

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: P880535

Luminaire Tested: **LD4C08D010 EU4089040 4LBDWNH**

Issue Date: 10/4/2024

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: P880535
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P251940)
Test Lab: INNOVATION CENTER
Issue Date: 10/4/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C08D010 EU4089040 4LBDWNH
Description: 4 INCH 800 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS AND 4LBDWN TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

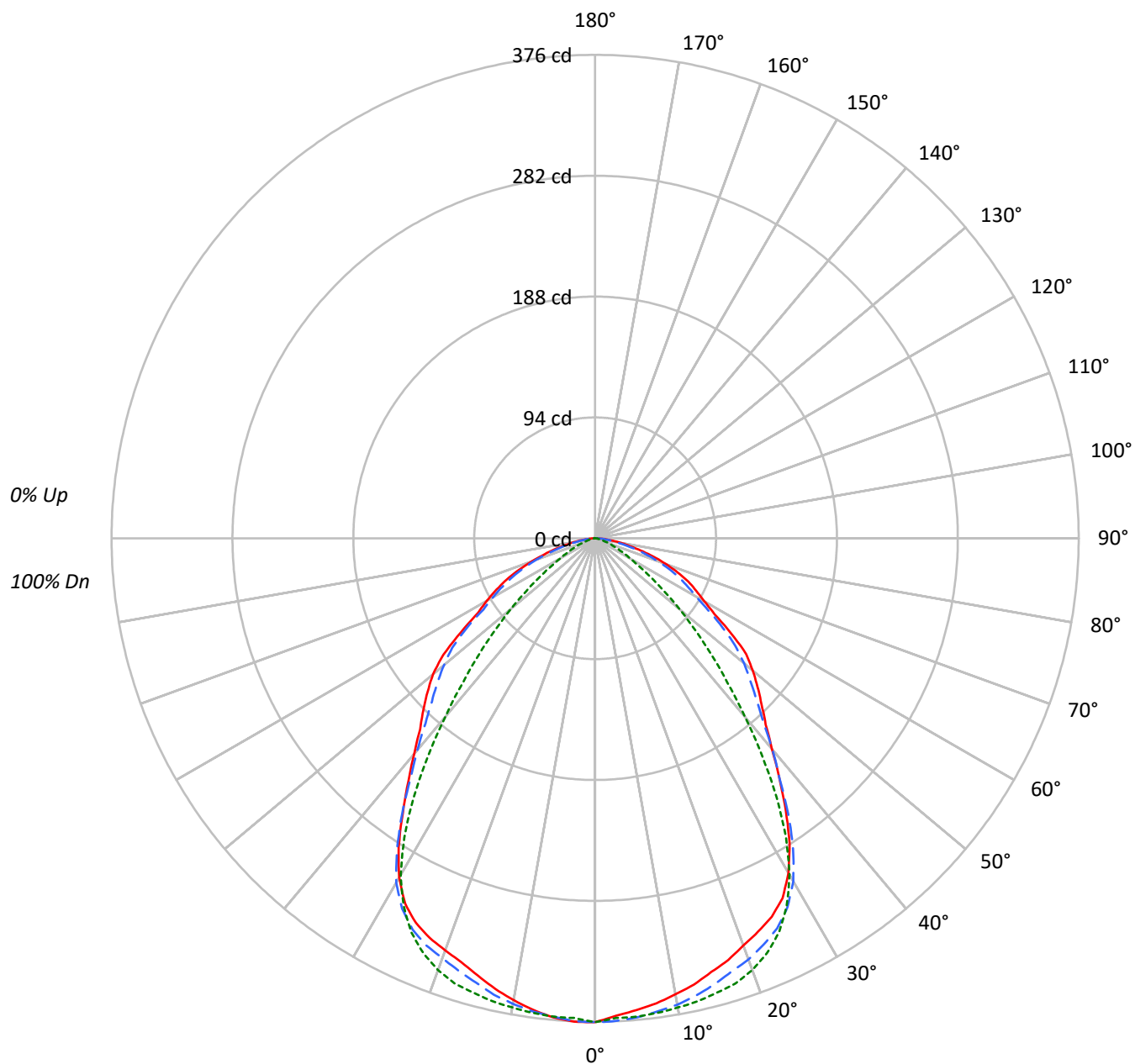
Lumens per Lamp: N/A
Luminaire Lumens: 766.0 lumens
Efficiency: N/A
Efficacy: 77.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.18 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 9.87
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					20
RC	80				70					50					30					10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	88		
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76		
3	94	85	78	72	92	84	77	72	81	75	70	78	73	69	76	72	68	66		
4	87	77	69	63	85	75	68	62	73	67	62	71	65	61	69	64	60	58		
5	81	69	61	55	79	68	61	55	66	60	54	64	58	54	63	57	53	51		
6	75	63	55	49	73	62	55	49	60	54	49	59	53	48	57	52	48	46		
7	70	58	50	44	68	57	49	44	56	49	44	54	48	43	53	47	43	41		
8	66	53	45	40	64	52	45	40	51	44	40	50	44	39	49	43	39	37		
9	62	49	41	36	60	49	41	36	47	41	36	46	40	36	45	40	36	34		
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	46242	46242	46242
5°	45420	46061	46135
10°	44934	46232	45508
15°	44414	46538	44783
20°	44059	46713	44582
25°	44028	45844	44733
30°	42629	42884	43210
35°	38739	36909	39084
40°	34272	29060	35106
45°	31795	22135	32802
50°	30542	16380	31440
55°	27652	11288	27288
60°	24055	7691	23907
65°	23227	5552	22064
70°	21013	3736	18714
75°	17325	2468	14857
80°	13937	1627	11037
85°	11418	846	7330



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	35.5	4.6
10°-20°	101.6	13.3
20°-30°	153.5	20.0
30°-40°	160.6	21.0
40°-50°	130.1	17.0
50°-60°	94.6	12.4
60°-70°	58.4	7.6
70°-80°	26.4	3.4
80°-90°	5.4	0.7
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°	290.6	37.9
0°-40°	451.2	58.9
0°-60°	675.9	88.2
0°-90°	766.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	766.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	376	376	376	376	376	
5°	368	374	374	374	374	35
15°	349	359	366	358	352	99
