

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: P843272

Luminaire Tested: **LD4C08DE010B50 EU4C08B50 4LBLWWH**

Issue Date: 5/7/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P843272  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2107-320-2)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LD4C08DE010B50 EU4C08B50 4LBLWWH  
Description: 4in Downlight with BioUp LEDs  
Light Source: -  
Ballast/Driver:

**Summary**

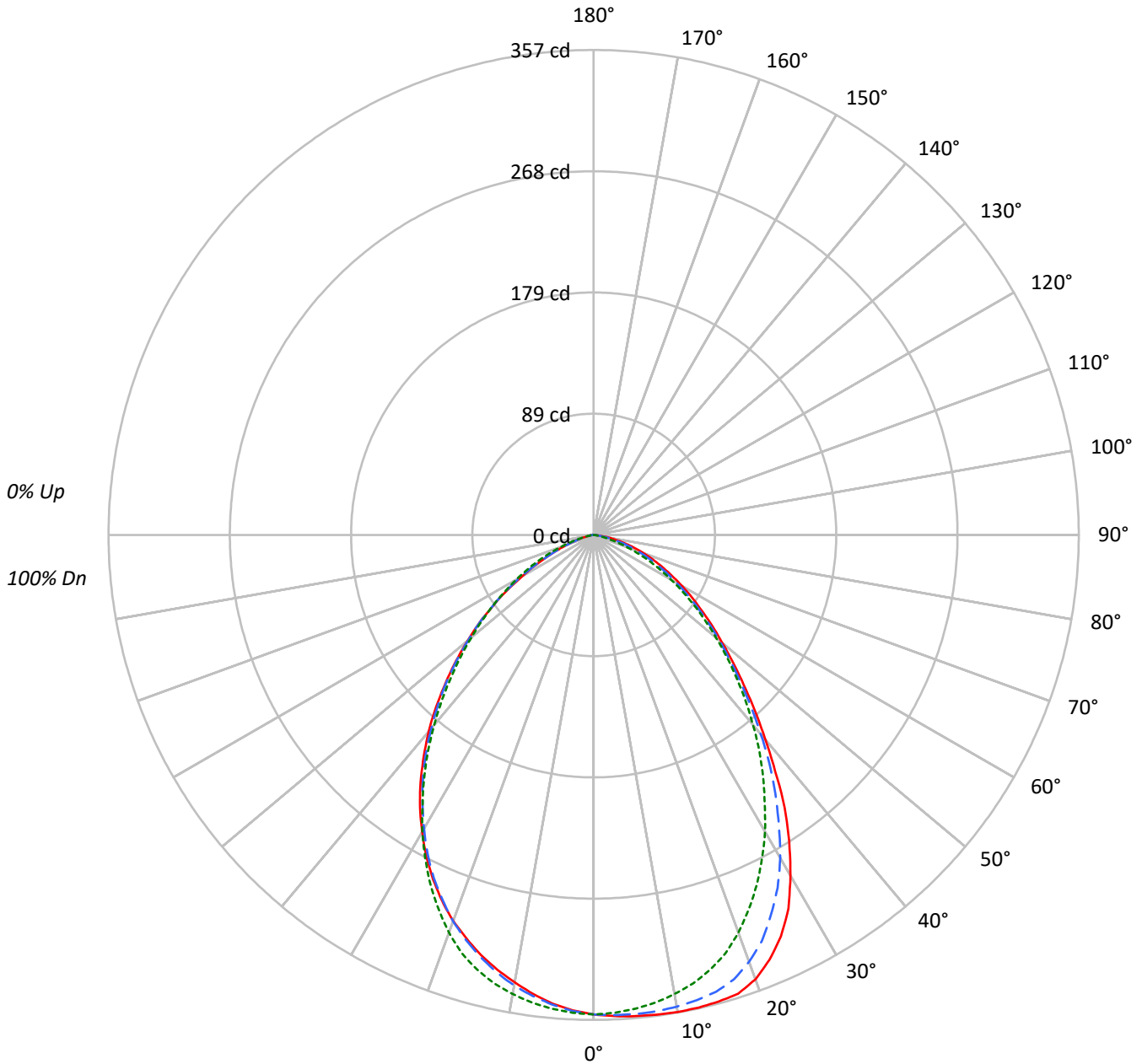
Lumens per Lamp: N/A  
Luminaire Lumens: 665.2 lumens  
Efficiency: N/A  
Efficacy: 69.3 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 1.09 / 1.17  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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									
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	101	108	105	102	99	101	98	96	97	95	93	94	92	90	88																			
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79	77																			
3	95	86	79	74	93	85	78	73	82	76	72	79	75	71	77	73	70	68																			
4	88	78	70	64	86	77	69	64	74	68	63	72	67	62	70	65	62	60																			
5	82	71	63	57	80	69	62	57	67	61	56	66	60	55	64	59	55	53																			
6	76	64	56	51	74	63	56	50	62	55	50	60	54	50	59	53	49	47																			
7	71	59	51	46	69	58	51	45	57	50	45	55	49	45	54	49	44	43																			
8	67	54	47	41	65	54	46	41	52	46	41	51	45	41	50	45	40	39																			
9	62	50	43	38	61	50	42	37	49	42	37	47	41	37	47	41	37	35																			
10	59	47	39	34	58	46	39	34	45	39	34	44	38	34	43	38	34	32																			

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

	0°	90°	180°
0°	43367	43367	43367
5°	43854	43188	42719
10°	44485	42814	41728
15°	45228	42137	40738
20°	45510	40712	39535
25°	44204	38511	37901
30°	41082	35777	35805
35°	36774	32605	33310
40°	31481	29236	30311
45°	27104	25783	26756
50°	23566	22438	23126
55°	20733	19298	19148
60°	18453	16118	14841
65°	16163	12907	10727
70°	13901	9124	7256
75°	11297	5269	4272
80°	8065	2335	2122
85°	3101	846	846



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	33.3	5.0
10°-20°	94.2	14.2
20°-30°	134.5	20.2
30°-40°	140.7	21.1
40°-50°	117.9	17.7
50°-60°	82.5	12.4
60°-70°	44.9	6.8
70°-80°	15.6	2.3
80°-90°	1.8	0.3
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°	261.9	39.4
0°-40°	402.6	60.5
0°-60°	602.9	90.6
