

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: P843259

Luminaire Tested: **LD4C08DE010B40 EU4C08B40 4LBLWWLI**

Issue Date: 5/7/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P843259  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2107-320-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LD4C08DE010B40 EU4C08B40 4LBLWWLI  
Description: 4in Downlight with BioUp LEDs  
Light Source: -  
Ballast/Driver:

**Summary**

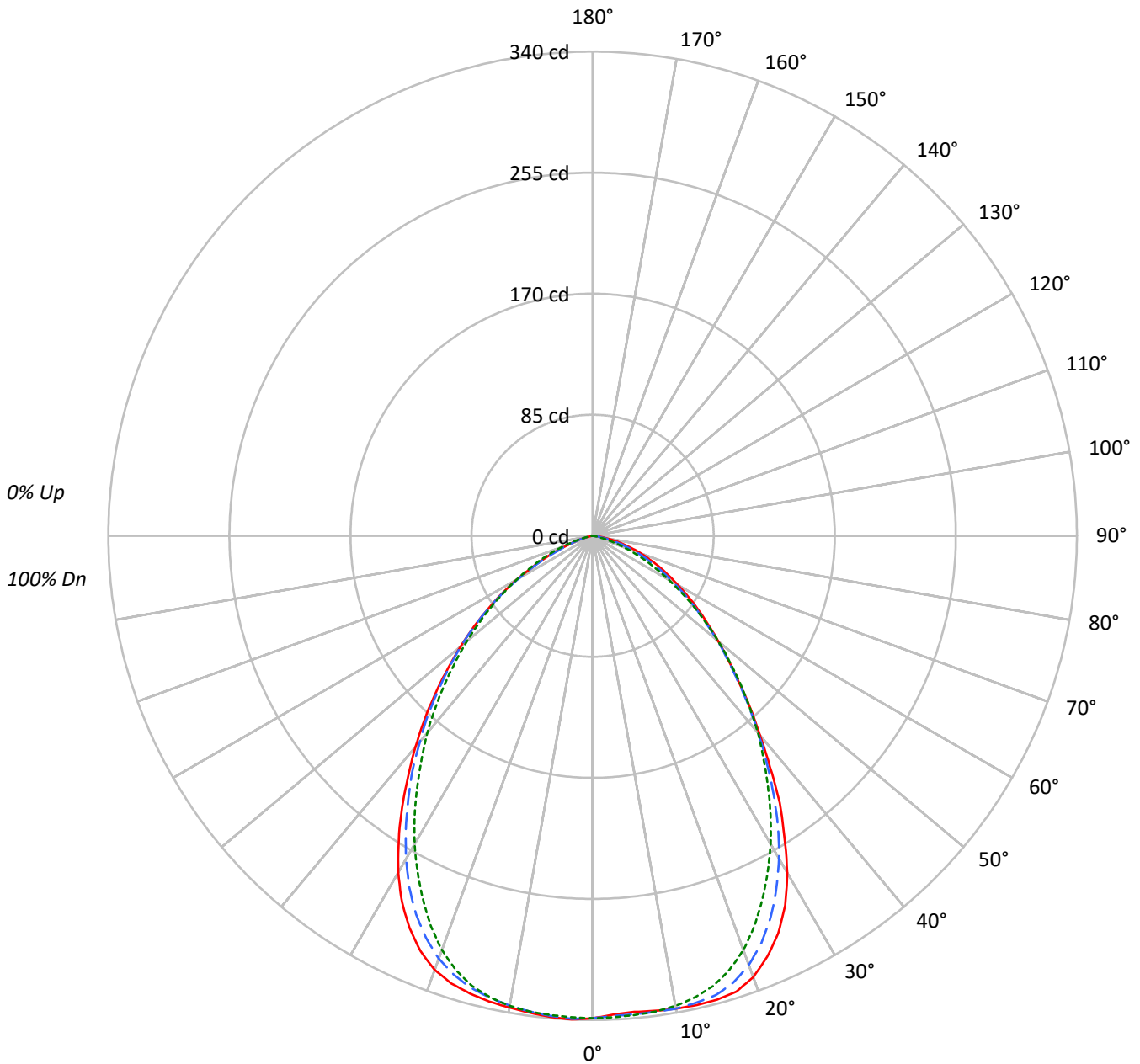
Lumens per Lamp: N/A  
Luminaire Lumens: 649.4 lumens  
Efficiency: N/A  
Efficacy: 67.6 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.12 / 1.18  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 9.6  
Input Voltage (V):  
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				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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	111	107	104	101	109	105	102	99	101	99	96	97	95	93	94	92	91	89				89
2	103	96	91	86	101	95	89	85	91	87	83	88	84	81	85	82	80	78				78
3	95	87	80	74	93	85	79	74	82	77	72	80	75	71	77	73	70	68				68
4	88	78	71	65	86	77	70	65	75	69	64	72	67	63	70	66	62	60				60
5	82	71	63	57	80	70	63	57	68	61	57	66	60	56	64	59	55	54				54
6	76	65	57	51	75	64	56	51	62	56	51	61	55	50	59	54	50	48				48
7	71	59	52	46	70	59	51	46	57	50	46	56	50	45	54	49	45	43				43
8	67	55	47	42	65	54	47	42	53	46	41	52	46	41	50	45	41	39				39
9	63	51	43	38	61	50	43	38	49	42	38	48	42	38	47	41	37	36				36
10	59	47	40	35	58	46	39	35	45	39	35	45	39	35	44	38	34	33				33

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	41623	41623	41623
5°	41387	41658	41819
10°	42065	41816	41965
15°	42888	41616	42315
20°	43104	40463	42398
25°	41778	38213	41208
30°	38770	35451	38713
35°	34345	32170	34989
40°	29268	28964	31016
45°	25158	25436	27034
50°	21960	21999	23164
55°	19384	18570	19213
60°	17003	15160	15086
65°	15029	11744	10465
70°	12823	8082	6214
75°	10395	4367	2848
80°	7075	1061	778
85°	2114	282	282



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	32.2	5.0
10°-20°	93.2	14.4
20°-30°	134.7	20.7
30°-40°	139.2	21.4
40°-50°	115.0	17.7
50°-60°	79.4	12.2
60°-70°	41.6	6.4
70°-80°	13.1	2.0
80°-90°	1.1	0.2
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°	260.0	40.0
0°-40°	399.2	61.5
0°-60°	593.6	91.4
0°-90°	649.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	649.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	339	339	339	339	339	
