

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: P880534

Luminaire Tested: **LD4C08D010 EU4089035 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: P880534
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 EU4089035 4LBDWNH
Description: 4 INCH 800 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS AND 4LBDWN TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

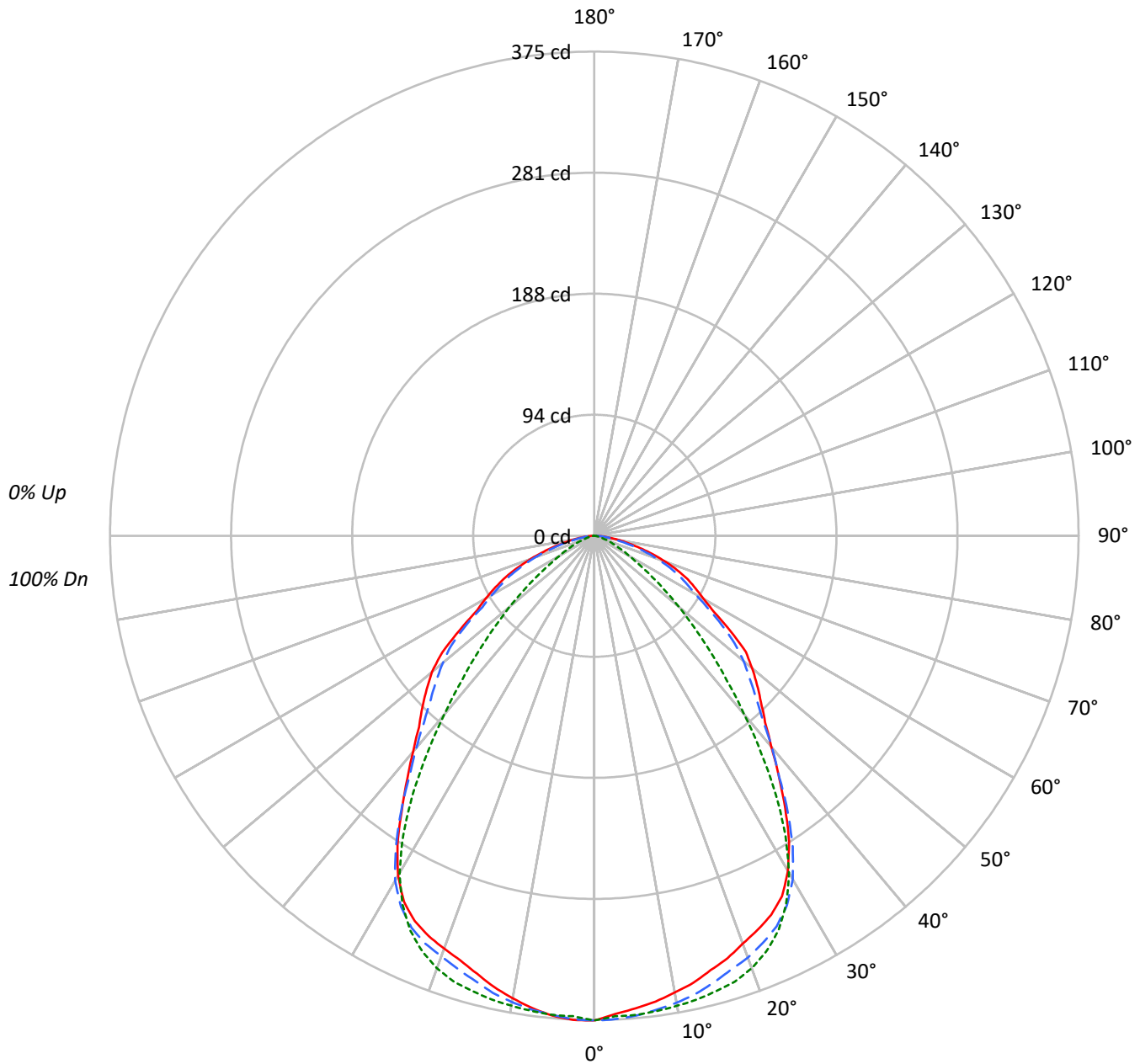
Lumens per Lamp: N/A
Luminaire Lumens: 764.0 lumens
Efficiency: N/A
Efficacy: 77.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.18 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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°	46119	46119	46119
5°	45296	45938	46012
10°	44810	46107	45384
15°	44299	46423	44655
20°	43941	46595	44477
25°	43919	45722	44624
30°	42515	42770	43097
35°	38634	36819	38979
40°	34176	28996	35010
45°	31708	22065	32715
50°	30465	16341	31345
55°	27587	11266	27202
60°	23981	7666	23834
65°	23168	5552	22006
70°	20941	3736	18678
75°	17278	2468	14810
80°	13867	1627	11037
85°	11418	846	7330



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	35.4	4.6
10°-20°	101.3	13.3
20°-30°	153.1	20.0
30°-40°	160.2	21.0
40°-50°	129.7	17.0
50°-60°	94.4	12.4
60°-70°	58.2	7.6
70°-80°	26.3	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°	289.8	37.9
0°-40°	450.0	58.9
0°-60°	674.2	88.2
0°-90°	764.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	764.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	375	375	375	375	375	
5°	367	373	372	372	373	35
15°	348	358	365	357	351	98
25°	324	334	337	335	329	148
35°	258	261	246	261	260	161
45°	182	177	127	179	188	142
55°	129	121	53	122	127	115
65°	80	72	19	70	76	78
75°	36	31	5	27	31	39
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°	375.4	375.4	375.4	375.4	375.4	375.4	375.4	375.4	375.4	375.4	375.4
2.5°	370.8	370.8	374.3	378.3	374.8	371.3	373.7	372.5	376.6	376.6	374.8
5°	367.3	368.5	371.3	374.8	371.9	368.5	371.3	370.2	374.3	374.3	373.1
7.5°	363.8	364.4	367.9	371.9	369.0	365.6	367.9	367.3	370.8	371.3	370.2
10°	359.2	359.8	363.3	367.3	364.4	361.5	363.8	363.3	367.9	367.9	367.3
