

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: P879318

Luminaire Tested: **LD4C02D010 EU4029027 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: P879318
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 EU4029027 4LBDWWH
Description: 4 INCH 250 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS AND 4LBDWW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

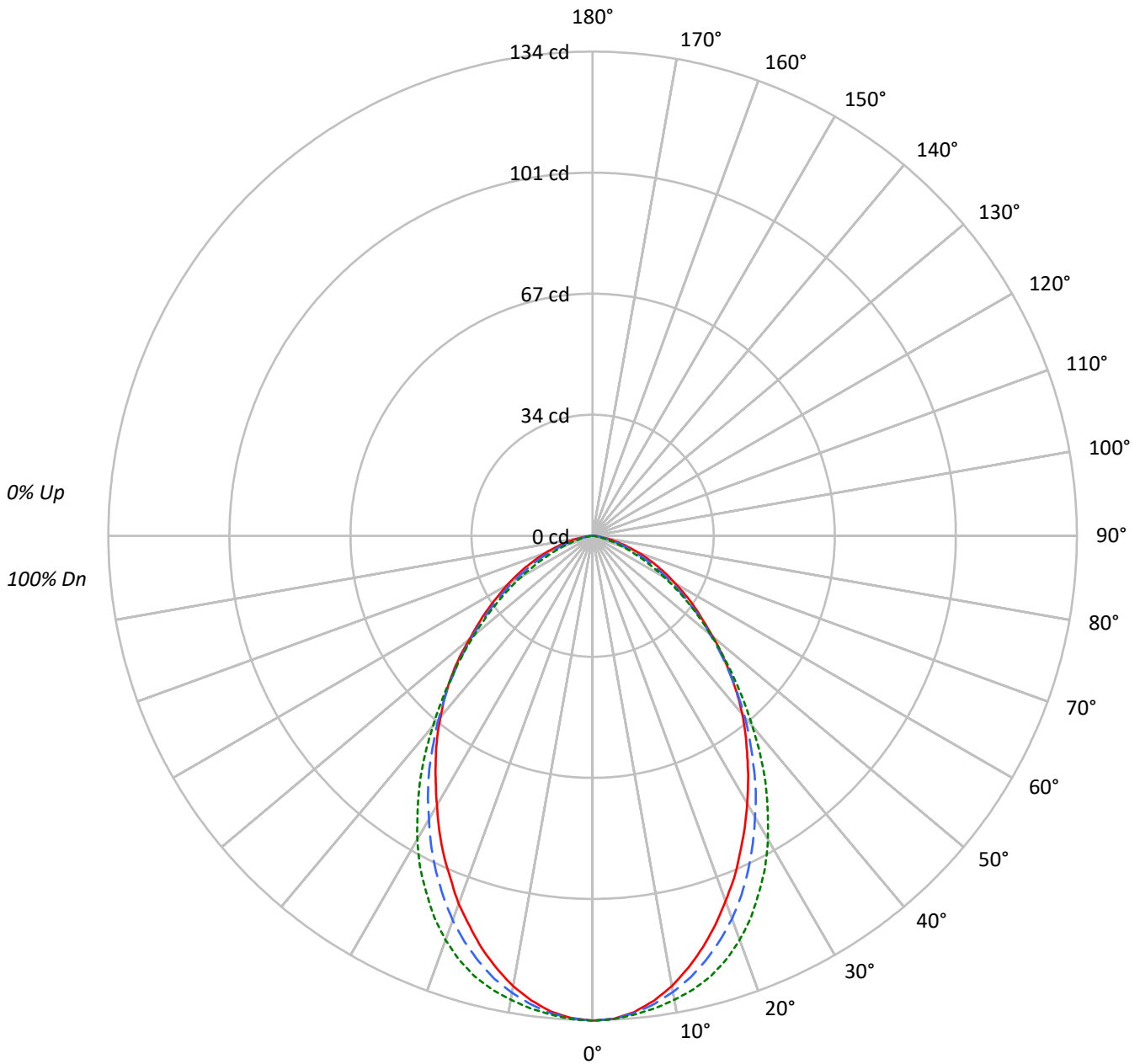
Lumens per Lamp: N/A
Luminaire Lumens: 240.0 lumens
Efficiency: N/A
Efficacy: 68.6 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.1 / 1.12
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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°	16487	16487	16487
5°	16316	16402	16303
10°	15781	16267	15793
15°	14995	16051	15046
20°	14054	15558	14172
25°	13094	14762	13216
30°	12129	13760	12214
35°	11188	12508	11353
40°	10328	11018	10504
45°	9347	9556	9625
50°	8295	8180	8486
55°	7390	6897	7561
60°	6462	5602	6708
65°	5669	4331	5872
70°	4777	3161	4993
75°	3702	2041	3940
80°	2405	1061	2688
85°	846	423	1128



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	12.5	5.2
10°-20°	34.2	14.3
20°-30°	47.1	19.6
30°-40°	49.1	20.5
40°-50°	42.0	17.5
50°-60°	30.1	12.5
60°-70°	17.4	7.3
70°-80°	6.7	2.8
80°-90°	0.8	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°	93.8	39.1
0°-40°	142.9	59.6
0°-60°	215.0	89.6
0°-90°	240.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	240.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	134	134	134	134	134	
5°	132	133	133	133	132	12
15°	118	122	126	122	118	33
25°	97	102	109	102	98	44
35°	75	78	83	79	76	47
45°	54	53	55	55	55	41
55°	34	33	32	34	35	31
65°	20	17	15	18	20	19
75°	8	6	4	6	8	8
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°	134.2	134.2	134.2	134.2	134.2	134.2	134.2	134.2	134.2	134.2	134.2
2.5°	133.8	133.7	133.8	133.8	133.8	133.7	133.8	133.8	133.8	133.8	133.8
5°	132.3	132.2	132.3	132.3	132.3	132.3	132.4	132.4	132.5	132.5	132.6
7.5°	129.8	129.7	129.8	130.0	130.0	130.1	130.1	130.2	130.3	130.6	130.7
10°	126.5	126.5	126.6	126.7	127.0	126.9	127.1	127.3	127.6	128.0	128.2
