

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: PORTFOLIO

Report Number: P879324

Luminaire Tested: **LD4C02D010 EU4029040 4LBDWWH**

Issue Date: 10/1/2024

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P879324
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2107-320-6)
Test Lab: INNOVATION CENTER
Issue Date: 10/1/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C02D010 EU4029040 4LBDWWH
Description: 4 INCH 250 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS AND 4LBDWW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

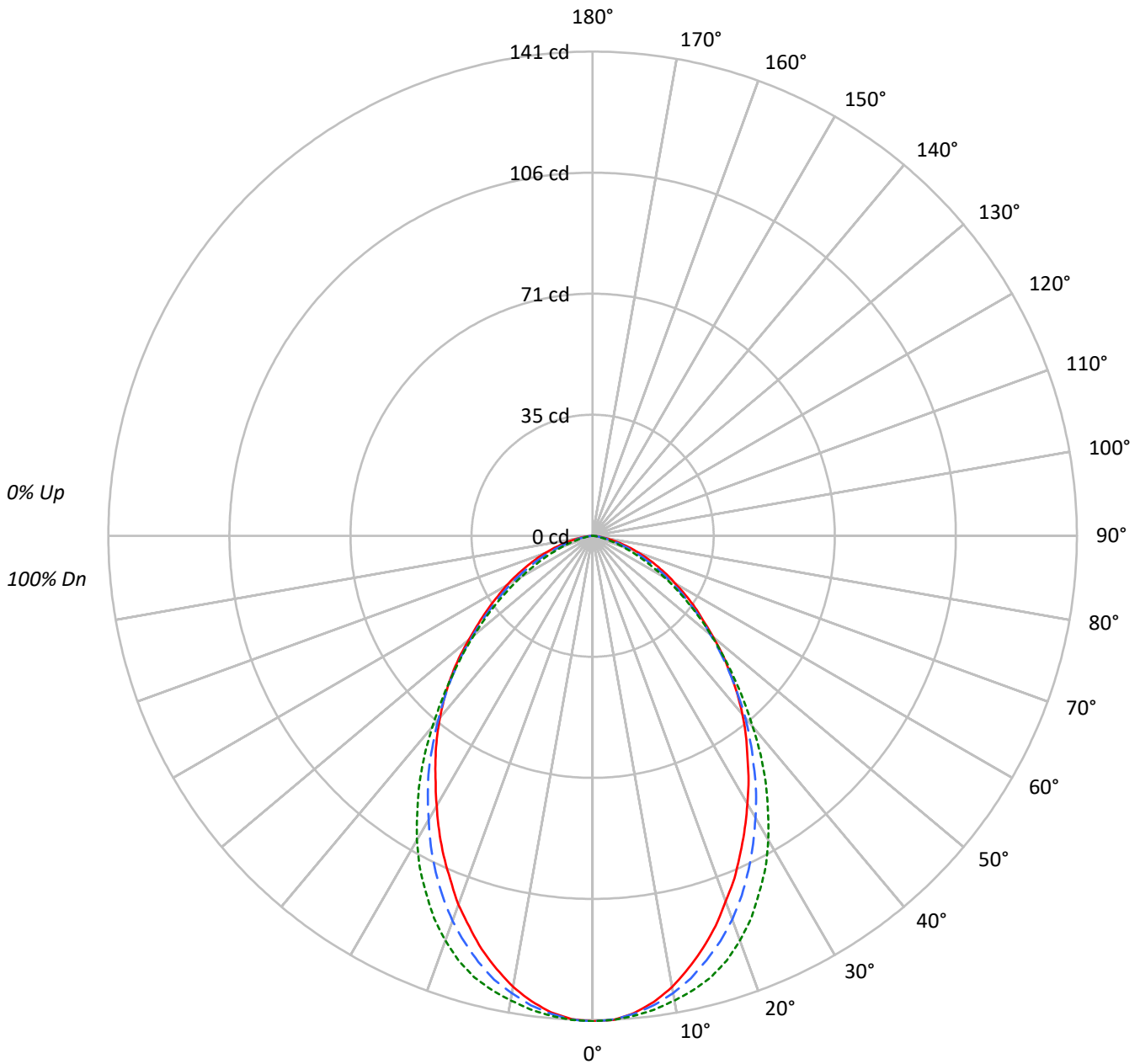
Lumens per Lamp: N/A
Luminaire Lumens: 253.0 lumens
Efficiency: N/A
Efficacy: 72.3 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.1 / 1.12
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 3.5
Input Voltage (V): NR
Input Current (Ain): 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	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88																			
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77																			
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67																			
4	88	77	70	64	86	76	69	63	74	68	63	71	66	62	69	65	61	59																			
5	81	70	62	56	80	69	62	56	67	61	56	65	59	55	63	58	54	52																			
6	76	64	56	50	74	63	56	50	61	55	50	60	54	49	58	53	49	47																			
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44	42																			
8	66	54	46	41	65	53	46	41	52	45	41	51	45	40	50	44	40	38																			
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35																			
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	17371	17371	17371
5°	17204	17302	17179
10°	16641	17140	16641
15°	15809	16929	15860
20°	14813	16395	14943
25°	13799	15548	13921
30°	12781	14512	12881
35°	11788	13183	11968
40°	10873	11627	11082
45°	9851	10077	10146
50°	8734	8620	8964
55°	7796	7261	7968
60°	6806	5897	7076
65°	5959	4564	6163
70°	5029	3341	5280
75°	3940	2183	4130
80°	2547	1132	2830
85°	846	564	1128



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	13.2	5.2
10°-20°	36.1	14.3
20°-30°	49.6	19.6
30°-40°	51.8	20.5
40°-50°	44.3	17.5
50°-60°	31.7	12.5
60°-70°	18.4	7.3
70°-80°	7.1	2.8
80°-90°	0.9	0.4
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°	98.9	39.1