12.5°	354.6	355.2	358.7	362.1	359.2	356.4	358.7	358.7	363.3	363.8	363.3
15°	348.3	349.4	352.3	355.8	354.0	350.6	352.9	352.9	356.9	358.1	358.1
17.5°	343.1	343.6	346.5	350.0	347.7	344.8	347.1	347.1	351.1	352.3	352.3
20°	336.1	337.3	340.2	343.6	341.9	339.6	341.3	341.3	345.9	347.1	347.7
22.5°	330.4	331.5	333.8	338.5	335.5	333.8	336.1	335.5	340.8	341.3	341.3
25°	324.0	325.2	328.0	330.9	329.2	327.5	329.2	329.2	333.2	333.8	333.8
27.5°	314.8	315.3	318.2	321.1	319.4	317.1	319.4	318.8	322.8	323.4	322.8
30°	299.7	300.9	302.0	306.1	304.4	302.6	304.9	303.8	307.8	307.8	307.2
32.5°	280.7	280.7	283.0	285.9	283.6	282.4	284.1	284.7	287.6	287.6	285.9
35°	257.6	258.8	260.5	262.2	260.5	259.3	261.1	260.5	263.9	262.8	261.1
37.5°	234.5	235.1	236.8	239.1	236.8	235.1	235.6	235.1	237.9	237.9	235.1
40°	213.1	214.3	215.4	217.7	215.4	214.3	214.9	213.1	216.6	215.4	213.7
42.5°	195.8	196.3	198.1	199.3	196.9	196.3	196.9	195.8	197.5	196.3	192.9
45°	182.5	182.5	183.1	184.8	182.5	181.9	181.9	180.8	182.5	180.2	176.7
47.5°	170.9	171.5	172.1	173.3	171.5	169.8	170.4	168.1	169.2	167.5	162.9
50°	159.4	160.5	161.1	162.3	160.5	159.4	160.0	157.7	157.7	154.8	150.7
52.5°	147.9	148.4	147.9	149.0	147.9	146.1	146.7	144.4	144.4	140.9	136.9
55°	128.8	129.4	130.0	131.1	130.0	128.2	129.4	127.7	127.7	125.3	120.7
57.5°	109.7	110.3	110.9	111.5	111.5	110.3	110.9	109.7	109.1	107.4	104.0
60°	97.6	97.6	97.6	98.2	97.6	97.0	97.0	95.9	95.9	93.6	90.1
62.5°	88.4	88.9	88.9	89.5	88.9	88.4	87.8	86.6	86.1	83.8	80.8
65°	79.7	79.7	79.1	80.3	79.7	79.1	79.1	78.0	76.8	74.5	71.6
67.5°	69.3	69.9	69.3	69.9	69.9	69.3	68.7	67.6	67.0	65.2	61.8
70°	58.3	58.3	58.3	58.9	58.3	58.3	58.9	57.2	56.6	54.3	51.4
72.5°	47.3	47.9	47.9	47.3	47.9	46.8	46.8	46.8	46.2	43.9	41.0
75°	36.4	37.0	37.0	37.5	37.0	36.4	36.4	35.8	35.2	33.5	31.2
77.5°	27.1	27.1	27.7	27.7	27.7	27.1	27.1	26.0	26.0	24.8	22.5
80°	19.6	19.6	19.1	19.6	19.6	19.1	19.1	18.5	18.5	17.3	15.6
82.5°	12.7	13.3	13.3	13.3	13.3	12.7	12.7	12.7	12.1	11.5	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	4.0	4.0	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°	375.4	375.4	375.4	375.4	375.4	375.4	375.4	375.4	375.4	375.4	375.4