5°	336	337	338	338	339	32
15°	337	334	327	329	333	95
25°	308	296	282	293	304	141
35°	229	221	214	226	233	142
45°	145	144	146	153	156	113
55°	90	88	87	89	90	81
65°	52	47	40	34	36	51
75°	22	17	9	6	6	23
85°	2	1	0	0	0	3
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°	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8
2.5°	336.5	336.6	336.6	337.0	337.0	337.0	337.1	337.1	337.2	337.3	337.5
5°	335.6	335.6	335.8	335.9	336.2	336.3	336.5	336.6	337.0	337.1	337.2
7.5°	336.5	336.5	336.6	336.9	336.9	337.0	337.0	337.1	337.2	337.3	337.3
10°	337.2	337.2	337.2	337.2	337.3	337.3	337.3	337.2	337.2	337.2	337.1
12.5°	337.5	337.5	337.3	337.2	337.3	337.2	337.2	336.9	336.5	336.3	335.9
15°	337.2	337.2	337.1	337.0	336.9	336.5	336.4	335.8	335.3	334.5	334.0
17.5°	335.6	335.3	335.1	334.7	334.3	333.9	333.7	332.5	331.6	330.3	328.9
20°	329.7	329.5	329.0	328.4	327.8	327.2	326.5	324.9	324.0	322.0	320.7
22.5°	320.1	319.9	320.0	318.9	317.6	316.9	316.3	315.0	313.4	310.9	309.5
25°	308.2	307.5	307.5	305.7	305.0	304.5	303.9	302.2	299.9	297.7	295.7
27.5°	292.6	291.7	291.2	290.8	289.4	288.2	287.4	286.1	284.2	282.3	279.4
30°	273.3	273.2	272.6	271.4	270.3	269.8	268.7	266.6	264.8	263.5	261.7
32.5°	250.6	250.4	250.4	250.4	249.7	249.6	248.0	246.9	245.5	243.4	242.2
35°	229.0	228.9	229.0	227.1	226.5	226.1	226.0	225.3	223.4	222.3	221.4
37.5°	204.5	204.9	204.7	204.1	204.8	203.6	204.5	202.9	202.1	201.9	200.7
40°	182.5	183.5	182.5	182.7	183.3	182.1	182.1	181.9	181.4	181.2	180.9
42.5°	163.7	162.5	163.2	162.6	163.2	162.8	162.1	162.6	162.7	162.1	162.0
45°	144.8	145.0	145.2	144.9	144.9	144.5	145.5	144.9	144.9	145.0	144.2
47.5°	129.3	128.9	129.2	128.9	129.1	128.8	129.1	129.2	128.9	128.9	128.2
50°	114.9	114.6	115.5	114.8	114.8	114.6	114.8	114.4	114.1	114.1	114.3
52.5°	102.3	101.7	101.6	102.3	101.3	101.3	101.5	101.2	100.7	100.5	99.8
55°	90.5	90.4	90.5	90.0	89.8	89.8	89.2	88.9	88.7	88.1	87.8
57.5°	79.6	79.2	79.3	79.2	78.7	78.6	78.1	78.1	77.6	77.1	76.5
60°	69.2	69.2	69.6	69.1	68.6	68.4	68.2	67.9	67.1	66.1	65.4
62.5°	59.9	60.1	59.9	59.5	59.2	59.0	58.8	58.0	57.2	56.7	55.8
65°	51.7	51.6	51.3	51.0	50.3	50.3	49.8	49.5	48.5	47.8	47.0
67.5°	43.4	43.2	43.2	43.2	42.3	42.2	42.0	41.2	40.4	39.4	38.7
70°	35.7	36.0	35.6	35.2	34.9	34.7	34.4	33.5	32.7	31.6	31.0
72.5°	28.5	28.8	28.3	28.2	27.5	27.2	27.1	26.4	25.5	24.9	23.8