0°-40°	150.7	59.5
0°-60°	226.6	89.6
0°-90°	253.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	253.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	141	141	141	141	141	
5°	140	140	140	140	139	13
15°	124	128	133	128	125	35
25°	102	107	115	108	103	47
35°	79	82	88	83	80	49
45°	57	56	58	58	58	44
55°	36	34	34	36	37	33
65°	20	18	16	19	21	20
75°	8	6	5	6	9	9
85°	1	0	0	0	1	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°	141.4	141.4	141.4	141.4	141.4	141.4	141.4	141.4	141.4	141.4	141.4
2.5°	141.1	141.0	141.0	141.0	141.0	141.0	141.1	141.1	141.0	141.0	141.0
5°	139.5	139.4	139.4	139.5	139.5	139.5	139.5	139.6	139.6	139.7	139.7
7.5°	136.9	136.7	136.9	137.1	137.1	137.1	137.2	137.2	137.4	137.7	137.8
10°	133.4	133.4	133.4	133.6	133.9	133.8	134.0	134.2	134.5	134.9	135.2
12.5°	129.0	129.1	129.2	129.4	129.7	129.8	130.1	130.4	130.9	131.4	132.0
15°	124.3	124.4	124.4	124.8	125.0	125.4	125.6	126.2	126.7	127.4	128.0
17.5°	119.1	119.0	119.2	119.5	120.1	120.3	120.5	121.2	121.9	122.9	123.7
20°	113.3	113.7	113.9	114.3	114.6	115.1	115.3	116.1	116.9	117.8	118.9
22.5°	107.9	107.7	108.0	108.5	108.8	109.1	109.5	110.4	111.2	112.4	113.4
25°	101.8	102.0	102.2	102.6	103.0	103.4	103.8	104.8	105.2	106.4	107.4
27.5°	96.0	96.3	96.4	96.8	97.2	97.5	97.7	98.8	99.2	100.3	101.2
30°	90.1	90.4	90.4	90.9	91.2	91.5	92.0	92.7	93.3	94.1	94.8
32.5°	84.5	84.5	84.7	85.1	85.4	85.8	85.9	86.4	87.1	87.8	88.6
35°	78.6	78.8	79.0	79.0	79.5	79.7	79.9	80.4	80.8	81.1	81.8
37.5°	73.3	73.3	73.1	73.4	73.7	73.7	74.0	74.2	74.5	74.9	75.4
40°	67.8	67.8	67.6	67.8	68.0	67.9	67.8	68.1	68.3	68.6	69.1
42.5°	62.3	62.2	62.1	62.1	62.2	62.1	62.2	62.3	62.3	62.3	62.6
45°	56.7	57.0	56.7	56.6	56.4	56.3	56.2	56.3	56.5	56.2	56.3
47.5°	51.3	51.4	51.2	51.0	50.9	50.8	50.9	50.5	50.6	50.7	50.5
50°	45.7	45.5	45.5	45.3	45.4	45.3	45.2	45.1	45.1	44.9	44.7
52.5°	40.6	40.7	40.8	40.4	40.5	40.2	40.3	40.0	40.0	39.7	39.8
55°	36.4	36.2	36.2	36.1	36.0	35.7	35.7	35.5	35.2	35.0	34.5
57.5°	32.0	31.9	31.7	31.8	31.5	31.4	31.3	31.1	30.8	30.5	30.1
60°	27.7	27.8	27.8	27.7	27.5	27.3	27.3	27.0	26.6	26.1	25.7
62.5°	24.2	24.1	24.0	23.9	23.6	23.6	23.3	23.1	22.7	22.2	21.9
65°	20.5	20.6	20.4	20.3	19.9	19.9	19.7	19.5	19.1	18.6	18.1
67.5°	17.2	17.1	17.0	16.9	16.6	16.5	16.4	15.9	15.6	15.1	14.7
70°	14.0	13.9	13.9	13.7	13.4	13.2	13.1	12.8	12.3	11.9	11.5