25°	325	335	338	336	330	149
35°	258	262	246	262	261	161
45°	183	177	127	180	189	142
55°	129	121	53	122	127	115
65°	80	72	19	71	76	78
75°	36	31	5	27	31	40
85°	8	6	1	5	5	9
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°	376.4	376.4	376.4	376.4	376.4	376.4	376.4	376.4	376.4	376.4	376.4
2.5°	371.7	371.7	375.2	379.3	375.8	372.3	374.6	373.5	377.6	377.6	375.8
5°	368.3	369.4	372.3	375.8	372.9	369.4	372.3	371.2	375.2	375.2	374.1
7.5°	364.8	365.4	368.9	372.9	370.0	366.5	368.9	368.3	371.7	372.3	371.2
10°	360.2	360.7	364.2	368.3	365.4	362.5	364.8	364.2	368.9	368.9	368.3
12.5°	355.5	356.1	359.6	363.1	360.2	357.3	359.6	359.6	364.2	364.8	364.2
15°	349.2	350.3	353.2	356.7	355.0	351.5	353.8	353.8	357.9	359.0	359.0
17.5°	344.0	344.5	347.4	350.9	348.6	345.7	348.0	348.0	352.1	353.2	353.2
20°	337.0	338.2	341.0	344.5	342.8	340.5	342.2	342.2	346.9	348.0	348.6
22.5°	331.2	332.4	334.7	339.3	336.4	334.7	337.0	336.4	341.7	342.2	342.2
25°	324.8	326.0	328.9	331.8	330.0	328.3	330.0	330.0	334.1	334.7	334.7
27.5°	315.6	316.2	319.0	322.0	320.2	317.9	320.2	319.6	323.7	324.3	323.7
30°	300.5	301.7	302.8	306.9	305.2	303.4	305.7	304.6	308.6	308.6	308.0
32.5°	281.4	281.4	283.8	286.6	284.3	283.1	284.9	285.5	288.4	288.4	286.6
35°	258.3	259.4	261.1	262.9	261.1	260.0	261.7	261.1	264.6	263.5	261.7
37.5°	235.1	235.7	237.4	239.7	237.4	235.7	236.2	235.7	238.6	238.6	235.7
40°	213.7	214.8	216.0	218.3	216.0	214.8	215.4	213.7	217.2	216.0	214.2
42.5°	196.3	196.9	198.6	199.8	197.5	196.9	197.5	196.3	198.0	196.9	193.4
45°	183.0	183.0	183.6	185.3	183.0	182.4	182.4	181.2	183.0	180.7	177.2
47.5°	171.4	172.0	172.6	173.7	172.0	170.3	170.8	168.5	169.7	167.9	163.3
50°	159.8	161.0	161.6	162.7	161.0	159.8	160.4	158.1	158.1	155.2	151.1
52.5°	148.2	148.8	148.2	149.4	148.2	146.5	147.1	144.8	144.8	141.3	137.2
55°	129.1	129.7	130.3	131.4	130.3	128.6	129.7	128.0	128.0	125.6	121.0
57.5°	110.0	110.6	111.2	111.7	111.7	110.6	111.2	110.0	109.4	107.7	104.2
60°	97.9	97.9	97.9	98.4	97.9	97.3	97.3	96.1	96.1	93.8	90.3
62.5°	88.6	89.2	89.2	89.7	89.2	88.6	88.0	86.9	86.3	84.0	81.1
65°	79.9	79.9	79.3	80.5	79.9	79.3	79.3	78.2	77.0	74.7	71.8
67.5°	69.5	70.0	69.5	70.0	70.0	69.5	68.9	67.7	67.2	65.4	62.0
70°	58.5	58.5	58.5	59.1	58.5	58.5	59.1	57.3	56.8	54.4	51.5
72.5°	47.5	48.1	48.1	47.5	48.1	46.9	46.9	46.9	46.3	44.0	41.1
75°	36.5	37.1	37.1	37.6	37.1	36.5	36.5	35.9	35.3	33.6	31.3