0°-90°	665.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	665.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	353	353	353	353	353	
5°	356	354	350	347	346	34
15°	356	348	331	322	320	100
25°	326	309	284	278	280	149
35°	245	233	217	219	222	152
45°	156	152	148	153	154	121
55°	97	94	90	90	89	87
65°	56	51	44	37	37	55
75°	24	19	11	9	9	26
85°	2	1	1	1	1	4
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°	353.0	353.0	353.0	353.0	353.0	353.0	353.0	353.0	353.0	353.0	353.0
2.5°	354.6	354.2	354.3	354.3	354.3	354.2	354.3	354.2	354.2	354.1	353.8
5°	355.6	355.3	355.3	355.3	355.2	355.0	355.0	354.9	354.6	354.5	354.0
7.5°	356.2	356.0	356.0	355.9	355.7	355.6	355.5	355.0	354.6	354.3	353.7
10°	356.6	356.2	356.2	356.0	355.7	355.6	355.3	354.7	354.2	353.6	352.6
12.5°	356.4	356.0	355.9	355.6	355.0	354.7	354.5	353.8	352.8	351.9	350.7
15°	355.6	355.3	355.0	354.6	354.0	353.6	353.2	352.2	350.9	349.7	348.1
17.5°	354.0	353.6	353.0	352.4	351.6	351.1	350.4	349.0	347.3	345.4	343.1
20°	348.1	347.9	347.3	346.4	344.9	344.3	343.3	341.6	339.3	337.0	334.5
22.5°	338.4	338.0	337.3	336.4	335.1	334.1	333.3	330.8	328.3	325.9	323.5
25°	326.1	325.8	324.6	323.5	322.2	320.6	319.7	317.8	315.3	312.1	308.7
27.5°	310.2	308.8	308.5	307.2	305.2	304.7	303.4	301.0	298.6	295.8	293.0
30°	289.6	289.6	288.7	288.2	286.3	285.8	284.4	281.9	280.5	276.7	274.6
32.5°	267.7	267.5	266.7	266.4	265.3	264.3	263.0	261.7	258.6	256.7	253.7
35°	245.2	243.6	243.9	243.0	242.3	241.2	241.1	239.7	236.9	235.9	233.1
37.5°	219.6	218.8	219.8	218.6	217.9	218.1	216.9	216.0	214.9	213.0	212.5
40°	196.3	196.8	196.7	195.7	196.2	195.6	194.4	193.4	192.9	191.7	191.3
42.5°	175.6	174.7	174.5	174.5	174.6	174.6	174.1	173.3	173.3	172.2	170.9
45°	156.0	156.0	155.7	156.5	155.4	155.4	154.9	154.7	154.2	154.0	152.5
47.5°	139.2	139.1	138.9	138.8	138.7	138.7	137.8	137.2	137.0	136.2	135.4
50°	123.3	124.1	123.8	123.1	122.9	123.0	122.5	122.1	121.9	120.6	120.7
52.5°	110.0	109.9	110.1	109.7	109.0	109.1	108.6	108.1	107.6	106.8	106.3
55°	96.8	97.5	97.2	96.8	96.7	96.4	96.0	95.3	95.2	93.7	93.5
57.5°	85.8	85.7	85.4	84.7	84.6	84.2	84.2	83.7	82.8	82.0	81.3
60°	75.1	75.1	74.7	74.6	74.0	73.8	73.7	73.2	72.2	71.6	70.4
62.5°	64.7	65.0	64.7	64.3	64.0	63.4	63.1	62.7	61.9	61.2	60.3
65°	55.6	55.5	55.4	54.9	54.7	54.2	54.0	53.2	52.5	51.8	50.8
67.5°	47.0	46.5	46.5	46.3	46.0	45.6	45.4	44.5	43.6	43.0	42.0