72.5°	11.0	11.0	10.9	10.6	10.5	10.4	10.2	9.8	9.5	9.1	8.8
75°	8.3	8.2	8.1	7.9	7.7	7.6	7.5	7.3	6.9	6.4	6.2
77.5°	5.7	5.8	5.7	5.6	5.4	5.2	5.1	5.0	4.7	4.4	4.1
80°	3.6	3.6	3.5	3.4	3.4	3.3	3.2	3.1	2.8	2.6	2.4
82.5°	2.0	1.9	1.9	1.8	1.7	1.7	1.6	1.5	1.5	1.4	1.2
85°	0.6	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5
87.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	141.4	141.4	141.4	141.4	141.4	141.4	141.4	141.4	141.4	141.4	141.4
2.5°	141.0	141.1	141.1	141.1	141.1	141.1	141.1	141.1	141.1	141.1	141.1
5°	139.9	139.9	140.0	140.1	140.1	140.1	140.1	140.3	140.3	140.3	140.2
7.5°	138.0	138.2	138.4	138.6	138.7	138.7	138.9	139.1	139.1	139.1	139.1
10°	135.6	136.0	136.3	136.6	136.8	136.9	137.2	137.2	137.4	137.4	137.4
12.5°	132.5	133.1	133.7	134.2	134.4	134.6	134.9	135.2	135.4	135.5	135.5
15°	129.0	129.7	130.5	131.1	131.5	131.8	132.3	132.7	133.0	133.1	133.1
17.5°	124.8	125.6	126.5	127.5	127.7	128.3	128.8	129.3	129.7	129.7	129.7
20°	120.1	121.0	121.8	122.7	123.3	123.6	124.3	125.0	125.3	125.4	125.3
22.5°	114.5	115.4	116.5	117.4	117.9	118.4	119.2	119.9	120.3	120.6	120.3
25°	108.4	109.6	110.6	111.4	112.1	112.6	113.6	114.1	114.8	114.7	114.8
27.5°	102.3	103.3	104.4	105.4	105.8	106.3	107.1	108.0	108.6	109.0	108.9
30°	96.0	96.9	97.8	98.7	99.4	99.8	100.9	101.3	102.1	102.3	102.1
32.5°	89.5	90.0	91.0	92.2	92.4	92.8	93.6	94.6	94.9	95.0	95.0
35°	82.4	83.5	84.3	85.0	85.2	85.6	86.4	87.2	87.5	87.9	87.7
37.5°	75.9	76.6	76.9	77.7	78.3	78.6	79.0	79.5	80.0	80.3	80.2
40°	69.5	69.8	70.1	70.9	70.9	70.9	71.5	72.3	72.3	72.5	72.5
42.5°	62.8	62.9	63.3	63.7	63.8	63.9	64.5	64.6	64.9	65.1	65.3
45°	56.4	56.7	56.9	57.0	57.2	57.3	57.5	57.6	58.1	58.0	58.1
47.5°	50.5	50.6	50.8	50.8	51.0	50.9	51.2	51.0	51.3	51.4	51.6
50°	44.7	45.0	44.8	44.9	44.9	45.0	44.9	44.9	44.9	45.1	45.3
52.5°	39.4	39.5	39.3	39.4	39.4	39.3	39.4	39.3	39.3	39.3	39.3
55°	34.5	34.3	34.2	34.0	33.8	34.1	33.9	33.8	34.0	33.9	34.0
57.5°	29.8	29.6	29.3	29.2	28.9	29.1	28.9	28.8	28.8	28.8	29.0
60°	25.3	25.1	24.8	24.5	24.5	24.4	24.3	24.0	24.1	24.0	24.1
62.5°	21.5	20.9	20.6	20.3	20.3	20.1	19.9	19.7	19.7	19.7	19.8
65°	17.9	17.3	16.8	16.4	16.4	16.2	15.9	15.9	15.6	15.7	15.7
67.5°	14.3	13.8	13.3	13.0	12.9	12.7	12.5	12.4	12.3	12.3	12.4
70°	11.1	10.6	10.3	9.9	9.9	9.7	9.5	9.4	9.3	9.3	9.2