2.5°	374.8	375.4	373.7	376.0	374.3	374.8	375.4	374.8	372.5	372.5	378.9
5°	372.5	373.7	371.9	374.8	373.7	373.7	374.8	374.3	371.9	372.5	378.3
7.5°	370.2	371.9	370.8	373.7	371.9	371.9	373.1	373.1	370.8	371.3	376.6
10°	366.7	369.0	368.5	371.3	369.6	369.6	371.3	371.3	369.0	369.6	374.8
12.5°	363.8	366.2	365.6	368.5	367.3	367.9	368.5	369.6	366.7	367.9	372.5
15°	359.2	361.5	361.5	364.4	363.3	364.4	365.6	367.3	365.0	365.0	369.6
17.5°	354.0	356.9	356.9	359.2	359.2	359.8	362.1	363.8	361.5	362.1	366.2
20°	348.3	351.7	351.7	354.6	354.0	355.2	356.9	358.7	356.4	356.4	361.0
22.5°	342.5	345.4	345.9	347.7	347.7	348.3	350.0	351.1	348.3	348.3	352.9
25°	334.4	337.3	337.9	339.0	337.9	337.9	339.0	340.2	337.3	337.3	341.3
27.5°	323.4	326.3	326.3	325.7	324.6	325.2	324.6	325.2	322.3	321.7	325.7
30°	307.2	309.0	309.0	308.4	306.7	306.7	304.9	305.5	301.5	301.5	304.9
32.5°	285.3	287.0	285.9	284.7	282.4	281.3	280.1	279.5	275.5	275.5	279.5
35°	259.3	260.5	258.8	256.4	253.5	251.8	250.1	247.8	244.9	245.5	247.8
37.5°	232.8	232.8	230.4	225.8	223.5	220.6	217.7	217.7	213.1	212.5	214.3
40°	210.2	207.9	203.9	197.5	193.5	190.6	186.5	184.2	180.8	180.8	183.7
42.5°	190.0	185.4	180.2	171.5	167.5	164.0	158.8	156.5	152.5	151.9	153.6
45°	172.1	167.5	160.0	150.7	145.6	141.5	134.0	131.1	127.7	127.0	128.2
47.5°	157.7	152.5	143.2	131.1	125.9	120.7	113.2	109.1	106.3	104.5	106.3
50°	145.0	138.0	128.2	115.5	108.6	104.0	94.7	90.7	86.6	85.5	86.1
52.5°	131.1	124.2	113.8	100.5	94.1	87.2	78.5	72.8	69.3	67.6	69.3
55°	116.1	109.1	98.8	85.5	78.5	72.2	62.9	58.3	54.3	52.6	54.3
57.5°	99.9	93.6	84.3	71.0	64.7	58.9	50.3	45.6	41.6	40.4	41.6
60°	86.1	80.8	71.6	58.9	53.7	47.3	39.9	35.2	31.8	31.2	31.8
62.5°	76.8	71.0	62.4	50.3	45.0	39.9	32.9	28.3	25.4	24.8	25.4
65°	67.6	61.2	53.1	42.7	37.5	33.5	26.6	22.5	19.6	19.1	19.6
67.5°	57.2	51.4	44.5	35.2	31.2	27.1	21.4	17.3	15.0	14.5	15.0
70°	47.3	42.2	35.2	28.3	24.3	21.4	16.2	13.3	11.0	10.4	11.0
72.5°	37.5	32.9	27.1	21.4	19.1	16.2	12.7	9.8	8.1	7.5	8.1
75°	28.9	25.4	20.8	15.6	13.9	12.1	8.7	6.9	5.8	5.2	5.8
77.5°	20.2	17.9	14.5	11.5	9.8	8.7	6.4	4.6	4.0	3.5	4.0