12.5°	122.4	122.5	122.6	122.7	123.0	123.1	123.4	123.7	124.2	124.7	125.2
15°	117.9	118.0	118.0	118.4	118.6	119.0	119.2	119.7	120.2	120.9	121.5
17.5°	112.9	112.9	113.0	113.3	113.9	114.1	114.3	115.0	115.6	116.5	117.3
20°	107.5	107.8	108.0	108.4	108.8	109.1	109.3	110.1	110.9	111.8	112.8
22.5°	102.4	102.2	102.5	102.9	103.2	103.5	103.9	104.7	105.5	106.6	107.6
25°	96.6	96.7	97.0	97.3	97.7	98.1	98.5	99.4	99.8	101.0	101.9
27.5°	91.1	91.3	91.4	91.9	92.2	92.5	92.7	93.7	94.1	95.1	96.0
30°	85.5	85.7	85.7	86.2	86.5	86.8	87.3	88.0	88.5	89.2	89.9
32.5°	80.1	80.1	80.3	80.8	81.0	81.4	81.5	82.0	82.6	83.3	84.0
35°	74.6	74.8	74.9	74.9	75.4	75.6	75.8	76.3	76.7	77.0	77.6
37.5°	69.5	69.5	69.4	69.6	69.9	69.9	70.2	70.4	70.7	71.0	71.5
40°	64.4	64.4	64.2	64.3	64.5	64.5	64.4	64.6	64.8	65.0	65.5
42.5°	59.1	59.0	58.9	58.9	59.0	58.9	59.0	59.1	59.1	59.1	59.4
45°	53.8	54.1	53.8	53.7	53.5	53.4	53.3	53.4	53.6	53.3	53.4
47.5°	48.6	48.7	48.5	48.4	48.2	48.1	48.2	47.9	48.0	48.1	47.9
50°	43.4	43.2	43.2	43.0	43.1	43.0	42.9	42.8	42.8	42.6	42.4
52.5°	38.5	38.6	38.7	38.3	38.4	38.1	38.2	37.9	37.9	37.6	37.7
55°	34.5	34.3	34.3	34.2	34.1	33.9	33.9	33.7	33.4	33.2	32.8
57.5°	30.4	30.3	30.1	30.2	29.9	29.8	29.7	29.5	29.2	29.0	28.5
60°	26.3	26.4	26.4	26.3	26.1	25.9	25.9	25.6	25.2	24.8	24.4
62.5°	23.0	22.8	22.8	22.7	22.4	22.4	22.1	21.9	21.5	21.1	20.7
65°	19.5	19.5	19.4	19.2	18.9	18.9	18.7	18.5	18.1	17.7	17.2
67.5°	16.3	16.2	16.2	16.0	15.7	15.7	15.5	15.1	14.8	14.3	13.9
70°	13.3	13.2	13.2	13.0	12.7	12.5	12.5	12.1	11.7	11.3	10.9
72.5°	10.4	10.4	10.3	10.1	10.0	9.9	9.7	9.3	9.0	8.6	8.3
75°	7.8	7.8	7.7	7.5	7.3	7.2	7.1	6.9	6.6	6.1	5.9
77.5°	5.4	5.5	5.4	5.3	5.1	4.9	4.9	4.7	4.4	4.1	3.9
80°	3.4	3.4	3.4	3.3	3.2	3.2	3.0	2.9	2.6	2.5	2.3
82.5°	1.9	1.8	1.8	1.7	1.6	1.6	1.5	1.4	1.4	1.3	1.2
85°	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.4
87.5°	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	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°	134.2	134.2	134.2	134.2	134.2	134.2	134.2	134.2	134.2	134.2	134.2