77.5°	27.2	27.2	27.8	27.8	27.8	27.2	27.2	26.1	26.1	24.9	22.6
80°	19.7	19.7	19.1	19.7	19.7	19.1	19.1	18.5	18.5	17.4	15.6
82.5°	12.7	13.3	13.3	13.3	13.3	12.7	12.7	12.7	12.1	11.6	10.4
85°	8.1	8.1	8.1	8.1	8.7	8.1	8.7	8.1	8.1	6.9	6.4
87.5°	3.5	3.5	3.5	4.1	4.1	3.5	3.5	3.5	3.5	3.5	2.9
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°	376.4	376.4	376.4	376.4	376.4	376.4	376.4	376.4	376.4	376.4	376.4
2.5°	375.8	376.4	374.6	376.9	375.2	375.8	376.4	375.8	373.5	373.5	379.9
5°	373.5	374.6	372.9	375.8	374.6	374.6	375.8	375.2	372.9	373.5	379.3
7.5°	371.2	372.9	371.7	374.6	372.9	372.9	374.1	374.1	371.7	372.3	377.6
10°	367.7	370.0	369.4	372.3	370.6	370.6	372.3	372.3	370.0	370.6	375.8
12.5°	364.8	367.1	366.5	369.4	368.3	368.9	369.4	370.6	367.7	368.9	373.5
15°	360.2	362.5	362.5	365.4	364.2	365.4	366.5	368.3	365.9	365.9	370.6
17.5°	355.0	357.9	357.9	360.2	360.2	360.7	363.1	364.8	362.5	363.1	367.1
20°	349.2	352.7	352.7	355.5	355.0	356.1	357.9	359.6	357.3	357.3	361.9
22.5°	343.4	346.3	346.9	348.6	348.6	349.2	350.9	352.1	349.2	349.2	353.8
25°	335.3	338.2	338.7	339.9	338.7	338.7	339.9	341.0	338.2	338.2	342.2
27.5°	324.3	327.2	327.2	326.6	325.4	326.0	325.4	326.0	323.1	322.5	326.6
30°	308.0	309.8	309.8	309.2	307.5	307.5	305.7	306.3	302.3	302.3	305.7
32.5°	286.1	287.8	286.6	285.5	283.1	282.0	280.8	280.3	276.2	276.2	280.3
35°	260.0	261.1	259.4	257.1	254.2	252.4	250.7	248.4	245.5	246.1	248.4
37.5°	233.4	233.4	231.0	226.4	224.1	221.2	218.3	218.3	213.7	213.1	214.8
40°	210.8	208.5	204.4	198.0	194.0	191.1	187.0	184.7	181.2	181.2	184.1
42.5°	190.5	185.9	180.7	172.0	167.9	164.5	159.3	156.9	152.9	152.3	154.0
45°	172.6	167.9	160.4	151.1	145.9	141.9	134.3	131.4	128.0	127.4	128.6
47.5°	158.1	152.9	143.6	131.4	126.2	121.0	113.5	109.4	106.5	104.8	106.5
50°	145.3	138.4	128.6	115.8	108.9	104.2	95.0	90.9	86.9	85.7	86.3
52.5°	131.4	124.5	114.1	100.7	94.4	87.4	78.7	73.0	69.5	67.7	69.5
55°	116.4	109.4	99.0	85.7	78.7	72.4	63.1	58.5	54.4	52.7	54.4
57.5°	100.2	93.8	84.5	71.2	64.8	59.1	50.4	45.8	41.7	40.5	41.7
60°	86.3	81.1	71.8	59.1	53.8	47.5	40.0	35.3	31.8	31.3	31.8
62.5°	77.0	71.2	62.5	50.4	45.2	40.0	33.0	28.4	25.5	24.9	25.5
65°	67.7	61.4	53.3	42.8	37.6	33.6	26.6	22.6	19.7	19.1	19.7
67.5°	57.3	51.5	44.6	35.3	31.3	27.2	21.4	17.4	15.1	14.5	15.1
70°	47.5	42.3	35.3	28.4	24.3	21.4	16.2	13.3	11.0	10.4	11.0
72.5°	37.6	33.0	27.2	21.4	19.1	16.2	12.7	9.8	8.1	7.5	8.1
