149.7	149.7	148.3	148.3	145.4
22.5°	136.9	135.5	134.0	132.6	132.6	131.2	129.7	129.7
25°	121.2	119.8	118.3	118.3	116.9	115.5	115.5	115.5
27.5°	106.9	106.9	105.5	105.5	105.5	104.1	104.1	102.7
30°	95.5	95.5	94.1	94.1	94.1	92.7	94.1	92.7
32.5°	85.5	85.5	85.5	85.5	85.5	84.1	84.1	84.1
35°	77.0	77.0	77.0	77.0	77.0	75.6	77.0	75.6
37.5°	68.4	69.9	68.4	68.4	69.9	68.4	68.4	68.4
40°	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7
42.5°	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0
45°	51.3	52.8	52.8	52.8	52.8	52.8	52.8	52.8
47.5°	48.5	48.5	48.5	48.5	49.9	48.5	49.9	49.9
50°	44.2	44.2	44.2	45.6	45.6	45.6	45.6	45.6
52.5°	41.3	41.3	41.3	41.3	42.8	42.8	42.8	42.8
55°	37.1	38.5	38.5	38.5	39.9	39.9	39.9	39.9
57.5°	35.6	35.6	35.6	37.1	37.1	37.1	38.5	37.1
60°	32.8	32.8	34.2	34.2	34.2	35.6	35.6	35.6
62.5°	29.9	31.4	31.4	31.4	31.4	32.8	32.8	32.8
65°	27.1	28.5	28.5	28.5	29.9	29.9	29.9	29.9
67.5°	24.2	25.7	25.7	27.1	27.1	27.1	27.1	27.1
70°	21.4	22.8	22.8	22.8	24.2	24.2	24.2	24.2
72.5°	20.0	20.0	20.0	21.4	21.4	21.4	22.8	21.4
75°	17.1	18.5	18.5	18.5	18.5	18.5	20.0	20.0
77.5°	14.3	14.3	14.3	14.3	15.7	15.7	15.7	15.7
80°	11.4	11.4	11.4	11.4	12.8	12.8	12.8	12.8
82.5°	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6
85°	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
87.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
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)