

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: P843273

Luminaire Tested: **LD4C08DE010B50 EU4C08B50 4LBLWWLI**

Issue Date: 5/7/2024



Test Information

Test Method: LM-79-08
Report Number: P843273
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: LD4C08DE010B50 EU4C08B50 4LBLWWLI
Description: 4in Downlight with BioUp LEDs
Light Source: -
Ballast/Driver:

Summary

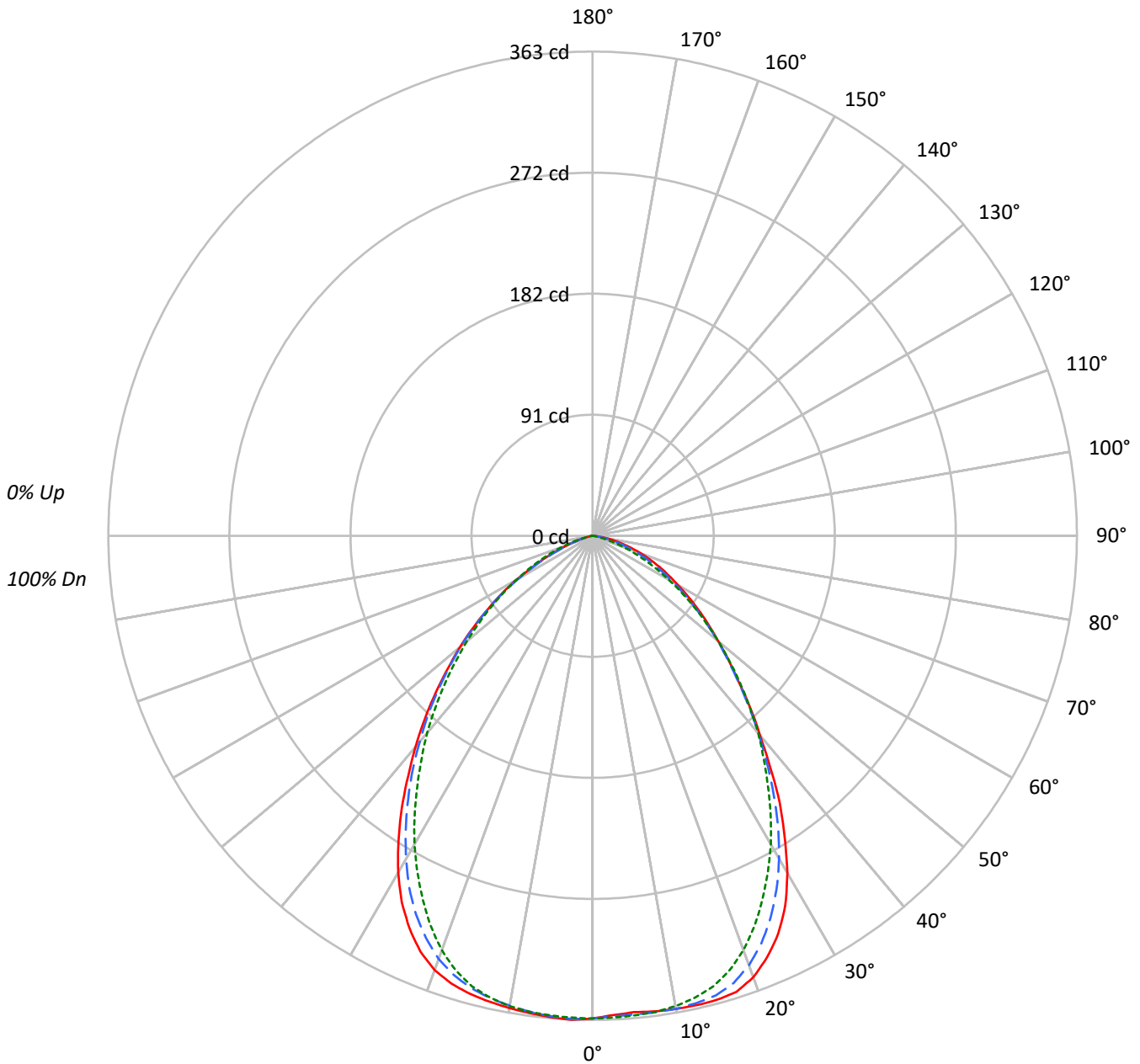
Lumens per Lamp: N/A
Luminaire Lumens: 693.8 lumens
Efficiency: N/A
Efficacy: 72.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.12 / 1.18
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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									
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	109	105	102	99	101	99	96	97	95	93	94	92	91	89																			
2	103	96	91	86	101	95	89	85	91	87	83	88	84	81	85	82	80	78																			
3	95	87	80	74	93	85	79	74	82	77	72	80	75	71	77	73	70	68																			
4	88	78	71	65	86	77	70	65	75	69	64	72	67	63	70	66	62	60																			
5	82	71	63	57	80	70	63	57	68	61	57	66	60	56	64	59	55	54																			
6	76	65	57	51	75	64	56	51	62	56	51	61	55	50	59	54	50	48																			
7	71	59	51	46	70	59	51	46	57	50	46	56	50	45	54	49	45	43																			
8	67	55	47	42	65	54	47	42	53	46	41	52	46	41	50	45	41	39																			
9	63	51	43	38	61	50	43	38	49	42	38	48	42	38	47	41	37	36																			
10	59	47	40	35	58	46	39	35	45	39	35	45	39	35	44	38	34	33																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	44461	44461	44461
5°	44211	44520	44680
10°	44934	44673	44847
15°	45813	44477	45215
20°	46046	43222	45288
25°	44624	40815	44028
30°	41423	37891	41352
35°	36684	34360	37389
40°	31273	30952	33149
45°	26860	27173	28876
50°	23451	23509	24770
55°	20733	19834	20519
60°	18158	16192	16143
65°	16075	12587	11192
70°	13721	8621	6645
75°	11107	4652	2990
80°	7641	1132	778
85°	2255	423	423