70°	38.7	38.4	38.4	38.4	37.8	37.3	37.2	36.8	35.4	34.9	33.8
72.5°	31.1	31.0	30.8	30.5	30.0	30.0	29.5	28.7	27.9	27.3	26.4
75°	23.8	24.0	23.8	23.3	23.1	22.8	22.4	21.7	21.0	20.2	19.2
77.5°	17.3	17.1	16.8	16.8	16.6	16.0	15.9	15.3	14.5	14.0	13.0
80°	11.4	11.3	11.0	10.7	10.6	10.5	10.4	9.7	9.0	8.6	7.7
82.5°	6.2	6.1	6.1	5.9	5.6	5.6	5.4	4.9	4.4	4.2	3.8
85°	2.2	2.2	2.2	2.0	2.0	2.0	1.9	1.8	1.6	1.5	1.3
87.5°	0.3	0.1	0.3	0.1	0.3	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°	353.0	353.0	353.0	353.0	353.0	353.0	353.0	353.0	353.0	353.0	353.0
2.5°	353.6	353.2	353.1	353.0	352.8	352.7	352.6	352.3	352.2	352.1	351.8
5°	353.6	353.0	352.7	352.3	352.1	351.8	351.3	350.9	350.6	350.2	349.8
7.5°	353.0	352.2	351.7	350.8	350.6	350.2	349.3	348.8	348.1	347.3	346.4
10°	351.7	350.7	349.7	348.5	348.1	347.4	346.4	345.4	344.3	343.2	342.3
12.5°	349.4	348.0	346.6	345.1	344.3	343.6	342.1	340.8	339.4	338.2	336.5
15°	346.2	344.5	342.7	340.7	339.7	338.9	336.8	335.1	332.9	331.3	329.7
17.5°	340.9	338.2	336.0	333.5	332.1	331.1	329.2	326.7	324.6	322.9	321.0
20°	331.8	329.2	326.3	323.4	321.9	320.7	317.9	315.3	313.3	311.4	309.3
22.5°	319.8	316.7	314.4	310.9	309.7	308.2	304.9	302.5	300.2	298.3	296.3
25°	305.3	302.5	299.5	296.2	294.8	293.0	290.3	287.7	286.2	284.1	281.8
27.5°	288.6	286.3	282.7	279.8	278.4	277.0	274.4	272.1	269.9	268.4	266.2
30°	271.0	268.3	265.0	262.1	261.2	259.5	257.3	255.5	253.2	252.2	251.3
32.5°	251.6	248.4	246.0	244.1	242.5	241.1	239.9	237.0	236.6	234.2	233.9
35°	230.4	229.1	226.8	225.1	223.8	222.8	220.7	219.4	217.9	217.4	216.6
37.5°	210.5	208.8	206.7	205.2	204.2	204.0	202.5	201.8	200.6	200.1	199.0
40°	189.5	188.9	187.0	186.7	185.2	185.1	184.2	183.3	182.3	182.3	182.4
42.5°	170.3	169.4	168.6	167.6	166.9	166.9	166.5	166.2	165.9	165.5	166.2
45°	152.2	151.1	150.6	149.7	150.0	149.2	148.9	148.9	148.5	148.4	149.3
47.5°	135.4	134.1	133.6	133.4	133.4	133.5	132.2	132.6	132.5	132.7	133.2
50°	120.0	119.0	118.1	118.1	118.2	117.7	117.2	117.6	117.2	117.4	118.3
52.5°	105.8	104.7	104.3	104.3	103.4	103.3	103.5	103.0	103.2	103.3	103.9
55°	92.5	91.9	91.3	90.5	90.7	90.4	89.9	89.8	90.0	90.1	90.9
57.5°	80.8	79.9	78.9	78.6	78.4	78.4	77.6	77.5	77.8	77.1	77.1
60°	69.5	69.0	67.8	67.4	67.4	66.6	66.1	66.4	65.7	65.6	65.7
62.5°	59.0	58.7	57.9	57.0	56.8	56.5	55.8	55.5	55.2	54.7	53.9
65°	49.9	49.0	48.0	47.5	47.1	46.4	46.0	45.5	44.6	44.4	43.6
67.5°	40.8	39.9	38.9	38.6	38.2	37.8	37.0	36.4	35.4	34.4	33.4