2.5°	133.8	133.8	133.8	133.9	133.9	133.9	133.9	133.9	133.9	133.9	133.9
5°	132.7	132.7	132.8	132.9	132.9	132.9	132.9	133.0	133.0	133.0	133.0
7.5°	130.9	131.1	131.3	131.5	131.6	131.6	131.7	131.9	131.9	131.9	131.9
10°	128.6	129.1	129.3	129.6	129.7	129.8	130.1	130.2	130.3	130.4	130.3
12.5°	125.7	126.2	126.8	127.3	127.5	127.7	128.0	128.3	128.4	128.6	128.5
15°	122.4	123.0	123.8	124.4	124.8	125.1	125.5	125.9	126.1	126.2	126.2
17.5°	118.4	119.2	120.0	120.9	121.2	121.7	122.2	122.7	123.0	123.0	123.0
20°	113.9	114.8	115.6	116.4	117.0	117.2	117.9	118.6	118.9	119.0	118.9
22.5°	108.7	109.5	110.5	111.4	111.9	112.3	113.0	113.7	114.1	114.4	114.1
25°	102.8	104.0	104.9	105.7	106.3	106.8	107.7	108.3	108.9	108.9	108.9
27.5°	97.0	98.0	99.0	100.0	100.4	100.9	101.6	102.5	103.0	103.4	103.3
30°	91.1	91.9	92.8	93.6	94.3	94.7	95.7	96.1	96.8	97.0	96.9
32.5°	84.9	85.4	86.3	87.4	87.7	88.1	88.7	89.7	90.0	90.1	90.1
35°	78.2	79.2	80.0	80.7	80.9	81.2	82.0	82.7	83.0	83.4	83.2
37.5°	72.0	72.6	73.0	73.7	74.3	74.6	74.9	75.4	75.9	76.1	76.1
40°	65.9	66.2	66.5	67.2	67.3	67.3	67.9	68.5	68.5	68.7	68.7
42.5°	59.6	59.6	60.0	60.4	60.5	60.6	61.2	61.3	61.6	61.7	61.9
45°	53.5	53.8	54.0	54.1	54.3	54.4	54.5	54.6	55.1	55.0	55.1
47.5°	47.9	48.0	48.2	48.2	48.3	48.3	48.5	48.4	48.7	48.8	48.9
50°	42.4	42.7	42.5	42.6	42.6	42.7	42.6	42.6	42.6	42.8	43.0
52.5°	37.4	37.5	37.3	37.4	37.4	37.3	37.4	37.3	37.3	37.3	37.3
55°	32.8	32.6	32.5	32.3	32.0	32.3	32.2	32.1	32.3	32.2	32.3
57.5°	28.3	28.0	27.8	27.7	27.4	27.6	27.4	27.3	27.3	27.3	27.5
60°	24.0	23.8	23.6	23.3	23.2	23.1	23.0	22.8	22.8	22.8	22.9
62.5°	20.4	19.9	19.5	19.3	19.2	19.1	18.9	18.7	18.7	18.7	18.8
65°	17.0	16.4	15.9	15.6	15.6	15.3	15.1	15.1	14.8	14.9	14.9
67.5°	13.6	13.1	12.6	12.4	12.2	12.0	11.9	11.8	11.6	11.6	11.7
70°	10.5	10.1	9.8	9.4	9.4	9.2	9.0	8.9	8.8	8.8	8.8
72.5°	7.9	7.5	7.2	7.0	6.8	6.7	6.5	6.5	6.4	6.4	6.5
75°	5.5	5.3	5.0	4.8	4.7	4.6	4.5	4.4	4.4	4.3	4.4
77.5°	3.7	3.4	3.2	3.1	3.0	2.9	2.9	2.8	2.7	2.7	2.7
80°	2.1	2.0	1.9	1.8	1.8	1.7	1.6	1.6	1.5	1.5	1.5
82.5°	1.1	1.0	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8