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.4	5.0
10°-20°	99.6	14.4
20°-30°	143.9	20.7
30°-40°	148.7	21.4
40°-50°	122.9	17.7
50°-60°	84.8	12.2
60°-70°	44.4	6.4
70°-80°	14.0	2.0
80°-90°	1.2	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°	277.8	40.0
0°-40°	426.5	61.5
0°-60°	634.2	91.4
0°-90°	693.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	693.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	362	362	362	362	362	
5°	358	360	361	362	362	34
15°	360	357	350	351	356	102
25°	329	316	301	313	325	150
35°	245	236	229	241	249	152
45°	155	154	156	164	166	121
55°	97	94	93	95	96	87
65°	55	50	43	36	38	55
75°	23	18	10	7	6	25
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°	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9
2.5°	359.6	359.7	359.7	360.0	360.0	360.0	360.1	360.1	360.2	360.4	360.5
5°	358.5	358.5	358.7	358.9	359.2	359.3	359.6	359.7	360.0	360.1	360.2
7.5°	359.6	359.6	359.7	359.8	359.8	360.0	360.0	360.1	360.2	360.4	360.4
10°	360.2	360.2	360.2	360.2	360.4	360.4	360.4	360.2	360.2	360.2	360.1
12.5°	360.5	360.5	360.4	360.2	360.4	360.2	360.2	359.8	359.6	359.3	358.9
15°	360.2	360.2	360.1	360.0	359.8	359.6	359.5	358.7	358.2	357.4	356.8
17.5°	358.5	358.2	357.9	357.7	357.2	356.7	356.4	355.3	354.3	352.9	351.5
20°	352.2	352.0	351.6	350.9	350.2	349.7	348.8	347.1	346.2	344.0	342.6
22.5°	342.0	341.8	341.9	340.7	339.3	338.5	338.0	336.4	334.8	332.3	330.6
25°	329.2	328.5	328.5	326.6	325.9	325.3	324.7	322.9	320.5	318.1	315.9
27.5°	312.7	311.6	311.1	310.8	309.1	308.0	307.0	305.7	303.5	301.5	298.6
30°	292.0	291.9	291.3	290.0	288.7	288.2	287.1	284.8	282.9	281.4	279.5
32.5°	267.7	267.6	267.6	267.6	266.7	266.6	265.0	263.8	262.3	260.0	258.7
35°	244.6	244.5	244.6	242.6	242.0	241.7	241.5	240.7	238.6	237.5	236.5
37.5°	218.5	218.9	218.6	218.1	218.8	217.6	218.5	216.7	216.0	215.7	214.5
40°	195.0	196.1	195.0	195.1	195.9	194.6	194.6	194.3	193.8	193.5	193.2
42.5°	174.9	173.6	174.4	173.7	174.4	174.0	173.2	173.7	173.8	173.2	173.1
45°	154.6	154.9	155.2	154.7	154.7	154.4	155.5	154.7	154.7	154.9	154.0
47.5°	138.2	137.8	138.0	137.8	137.9	137.7	137.9	138.0	137.8	137.8	137.0
50°	122.7	122.5	123.4	122.6	122.6	122.5	122.6	122.3	121.9	121.9	122.2
52.5°	109.3	108.7	108.6	109.3	108.3	108.3	108.4	108.2	107.7	107.3	106.7