70°	32.9	31.6	31.1	30.0	29.7	29.2	28.2	27.6	26.7	25.4	24.4
72.5°	25.1	24.3	23.5	22.5	21.9	21.5	20.6	19.6	18.5	17.8	16.8
75°	18.1	17.7	16.6	15.4	15.2	14.7	13.7	13.0	12.3	11.1	10.4
77.5°	12.3	11.4	10.7	9.7	9.5	9.0	8.5	7.7	7.2	6.6	5.9
80°	7.2	6.6	6.1	5.4	5.2	4.9	4.4	3.9	3.5	3.3	3.2
82.5°	3.5	3.0	2.9	2.4	2.3	2.2	1.9	1.8	1.5	1.5	1.5
85°	1.3	1.0	1.0	0.8	0.6	0.6	0.6	0.6	0.6	0.6	0.6
87.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	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°	353.0	353.0	353.0	353.0	353.0	353.0	353.0	353.0	353.0	353.0	353.0
2.5°	351.7	351.6	351.3	351.2	351.2	351.1	351.1	350.9	350.9	350.8	350.8
5°	349.2	348.8	348.5	348.3	348.3	347.9	347.5	347.3	347.1	347.1	346.9
7.5°	345.8	345.2	344.7	344.3	344.2	343.5	343.0	343.0	342.4	342.1	341.8
10°	341.3	340.3	339.6	339.2	338.7	338.2	337.5	337.1	336.8	336.0	335.9
12.5°	335.2	334.5	333.3	332.7	332.5	331.7	330.6	330.1	329.9	329.3	328.9
15°	328.3	326.8	325.8	325.0	325.0	323.6	323.1	322.4	321.7	321.4	321.2
17.5°	319.3	317.8	316.8	315.8	315.5	314.4	313.6	313.4	312.6	313.0	312.3
20°	307.8	306.6	305.8	304.5	304.5	303.9	303.5	302.9	302.6	302.4	302.6
22.5°	295.4	293.9	292.5	292.4	292.4	291.5	291.4	291.3	290.6	291.1	291.0
25°	280.9	279.8	279.0	278.9	278.9	278.4	277.7	278.1	278.5	278.4	278.7
27.5°	265.8	264.7	264.5	264.3	264.1	264.0	264.2	264.2	264.6	265.1	265.7
30°	249.5	249.3	248.9	248.8	248.4	249.2	249.4	249.8	249.7	250.4	251.1
32.5°	233.2	232.7	232.6	232.9	233.2	233.1	233.9	234.2	234.5	235.4	235.9
35°	216.8	216.7	216.4	216.4	216.6	217.7	217.7	218.6	219.1	219.4	220.5
37.5°	199.2	199.7	200.0	200.4	200.5	201.0	201.2	202.1	202.7	203.3	203.8
40°	183.0	182.8	183.9	183.2	183.4	184.7	185.2	185.1	185.8	186.7	187.2
42.5°	165.7	166.2	166.5	166.7	167.4	167.5	168.3	169.1	169.4	170.4	170.7
45°	149.1	149.2	149.8	150.3	150.7	151.8	152.1	152.5	153.3	153.3	153.7
47.5°	133.4	133.9	133.9	134.6	135.4	135.3	136.2	136.4	136.3	137.0	137.3
50°	118.2	119.1	119.0	119.5	119.7	119.9	120.7	121.0	120.5	121.1	121.2
52.5°	103.9	104.3	104.8	104.9	104.7	105.3	105.1	105.7	105.4	106.1	105.4
55°	90.7	90.5	90.5	90.9	90.5	90.9	91.1	90.5	90.1	90.7	90.5
57.5°	77.5	77.5	77.2	77.6	77.2	76.9	76.7	76.3	75.9	75.9	75.7
60°	65.2	64.9	64.3	64.2	64.2	63.6	63.2	62.7	62.7	62.2	61.7
62.5°	53.6	53.0	52.6	52.6	52.2	51.6	50.3	49.6	49.3	48.4	48.3