85°	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.4
87.5°	0.0	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°	134.2	134.2	134.2	134.2	134.2	134.2	134.2	134.2	134.2	134.2	134.2
2.5°	133.9	133.8	133.8	133.8	133.8	133.8	133.8	133.8	133.7	133.7	133.7
5°	133.0	133.0	132.9	132.9	132.8	132.8	132.8	132.7	132.6	132.5	132.4
7.5°	131.9	131.8	131.6	131.6	131.5	131.3	131.1	131.0	130.8	130.6	130.5
10°	130.3	130.1	129.9	129.7	129.6	129.4	129.0	128.7	128.4	128.1	127.7
12.5°	128.4	128.2	127.8	127.5	127.3	126.8	126.4	126.0	125.6	124.9	124.4
15°	126.0	125.7	125.0	124.9	124.6	123.9	123.3	122.6	121.9	121.2	120.6
17.5°	122.8	122.2	121.9	121.4	121.1	120.2	119.5	118.7	117.8	117.0	116.1
20°	118.7	118.0	117.4	117.2	116.7	115.9	115.2	114.1	113.2	112.2	111.5
22.5°	113.8	113.3	112.4	112.2	111.6	110.8	109.9	108.9	108.0	106.9	105.9
25°	108.5	107.9	107.2	106.6	106.2	105.5	104.3	103.5	102.5	101.4	100.6
27.5°	102.9	102.2	101.2	100.8	100.4	99.4	98.5	97.5	96.7	95.7	95.1
30°	96.4	95.8	95.2	94.7	94.2	93.4	92.5	91.5	90.6	90.1	89.2
32.5°	89.8	89.3	88.5	88.3	87.7	87.1	86.4	85.6	84.8	84.0	83.3
35°	82.7	82.3	81.7	81.3	81.1	80.6	79.9	79.2	78.8	78.0	77.6
37.5°	75.7	75.5	74.9	74.5	74.4	73.8	73.5	73.0	72.3	72.1	71.7
40°	68.4	68.3	68.0	68.0	67.7	67.5	67.0	66.6	66.3	66.2	65.9
42.5°	61.8	61.7	61.4	61.4	61.2	61.1	61.0	60.7	60.4	60.1	60.2
45°	55.2	55.1	54.9	54.8	55.0	54.9	54.8	54.7	54.7	54.7	54.6
47.5°	48.9	49.0	48.8	48.9	48.9	48.8	48.8	49.0	49.0	49.1	49.2
50°	43.0	43.3	43.2	43.3	43.4	43.4	43.3	43.5	43.5	43.9	43.8
52.5°	37.5	37.6	37.8	37.8	37.9	37.9	38.2	38.4	38.4	38.6	39.0
55°	32.3	32.4	32.8	32.8	33.0	33.1	33.4	33.5	33.7	34.2	34.3
57.5°	27.4	27.7	27.9	28.0	28.1	28.4	28.6	29.0	29.3	29.6	30.0
60°	23.0	23.3	23.6	23.7	23.8	24.1	24.4	24.9	25.3	25.7	26.0
62.5°	18.9	19.2	19.4	19.7	19.7	20.0	20.5	20.8	21.3	21.7	22.1
65°	15.2	15.4	15.8	15.8	16.0	16.4	16.9	17.3	17.8	18.3	18.7
67.5°	11.9	12.1	12.3	12.5	12.6	13.1	13.5	14.1	14.5	14.9	15.4
70°	9.0	9.1	9.4	9.6	9.7	10.1	10.5	10.9	11.4	11.8	12.3
72.5°	6.5	6.7	6.9	7.0	7.1	7.4	7.8	8.3	8.7	9.1	9.4