75°	21.9	22.0	21.8	21.5	20.9	20.8	20.2	19.7	19.0	18.1	17.1
77.5°	15.8	15.5	15.5	15.0	14.5	14.5	14.4	13.6	12.7	12.0	11.2
80°	10.0	9.9	9.5	9.3	8.9	8.8	8.7	8.0	7.4	6.9	6.3
82.5°	5.1	5.0	4.9	4.7	4.4	4.2	4.3	3.8	3.6	3.1	2.6
85°	1.5	1.7	1.7	1.5	1.4	1.4	1.4	1.3	1.1	0.8	0.7
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°	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8
2.5°	337.6	337.7	337.8	337.9	337.9	338.1	338.2	338.3	338.4	338.4	338.5
5°	337.3	337.6	337.6	337.7	337.7	337.7	337.8	337.8	337.8	337.8	337.9
7.5°	337.5	337.5	337.5	337.3	337.3	337.2	337.2	337.2	337.0	337.0	337.0
10°	336.9	336.6	336.5	336.3	336.2	336.0	335.8	335.6	335.3	335.2	335.0
12.5°	335.6	335.1	334.5	334.0	333.8	333.7	333.2	332.7	332.3	332.0	331.7
15°	332.9	332.2	331.4	330.3	330.1	329.8	328.9	328.2	327.7	327.2	326.6
17.5°	327.9	326.4	325.3	323.8	323.2	322.9	321.5	320.8	319.9	319.6	319.1
20°	318.9	317.5	315.6	314.2	313.4	312.6	311.5	310.5	309.5	309.5	308.8
22.5°	307.6	305.8	303.3	301.5	301.4	299.9	298.9	297.7	297.4	296.7	296.7
25°	293.3	291.8	289.2	287.6	286.8	286.4	284.8	283.2	282.5	281.9	282.4
27.5°	277.5	275.3	273.2	271.3	270.6	269.9	268.4	267.8	266.3	266.2	266.1
30°	259.4	257.2	255.1	254.3	253.0	252.4	251.2	250.4	249.9	249.9	249.7
32.5°	240.5	238.5	237.4	235.5	234.9	234.1	233.3	232.5	232.8	232.5	232.7
35°	220.1	219.6	217.7	216.5	216.5	216.4	215.1	214.6	214.3	214.5	215.1
37.5°	200.6	199.0	197.8	197.0	197.7	196.9	196.7	196.7	197.6	197.0	198.1
40°	179.9	179.7	179.3	179.5	179.6	178.7	179.0	179.1	179.6	180.6	180.7
42.5°	161.8	161.7	161.7	161.7	161.4	160.9	161.4	162.3	162.1	163.0	163.6
45°	144.4	144.2	144.6	144.3	145.0	145.2	144.9	145.1	145.8	146.4	147.4
47.5°	128.5	128.5	128.6	128.8	128.1	128.7	128.9	129.5	129.9	130.1	130.6
50°	113.7	113.7	113.5	113.5	113.5	113.8	113.4	114.0	114.1	115.1	115.7
52.5°	100.1	99.4	99.8	99.6	99.1	98.8	99.1	99.2	99.9	100.3	101.0
55°	87.1	87.1	86.1	85.9	86.2	86.1	86.0	86.0	86.4	86.7	87.4
57.5°	75.7	74.9	74.1	74.0	73.6	73.8	73.8	73.6	73.4	73.5	73.6
60°	64.8	64.4	63.2	63.2	63.1	62.9	62.3	62.2	61.6	61.7	61.1
62.5°	55.0	54.7	53.2	52.7	52.7	52.2	51.6	51.5	50.7	50.7	50.1
65°	46.0	45.3	44.4	43.5	43.5	42.9	42.6	41.5	40.8	40.4	39.7
67.5°	37.9	36.8	35.9	35.1	34.6	34.5	33.5	32.8	31.8	31.2	30.0
70°	30.0	29.1	28.2	27.5	27.0	26.4	25.6	24.4	23.7	22.5	21.8
72.5°	22.6	21.9	21.2	20.1	19.5	19.0	18.2	17.1	15.9	15.1	14.1