65°	42.7	42.1	41.7	40.8	40.2	39.9	38.7	37.8	37.3	36.5	36.7
67.5°	32.9	31.7	30.6	30.0	29.6	28.7	28.2	27.6	27.2	27.2	27.2
70°	23.6	22.6	21.5	21.0	20.7	20.0	19.6	19.5	19.8	19.7	19.8
72.5°	15.9	14.9	14.4	14.2	13.9	13.4	13.7	13.9	13.5	13.7	13.9
75°	9.6	9.4	9.0	8.8	8.8	9.0	8.8	8.8	9.0	9.0	9.1
77.5°	5.6	5.3	5.3	5.2	5.4	5.3	5.3	5.3	5.4	5.4	5.4
80°	3.0	3.0	3.0	3.0	3.2	3.0	3.2	3.2	3.2	3.2	3.2
82.5°	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.5
85°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
87.5°	0.1	0.3	0.3	0.3	0.3	0.3	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°	353.0	353.0	353.0	353.0	353.0	353.0	353.0	353.0
2.5°	350.6	350.6	350.6	350.3	350.4	350.4	350.3	350.3
5°	346.8	346.6	346.4	346.4	346.1	346.4	346.2	346.4
7.5°	341.6	341.6	341.2	341.2	341.1	340.9	340.8	340.9
10°	335.5	335.5	335.2	335.1	335.2	334.6	334.6	334.5
12.5°	328.7	328.4	328.2	328.3	328.2	327.8	327.7	327.8
15°	320.8	320.5	320.6	320.1	320.1	320.0	320.3	320.3
17.5°	312.1	311.9	311.6	311.7	311.5	311.6	311.5	311.4
20°	302.5	302.4	302.4	301.8	302.0	301.8	302.0	302.4
22.5°	291.4	291.3	291.4	291.0	291.3	291.3	291.6	291.6
25°	279.1	279.0	279.3	279.4	279.5	280.0	279.5	279.6
27.5°	265.6	266.0	266.4	266.5	267.1	266.6	266.4	266.7
30°	251.8	251.8	251.7	252.2	252.7	253.1	252.4	252.4
32.5°	236.1	236.8	236.8	236.9	237.3	237.3	237.3	237.9
35°	221.0	221.5	221.6	221.0	221.3	221.2	222.1	222.1
37.5°	204.2	204.2	204.3	205.3	205.3	204.9	205.2	205.2
40°	188.2	188.3	187.7	188.0	188.7	188.5	188.7	189.0
42.5°	170.7	171.7	171.0	171.3	171.2	171.3	171.4	171.4
45°	154.0	154.2	154.2	154.4	154.6	154.9	154.1	154.0
47.5°	137.7	137.8	138.2	137.5	138.3	137.5	138.3	137.4
50°	121.2	121.7	121.4	121.6	121.2	121.2	121.1	121.0
52.5°	105.7	105.4	105.4	105.3	105.3	105.7	105.3	105.8
55°	90.0	90.1	89.9	89.8	89.6	90.0	89.6	89.4
57.5°	75.2	75.5	75.0	75.2	74.2	74.7	74.8	75.0
60°	61.6	61.1	61.1	60.6	60.6	60.9	60.4	60.4
62.5°	47.7	47.9	47.5	48.0	48.0	48.7	48.3	48.7
65°	36.5	36.7	36.8	36.8	36.8	37.7	37.3	36.9
67.5°	27.6	27.7	27.8	27.7	28.1	27.8	27.8	27.9
70°	20.0	20.1	20.2	20.2	20.1	20.2	20.2	20.2
72.5°	13.9	14.0	13.9	14.0	14.2	14.0	14.0	14.2
75°	9.1	9.1	9.0	9.0	9.0	9.0	9.1	9.0
77.5°	5.3	5.4	5.3	5.4	5.4	5.4	5.4	5.4
80°	3.2	3.2	3.2	3.0	3.2	3.2	3.2	3.0
82.5°	1.6	1.6	1.5	1.5	1.6	1.6	1.6	1.6
85°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
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)