80°	13.9	12.1	9.8	7.5	6.4	5.2	4.0	2.9	2.3	2.3	2.3
82.5°	9.2	7.5	5.8	4.6	4.0	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°	375.4	375.4	375.4	375.4	375.4	375.4	375.4	375.4	375.4	375.4	375.4
2.5°	377.1	375.4	377.7	375.4	374.3	375.4	374.3	377.7	374.8	372.5	374.8
5°	376.6	374.3	376.6	374.8	373.1	373.7	372.5	376.0	372.5	370.8	371.9
7.5°	375.4	373.7	374.8	373.1	371.3	371.9	370.8	373.7	370.2	368.5	369.6
10°	373.7	371.9	372.5	371.3	369.6	369.6	368.5	370.8	366.7	364.4	365.6
12.5°	371.3	369.0	370.2	368.5	366.2	366.2	365.0	366.7	362.7	360.4	361.0
15°	368.5	366.2	366.2	364.4	362.1	362.1	359.8	361.5	356.9	354.6	354.6
17.5°	365.0	362.1	362.1	360.4	357.5	356.9	355.2	356.9	351.7	349.4	349.4
20°	359.8	357.5	356.9	355.8	352.9	352.3	350.0	350.6	346.5	344.8	344.2
22.5°	352.9	350.6	351.1	349.4	347.1	346.5	344.2	345.9	341.9	340.2	340.8
25°	340.8	339.6	340.8	340.2	338.5	338.5	337.3	338.5	335.0	333.8	334.4
27.5°	326.9	326.3	326.9	326.9	325.7	325.7	325.7	327.5	324.0	323.4	323.4
30°	306.7	306.7	307.2	307.8	307.8	309.0	308.4	310.7	308.4	307.2	308.4
32.5°	280.1	282.4	284.1	284.1	284.1	285.3	286.5	288.2	285.9	286.5	286.5
35°	250.1	251.8	253.0	255.8	254.1	258.1	259.3	261.6	261.1	262.2	261.6
37.5°	216.6	218.9	221.2	225.3	224.7	229.3	231.6	236.2	235.1	237.4	238.5
40°	185.4	188.9	192.3	195.2	197.5	202.1	206.8	212.5	214.3	216.0	216.6
42.5°	155.4	158.8	164.6	168.6	172.1	179.6	186.0	192.9	194.6	198.1	199.3
45°	131.1	134.0	140.9	146.1	149.0	160.0	167.5	176.1	179.0	183.1	184.8
47.5°	108.6	113.8	120.7	127.0	131.1	142.6	152.5	161.7	165.8	170.4	172.7
50°	88.9	94.7	104.0	109.7	115.5	128.2	139.2	149.0	153.0	158.2	160.5
52.5°	72.8	79.1	87.8	94.1	100.5	113.8	125.3	134.6	139.8	143.2	146.7
55°	57.2	64.1	72.8	79.7	84.9	99.3	109.1	118.4	121.9	124.7	126.5
57.5°	44.5	49.7	58.3	64.1	70.5	83.1	93.0	99.9	102.8	106.3	107.4
60°	34.7	39.9	47.9	53.7	59.5	71.6	81.4	88.4	91.2	94.1	95.9
62.5°	27.7	32.9	40.4	45.6	50.8	61.8	70.5	77.4	80.8	83.8	85.5
65°	22.0	26.6	32.9	38.1	42.2	52.0	60.6	67.0	70.5	73.3	75.1
67.5°	17.3	21.4	27.1	30.6	34.7	42.7	50.3	56.0	58.9	62.4	64.1
70°	13.3	16.2	21.4	24.3	27.1	34.1	39.9	45.6	48.5	50.8	52.0