75°	16.3	15.4	14.4	13.4	13.1	12.7	11.7	10.9	10.0	9.2	8.1
77.5°	10.6	9.5	8.8	7.7	7.6	7.4	6.3	5.6	5.0	4.4	3.8
80°	5.6	5.1	4.4	3.8	3.6	3.2	2.6	2.3	1.9	1.5	1.3
82.5°	2.4	2.0	1.7	1.4	1.3	1.2	0.8	0.7	0.6	0.6	0.5
85°	0.6	0.5	0.5	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2
87.5°	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	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°	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8
2.5°	338.8	338.9	339.0	339.0	339.1	339.2	339.2	339.4	339.5	339.6	339.6
5°	338.1	338.1	338.1	338.2	338.2	338.2	338.2	338.4	338.4	338.5	338.8
7.5°	336.9	336.9	336.9	336.9	336.6	336.9	336.6	336.6	337.0	337.1	337.2
10°	334.7	334.6	334.6	334.5	334.5	334.5	334.6	334.7	335.0	335.1	335.4
12.5°	331.6	331.5	331.5	331.4	331.4	331.5	331.6	331.9	332.3	332.6	333.2
15°	326.5	326.4	326.5	326.6	326.9	327.2	327.7	328.1	328.8	329.5	330.1
17.5°	319.1	319.3	319.4	319.6	320.0	320.6	321.5	322.6	323.4	324.5	325.5
20°	308.9	309.5	309.6	310.5	310.7	311.9	313.1	314.5	315.9	317.2	318.7
22.5°	296.8	297.1	297.6	298.7	299.3	300.8	302.2	304.0	305.6	307.1	309.3
25°	282.9	283.0	284.5	284.5	286.1	287.4	288.9	290.8	293.2	295.4	296.8
27.5°	267.2	267.8	268.9	269.4	270.5	272.6	273.9	276.3	278.6	280.5	282.0
30°	250.6	251.1	253.0	253.2	254.1	255.9	257.9	260.0	261.8	263.9	265.4
32.5°	233.1	234.6	235.6	236.6	236.8	239.6	240.5	242.1	244.1	246.2	247.7
35°	216.2	216.8	218.5	219.0	219.8	221.4	223.4	224.6	225.6	227.1	228.7
37.5°	198.3	200.2	200.6	202.1	202.3	203.8	204.8	206.3	207.6	208.9	209.1
40°	181.6	182.2	183.7	184.0	184.3	186.2	187.5	187.8	188.5	189.6	191.2
42.5°	164.7	165.3	166.9	166.5	167.6	168.5	169.2	170.7	171.3	171.8	171.8
45°	148.1	148.3	149.3	149.9	150.5	151.0	152.1	152.9	153.1	154.3	154.6
47.5°	132.2	132.4	133.2	134.1	133.8	134.4	135.7	136.1	136.2	137.0	137.4
50°	116.6	117.2	118.1	117.9	118.7	119.1	120.1	120.5	120.5	120.6	120.7
52.5°	101.9	102.4	102.7	102.9	103.3	104.0	104.4	104.2	104.7	105.2	104.8
55°	87.4	87.8	88.4	88.6	88.6	88.7	88.5	89.7	89.2	89.1	89.2
57.5°	74.1	73.6	73.5	74.1	74.5	74.2	73.9	74.5	74.5	74.1	73.8
60°	61.3	60.9	60.8	60.9	60.4	60.1	60.3	60.1	59.4	59.1	59.2
62.5°	49.6	49.2	48.2	48.2	47.9	47.8	46.9	47.0	46.4	45.7	45.9
65°	38.8	37.8	37.2	37.1	36.3	35.5	35.2	34.4	33.5	33.4	33.5
67.5°	29.1	28.0	27.1	26.8	26.2	25.6	24.6	23.9	24.2	24.0	24.5