75°	4.4	4.6	4.7	4.8	5.0	5.2	5.5	5.8	6.2	6.6	6.9
77.5°	2.8	2.9	3.1	3.1	3.2	3.4	3.5	3.8	4.1	4.4	4.7
80°	1.6	1.7	1.7	1.8	1.9	2.0	2.1	2.3	2.5	2.7	3.0
82.5°	0.8	0.9	0.9	0.9	0.9	1.0	1.1	1.2	1.3	1.4	1.5
85°	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5	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°	134.2	134.2	134.2	134.2	134.2	134.2	134.2	134.2
2.5°	133.7	133.7	133.7	133.6	133.7	133.7	133.7	133.6
5°	132.4	132.3	132.3	132.3	132.2	132.2	132.3	132.2
7.5°	130.3	130.1	130.0	130.0	130.0	129.9	129.9	129.7
10°	127.5	127.2	127.2	127.1	126.7	126.7	126.6	126.6
12.5°	124.1	123.7	123.5	123.3	123.0	122.8	122.8	122.6
15°	120.0	119.5	119.2	119.1	118.7	118.4	118.4	118.3
17.5°	115.6	114.9	114.6	114.4	113.8	113.8	113.7	113.2
20°	110.5	109.9	109.5	109.3	109.0	108.5	108.4	108.4
22.5°	105.3	104.4	104.1	103.8	103.5	103.0	103.0	102.7
25°	99.8	99.0	98.7	98.4	97.9	97.7	97.4	97.5
27.5°	94.2	93.5	93.2	92.7	92.3	92.1	91.9	91.9
30°	88.4	88.0	87.6	87.6	86.9	86.6	86.3	86.1
32.5°	82.8	82.3	82.1	81.9	81.6	81.2	81.1	80.8
35°	77.3	76.8	76.5	76.3	75.9	75.8	75.6	75.7
37.5°	71.5	71.4	71.2	71.0	70.7	70.7	70.5	70.7
40°	65.7	65.7	65.5	65.5	65.5	65.4	65.5	65.5
42.5°	60.2	60.2	60.0	60.1	60.2	60.3	60.4	60.5
45°	54.8	54.8	54.8	54.9	54.8	55.1	55.3	55.4
47.5°	49.3	49.4	49.6	49.6	49.7	50.1	50.1	50.1
50°	44.1	44.3	44.2	44.5	44.4	44.6	44.4	44.4
52.5°	39.0	39.3	39.3	39.4	39.7	39.7	39.7	39.7
55°	34.5	34.9	34.7	35.0	35.1	35.2	35.4	35.3
57.5°	30.4	30.6	30.7	30.7	30.9	31.0	31.1	31.0
60°	26.3	26.6	26.9	26.9	27.0	27.1	27.2	27.3
62.5°	22.5	23.0	23.1	23.1	23.4	23.5	23.6	23.7
65°	19.1	19.4	19.7	19.8	20.0	20.0	20.2	20.2
67.5°	15.8	16.1	16.3	16.4	16.7	16.7	17.0	17.0
70°	12.8	13.0	13.1	13.3	13.6	13.7	13.8	13.9
72.5°	9.9	10.2	10.3	10.5	10.7	10.8	10.9	11.0
75°	7.2	7.6	7.7	7.9	8.0	8.2	8.3	8.3
77.5°	5.0	5.2	5.4	5.5	5.6	5.8	5.9	5.9
80°	3.1	3.3	3.4	3.4	3.6	3.7	3.8	3.8
82.5°	1.6	1.7	1.8	1.9	2.0	2.0	2.0	2.1
85°	0.6	0.7	0.7	0.7	0.7	0.8	0.8	0.8
87.5°	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



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













(END OF REPORT)