72.5°	9.8	12.1	16.2	18.5	20.2	26.0	30.6	34.7	37.0	39.3	40.4
75°	6.9	8.7	11.5	13.3	14.5	18.5	22.5	25.4	27.1	28.9	30.6
77.5°	4.6	5.8	7.5	8.7	9.8	12.7	15.0	17.3	19.1	20.8	21.4
80°	2.9	4.0	5.2	5.8	6.4	8.1	10.4	11.5	12.7	13.9	14.5
82.5°	1.7	2.3	2.9	3.5	4.0	5.2	6.4	7.5	8.1	9.2	9.8
85°	0.6	1.2	1.2	1.7	1.7	2.9	3.5	4.0	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°	375.4	375.4	375.4	375.4	375.4	375.4	375.4	375.4
2.5°	377.1	375.4	374.3	373.7	377.7	372.5	374.8	375.4
5°	374.8	373.1	371.9	371.3	374.8	370.2	371.9	373.1
7.5°	371.3	370.2	368.5	367.9	371.3	366.2	368.5	369.0
10°	367.3	365.6	364.4	363.8	366.7	361.5	363.8	363.8
12.5°	362.1	361.0	358.7	358.7	361.0	356.4	358.1	358.1
15°	355.2	354.0	351.7	351.7	354.0	349.4	351.1	351.1
17.5°	349.4	348.3	346.5	345.9	348.3	343.6	345.4	344.8
20°	344.8	343.6	341.3	341.3	343.1	338.5	340.2	340.2
22.5°	340.8	340.2	337.9	337.9	340.2	335.5	336.7	335.5
25°	334.4	333.8	331.5	332.1	333.2	328.6	330.4	329.2
27.5°	324.0	324.0	321.7	321.1	322.8	318.8	319.9	319.4
30°	307.8	308.4	305.5	305.5	306.1	302.6	304.4	303.8
32.5°	285.9	286.5	284.1	283.6	285.3	282.4	283.6	283.6
35°	261.6	262.2	260.5	260.5	262.2	260.5	260.5	259.9
37.5°	237.4	238.5	237.4	237.9	239.1	237.4	238.5	237.9
40°	217.7	218.9	217.2	218.3	219.5	217.7	219.5	218.3
42.5°	199.8	201.6	200.4	201.6	202.7	201.6	202.7	201.0
45°	186.5	187.7	187.1	187.7	188.9	188.3	188.9	188.3
47.5°	173.8	176.1	175.0	176.1	177.9	176.7	177.9	176.1
50°	162.3	164.0	163.5	164.6	165.2	164.6	165.8	164.0
52.5°	147.3	149.0	148.4	148.4	149.6	148.4	149.6	148.4
55°	127.7	128.2	128.2	128.8	128.2	127.7	128.2	127.0
57.5°	108.6	109.7	108.0	109.7	109.1	108.6	108.6	107.4
60°	96.4	98.2	97.0	98.2	97.6	97.6	97.6	97.0
62.5°	86.6	87.8	86.6	87.2	87.2	87.2	86.6	86.1
65°	75.7	77.4	76.2	76.8	76.2	75.7	76.2	75.7
67.5°	64.7	65.2	65.2	64.7	64.7	64.7	64.7	63.5
70°	52.6	53.1	52.6	53.7	53.1	52.6	53.1	52.0
72.5°	41.0	41.6	41.0	41.6	41.0	41.0	41.0	41.0
75°	30.6	31.2	31.2	31.2	31.2	31.2	30.0	31.2
77.5°	22.0	22.0	22.0	22.5	22.0	22.0	22.0	22.0
80°	15.0	15.0	15.0	15.6	15.0	15.6	15.0	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)