75°	29.0	25.5	20.8	15.6	13.9	12.1	8.7	6.9	5.8	5.2	5.8
77.5°	20.3	17.9	14.5	11.6	9.8	8.7	6.4	4.6	4.1	3.5	4.1
80°	13.9	12.1	9.8	7.5	6.4	5.2	4.1	2.9	2.3	2.3	2.3
82.5°	9.3	7.5	5.8	4.6	4.1	3.5	2.3	1.7	1.7	1.2	1.2
85°	5.2	4.6	3.5	2.9	2.3	1.7	1.2	1.2	0.6	0.6	0.6
87.5°	2.3	1.7	1.2	1.2	0.6	0.6	0.6	0.6	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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	376.4	376.4	376.4	376.4	376.4	376.4	376.4	376.4	376.4	376.4	376.4
2.5°	378.1	376.4	378.7	376.4	375.2	376.4	375.2	378.7	375.8	373.5	375.8
5°	377.6	375.2	377.6	375.8	374.1	374.6	373.5	376.9	373.5	371.7	372.9
7.5°	376.4	374.6	375.8	374.1	372.3	372.9	371.7	374.6	371.2	369.4	370.6
10°	374.6	372.9	373.5	372.3	370.6	370.6	369.4	371.7	367.7	365.4	366.5
12.5°	372.3	370.0	371.2	369.4	367.1	367.1	365.9	367.7	363.6	361.3	361.9
15°	369.4	367.1	367.1	365.4	363.1	363.1	360.7	362.5	357.9	355.5	355.5
17.5°	365.9	363.1	363.1	361.3	358.4	357.9	356.1	357.9	352.7	350.3	350.3
20°	360.7	358.4	357.9	356.7	353.8	353.2	350.9	351.5	347.4	345.7	345.1
22.5°	353.8	351.5	352.1	350.3	348.0	347.4	345.1	346.9	342.8	341.0	341.7
25°	341.7	340.5	341.7	341.0	339.3	339.3	338.2	339.3	335.9	334.7	335.3
27.5°	327.7	327.2	327.7	327.7	326.6	326.6	326.6	328.3	324.8	324.3	324.3
30°	307.5	307.5	308.0	308.6	308.6	309.8	309.2	311.5	309.2	308.0	309.2
32.5°	280.8	283.1	284.9	284.9	284.9	286.1	287.2	289.0	286.6	287.2	287.2
35°	250.7	252.4	253.6	256.5	254.8	258.8	260.0	262.3	261.7	262.9	262.3
37.5°	217.2	219.5	221.8	225.8	225.2	229.9	232.2	236.8	235.7	238.0	239.1
40°	185.9	189.3	192.8	195.7	198.0	202.7	207.3	213.1	214.8	216.6	217.2
42.5°	155.8	159.3	165.0	169.1	172.6	180.1	186.5	193.4	195.2	198.6	199.8
45°	131.4	134.3	141.3	146.5	149.4	160.4	167.9	176.6	179.5	183.6	185.3
47.5°	108.9	114.1	121.0	127.4	131.4	143.0	152.9	162.1	166.2	170.8	173.1
50°	89.2	95.0	104.2	110.0	115.8	128.6	139.6	149.4	153.4	158.6	161.0
52.5°	73.0	79.3	88.0	94.4	100.7	114.1	125.6	134.9	140.1	143.6	147.1
55°	57.3	64.3	73.0	79.9	85.1	99.6	109.4	118.7	122.2	125.1	126.8
57.5°	44.6	49.8	58.5	64.3	70.7	83.4	93.2	100.2	103.1	106.5	107.7
60°	34.8	40.0	48.1	53.8	59.6	71.8	81.7	88.6	91.5	94.4	96.1
62.5°	27.8	33.0	40.5	45.8	51.0	62.0	70.7	77.6	81.1	84.0	85.7
65°	22.0	26.6	33.0	38.2	42.3	52.1	60.8	67.2	70.7	73.5	75.3
67.5°	17.4	21.4	27.2	30.7	34.8	42.8	50.4	56.2	59.1	62.5	64.3