72.5°	8.4	7.9	7.6	7.4	7.2	7.1	6.9	6.8	6.7	6.7	6.8
75°	5.8	5.6	5.3	5.0	4.9	4.9	4.7	4.6	4.6	4.6	4.6
77.5°	3.9	3.6	3.4	3.3	3.2	3.1	3.0	3.0	2.8	2.8	2.8
80°	2.2	2.1	2.0	1.9	1.9	1.8	1.7	1.7	1.6	1.6	1.6
82.5°	1.1	1.1	1.0	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8
85°	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
87.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
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°	141.4	141.4	141.4	141.4	141.4	141.4	141.4	141.4	141.4	141.4	141.4
2.5°	141.1	141.1	141.1	141.1	141.1	141.1	141.0	141.0	141.0	141.0	141.0
5°	140.3	140.2	140.1	140.1	140.0	140.0	139.9	139.9	139.7	139.7	139.6
7.5°	139.0	138.9	138.7	138.7	138.6	138.4	138.2	138.1	137.9	137.7	137.6
10°	137.3	137.1	137.0	136.7	136.7	136.5	135.9	135.7	135.3	135.0	134.6
12.5°	135.3	135.1	134.7	134.4	134.2	133.7	133.2	132.8	132.4	131.7	131.2
15°	132.8	132.5	131.8	131.7	131.4	130.6	130.0	129.2	128.5	127.8	127.2
17.5°	129.5	128.8	128.5	128.0	127.6	126.7	126.0	125.1	124.1	123.3	122.4
20°	125.1	124.4	123.8	123.5	123.1	122.2	121.4	120.3	119.3	118.3	117.5
22.5°	119.9	119.5	118.5	118.2	117.7	116.8	115.8	114.8	113.9	112.7	111.7
25°	114.4	113.7	113.0	112.4	111.9	111.2	109.9	109.1	108.1	106.9	106.1
27.5°	108.5	107.7	106.6	106.2	105.9	104.8	103.8	102.8	102.0	100.9	100.2
30°	101.6	101.0	100.4	99.8	99.3	98.5	97.6	96.4	95.5	95.0	94.1
32.5°	94.6	94.2	93.3	93.0	92.5	91.8	91.1	90.3	89.3	88.6	87.8
35°	87.2	86.7	86.1	85.7	85.5	85.0	84.3	83.5	83.1	82.2	81.8
37.5°	79.8	79.6	79.0	78.5	78.4	77.8	77.5	76.9	76.3	76.0	75.6
40°	72.2	72.0	71.7	71.6	71.3	71.2	70.6	70.2	69.9	69.8	69.5
42.5°	65.1	65.0	64.7	64.8	64.5	64.4	64.3	63.9	63.7	63.4	63.4
45°	58.2	58.1	57.9	57.8	58.0	57.9	57.8	57.7	57.7	57.7	57.6
47.5°	51.6	51.7	51.5	51.6	51.6	51.4	51.4	51.6	51.7	51.8	51.9
50°	45.3	45.6	45.5	45.7	45.7	45.8	45.6	45.9	45.8	46.3	46.2
52.5°	39.6	39.6	39.8	39.9	39.9	40.0	40.3	40.5	40.5	40.7	41.1
55°	34.1	34.1	34.5	34.5	34.8	34.9	35.2	35.3	35.5	36.1	36.2
57.5°	28.9	29.2	29.4	29.5	29.7	29.9	30.1	30.6	30.9	31.2	31.6
60°	24.2	24.6	24.8	24.9	25.1	25.5	25.7	26.2	26.7	27.1	27.4
62.5°	19.9	20.2	20.4	20.8	20.8	21.0	21.7	22.0	22.5	22.9	23.3
65°	16.1	16.3	16.6	16.6	16.8	17.2	17.8	18.2	18.8	19.3	19.7
67.5°	12.6	12.7	12.9	13.1	13.2	13.8	14.2	14.9	15.3	15.7	16.3