70°	20.2	19.5	18.6	18.0	18.2	17.5	16.9	16.9	17.0	17.1	17.5
72.5°	13.4	12.5	12.1	11.7	11.4	10.9	11.2	11.2	11.1	11.2	10.9
75°	7.6	7.1	6.8	6.7	6.3	6.3	6.3	6.3	6.2	6.1	6.1
77.5°	3.4	3.2	3.1	3.0	3.0	3.0	2.7	2.6	2.6	2.6	2.5
80°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
82.5°	0.5	0.5	0.6	0.6	0.6	0.5	0.6	0.6	0.5	0.5	0.6
85°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
87.5°	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1	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):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8
2.5°	339.7	339.8	339.8	339.8	340.0	340.0	340.0	340.0
5°	338.9	339.0	339.0	339.0	339.1	339.1	339.1	339.1
7.5°	337.3	337.5	337.5	337.6	337.6	337.7	337.7	337.8
10°	335.6	335.8	335.9	336.0	336.2	336.3	336.3	336.4
12.5°	333.7	333.9	334.0	334.3	334.5	334.6	334.7	335.0
15°	330.8	331.4	331.6	331.7	332.2	332.5	332.6	332.7
17.5°	326.4	327.4	327.8	328.1	328.5	329.0	329.5	329.6
20°	320.0	321.2	321.6	322.3	323.1	323.7	324.0	324.3
22.5°	311.2	312.4	313.2	313.9	314.5	315.2	316.2	315.8
25°	298.4	300.6	301.4	301.8	303.2	304.0	304.5	304.0
27.5°	284.2	285.5	286.2	287.0	288.1	288.8	289.2	289.9
30°	266.9	269.2	269.1	269.9	271.2	271.9	272.2	272.9
32.5°	249.2	250.2	251.0	250.9	251.3	252.8	252.2	253.4
35°	230.2	230.4	231.6	231.5	232.5	232.5	232.5	233.3
37.5°	210.0	211.5	210.9	212.4	211.9	212.3	212.3	212.6
40°	191.5	192.1	192.1	192.6	192.9	192.6	192.8	193.4
42.5°	172.5	173.0	173.1	172.8	173.2	174.4	173.5	174.3
45°	154.6	155.0	155.6	155.2	155.8	155.5	155.8	155.6
47.5°	137.9	137.7	137.6	138.7	137.7	137.9	138.3	137.5
50°	120.7	121.5	121.0	121.3	121.6	121.6	121.2	121.2
52.5°	105.4	105.3	104.9	105.3	105.0	105.2	105.4	105.2
55°	89.7	90.2	89.9	89.8	89.9	89.9	90.6	89.7
57.5°	74.1	73.9	74.2	75.2	74.2	74.9	75.3	75.4
60°	59.4	59.4	60.2	59.8	60.5	61.1	61.7	61.4
62.5°	45.3	45.9	46.2	46.3	47.1	47.6	47.6	47.5
65°	33.5	34.5	34.5	35.0	35.2	35.2	35.5	36.0
67.5°	24.9	24.9	25.0	25.2	25.1	25.1	25.3	25.5
70°	17.3	17.0	17.5	17.3	17.3	17.1	17.3	17.3
72.5°	10.9	10.9	11.1	10.9	10.7	10.8	10.8	11.1
75°	5.8	6.1	5.8	5.8	6.0	5.7	5.8	6.0
77.5°	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.3
80°	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.1
82.5°	0.5	0.6	0.5	0.6	0.5	0.5	0.5	0.5
85°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
87.5°	0.0	0.1	0.0	0.1	0.0	0.0	0.0	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)