70°	13.3	16.2	21.4	24.3	27.2	34.2	40.0	45.8	48.6	51.0	52.1
72.5°	9.8	12.1	16.2	18.5	20.3	26.1	30.7	34.8	37.1	39.4	40.5
75°	6.9	8.7	11.6	13.3	14.5	18.5	22.6	25.5	27.2	29.0	30.7
77.5°	4.6	5.8	7.5	8.7	9.8	12.7	15.1	17.4	19.1	20.8	21.4
80°	2.9	4.1	5.2	5.8	6.4	8.1	10.4	11.6	12.7	13.9	14.5
82.5°	1.7	2.3	2.9	3.5	4.1	5.2	6.4	7.5	8.1	9.3	9.8
85°	0.6	1.2	1.2	1.7	1.7	2.9	3.5	4.1	4.6	5.2	5.8
87.5°	0.0	0.0	0.6	0.6	0.6	0.6	1.2	1.2	1.2	1.2	1.2
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°	376.4	376.4	376.4	376.4	376.4	376.4	376.4	376.4
2.5°	378.1	376.4	375.2	374.6	378.7	373.5	375.8	376.4
5°	375.8	374.1	372.9	372.3	375.8	371.2	372.9	374.1
7.5°	372.3	371.2	369.4	368.9	372.3	367.1	369.4	370.0
10°	368.3	366.5	365.4	364.8	367.7	362.5	364.8	364.8
12.5°	363.1	361.9	359.6	359.6	361.9	357.3	359.0	359.0
15°	356.1	355.0	352.7	352.7	355.0	350.3	352.1	352.1
17.5°	350.3	349.2	347.4	346.9	349.2	344.5	346.3	345.7
20°	345.7	344.5	342.2	342.2	344.0	339.3	341.0	341.0
22.5°	341.7	341.0	338.7	338.7	341.0	336.4	337.6	336.4
25°	335.3	334.7	332.4	333.0	334.1	329.5	331.2	330.0
27.5°	324.8	324.8	322.5	322.0	323.7	319.6	320.8	320.2
30°	308.6	309.2	306.3	306.3	306.9	303.4	305.2	304.6
32.5°	286.6	287.2	284.9	284.3	286.1	283.1	284.3	284.3
35°	262.3	262.9	261.1	261.1	262.9	261.1	261.1	260.6
37.5°	238.0	239.1	238.0	238.6	239.7	238.0	239.1	238.6
40°	218.3	219.5	217.7	218.9	220.0	218.3	220.0	218.9
42.5°	200.3	202.1	200.9	202.1	203.2	202.1	203.2	201.5
45°	187.0	188.2	187.6	188.2	189.3	188.8	189.3	188.8
47.5°	174.3	176.6	175.5	176.6	178.3	177.2	178.3	176.6
50°	162.7	164.5	163.9	165.0	165.6	165.0	166.2	164.5
52.5°	147.6	149.4	148.8	148.8	150.0	148.8	150.0	148.8
55°	128.0	128.6	128.6	129.1	128.6	128.0	128.6	127.4
57.5°	108.9	110.0	108.3	110.0	109.4	108.9	108.9	107.7
60°	96.7	98.4	97.3	98.4	97.9	97.9	97.9	97.3
62.5°	86.9	88.0	86.9	87.4	87.4	87.4	86.9	86.3
65°	75.9	77.6	76.4	77.0	76.4	75.9	76.4	75.9
67.5°	64.8	65.4	65.4	64.8	64.8	64.8	64.8	63.7
70°	52.7	53.3	52.7	53.8	53.3	52.7	53.3	52.1
72.5°	41.1	41.7	41.1	41.7	41.1	41.1	41.1	41.1
75°	30.7	31.3	31.3	31.3	31.3	31.3	30.1	31.3
77.5°	22.0	22.0	22.0	22.6	22.0	22.0	22.0	22.0
80°	15.1	15.1	15.1	15.6	15.1	15.6	15.1	15.6
82.5°	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8
85°	5.2	5.8	5.8	5.2	5.2	5.2	5.2	5.2
87.5°	1.2	0.6	0.6	0.6	0.6	0.6	0.6	0.6
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)