70°	9.5	9.6	9.9	10.1	10.2	10.6	11.1	11.5	12.0	12.4	13.0
72.5°	6.8	7.0	7.3	7.4	7.5	7.8	8.3	8.7	9.1	9.6	9.9
75°	4.7	4.8	4.9	5.1	5.2	5.5	5.8	6.1	6.5	7.0	7.3
77.5°	2.9	3.1	3.2	3.3	3.3	3.5	3.7	4.1	4.4	4.7	4.9
80°	1.7	1.8	1.8	1.9	2.0	2.1	2.2	2.4	2.6	2.9	3.1
82.5°	0.9	0.9	1.0	1.0	1.0	1.0	1.2	1.3	1.4	1.5	1.6
85°	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.6
87.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
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):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	141.4	141.4	141.4	141.4	141.4	141.4	141.4	141.4
2.5°	140.9	140.9	140.9	140.9	140.9	140.9	140.9	140.9
5°	139.6	139.5	139.5	139.4	139.4	139.4	139.4	139.3
7.5°	137.3	137.2	137.1	137.1	137.0	137.0	137.0	136.7
10°	134.4	134.1	134.1	134.0	133.6	133.6	133.4	133.4
12.5°	130.8	130.4	130.2	130.0	129.7	129.5	129.4	129.2
15°	126.5	126.0	125.7	125.6	125.1	124.8	124.8	124.7
17.5°	121.8	121.1	120.8	120.6	120.0	119.9	119.8	119.4
20°	116.5	115.8	115.5	115.2	114.9	114.3	114.2	114.3
22.5°	111.0	110.0	109.7	109.4	109.1	108.6	108.6	108.3
25°	105.2	104.4	104.0	103.7	103.2	103.0	102.7	102.7
27.5°	99.3	98.5	98.3	97.7	97.3	97.1	96.8	96.8
30°	93.2	92.8	92.4	92.3	91.6	91.3	91.0	90.8
32.5°	87.3	86.7	86.5	86.3	86.0	85.6	85.5	85.1
35°	81.5	80.9	80.7	80.5	80.0	79.9	79.7	79.8
37.5°	75.3	75.2	75.1	74.8	74.5	74.5	74.3	74.5
40°	69.3	69.2	69.0	69.1	69.1	69.0	69.1	69.1
42.5°	63.5	63.5	63.3	63.4	63.4	63.5	63.7	63.8
45°	57.8	57.8	57.8	57.9	57.8	58.1	58.3	58.4
47.5°	52.0	52.0	52.3	52.3	52.4	52.8	52.8	52.8
50°	46.4	46.7	46.6	46.9	46.9	47.1	46.9	46.9
52.5°	41.1	41.4	41.5	41.5	41.8	41.9	41.9	41.8
55°	36.4	36.8	36.6	36.9	37.0	37.1	37.3	37.2
57.5°	32.1	32.2	32.4	32.4	32.6	32.7	32.8	32.7
60°	27.7	28.1	28.3	28.4	28.5	28.6	28.6	28.8
62.5°	23.7	24.2	24.3	24.4	24.6	24.8	24.9	25.0
65°	20.1	20.5	20.7	20.9	21.1	21.1	21.2	21.2
67.5°	16.6	17.0	17.1	17.2	17.6	17.6	17.9	17.9
70°	13.5	13.7	13.8	14.0	14.3	14.5	14.6	14.7
72.5°	10.4	10.7	10.9	11.1	11.3	11.4	11.5	11.6
75°	7.6	8.1	8.1	8.3	8.5	8.7	8.8	8.7
77.5°	5.3	5.5	5.7	5.8	5.9	6.1	6.2	6.2
80°	3.3	3.5	3.5	3.6	3.8	3.9	4.0	4.0
82.5°	1.7	1.8	1.9	2.0	2.1	2.1	2.1	2.2
85°	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8
87.5°	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2
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)