55°	96.8	96.7	96.8	96.2	95.9	95.9	95.3	95.0	94.9	94.1	93.8
57.5°	85.0	84.6	84.8	84.6	84.1	84.0	83.4	83.4	82.9	82.4	81.6
60°	73.9	73.9	74.4	73.8	73.4	73.1	72.9	72.6	71.6	70.6	69.8
62.5°	64.0	64.1	64.0	63.6	63.4	63.0	62.8	62.0	61.1	60.6	59.7
65°	55.3	55.2	54.8	54.5	53.8	53.8	53.3	52.9	51.9	51.1	50.1
67.5°	46.3	46.1	46.1	46.1	45.3	45.2	44.8	44.0	43.3	42.1	41.4
70°	38.2	38.5	38.1	37.7	37.2	37.1	36.7	35.9	34.9	33.8	33.2
72.5°	30.5	30.7	30.4	30.1	29.4	29.1	29.0	28.2	27.2	26.5	25.4
75°	23.4	23.5	23.3	23.0	22.4	22.3	21.6	21.0	20.4	19.2	18.3
77.5°	16.8	16.6	16.6	16.1	15.4	15.4	15.3	14.5	13.5	12.8	12.0
80°	10.8	10.6	10.2	9.9	9.5	9.4	9.2	8.6	7.9	7.3	6.8
82.5°	5.4	5.3	5.2	5.1	4.8	4.4	4.7	4.1	3.8	3.3	2.9
85°	1.6	1.8	1.8	1.6	1.5	1.5	1.5	1.4	1.1	1.0	0.8
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°	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9
2.5°	360.7	360.8	361.0	361.1	361.1	361.2	361.4	361.5	361.6	361.6	361.7
5°	360.4	360.7	360.7	360.8	360.8	360.8	361.0	361.0	361.0	361.0	361.1
7.5°	360.5	360.5	360.5	360.4	360.4	360.2	360.2	360.2	360.0	360.0	360.0
10°	359.8	359.7	359.6	359.3	359.2	359.1	358.7	358.5	358.2	358.1	357.8
12.5°	358.5	357.9	357.4	356.8	356.6	356.4	355.9	355.5	355.0	354.7	354.4
15°	355.8	354.9	354.0	352.9	352.6	352.4	351.5	350.6	350.1	349.7	349.0
17.5°	350.3	348.7	347.6	346.0	345.3	345.0	343.5	342.8	341.8	341.5	341.0
20°	340.7	339.2	337.2	335.7	334.8	334.0	332.8	331.7	330.6	330.6	330.0
22.5°	328.6	326.7	324.1	322.2	322.0	320.5	319.4	318.1	317.7	316.9	316.9
25°	313.4	311.8	308.9	307.2	306.4	306.1	304.3	302.6	301.8	301.1	301.6
27.5°	296.6	294.1	291.9	289.9	289.2	288.4	286.7	286.1	284.6	284.4	284.3
30°	277.2	274.8	272.7	271.7	270.3	269.6	268.4	267.6	267.1	267.1	266.7
32.5°	257.0	254.8	253.7	251.7	251.0	250.0	249.3	248.4	248.6	248.4	248.5
35°	235.1	234.6	232.5	231.3	231.3	231.2	229.8	229.3	229.0	229.1	229.8
37.5°	214.3	212.7	211.3	210.5	211.2	210.4	210.3	210.3	211.0	210.5	211.6
40°	192.2	192.1	191.4	191.7	191.9	190.9	191.2	191.3	191.9	193.0	193.1
42.5°	172.8	172.7	172.7	172.7	172.5	171.9	172.5	173.5	173.2	174.1	174.7
45°	154.2	154.0	154.5	154.1	154.9	155.2	154.7	155.0	155.9	156.4	157.5
47.5°	137.3	137.3	137.4	137.7	136.9	137.5	137.8	138.3	138.8	139.0	139.6
50°	121.5	121.5	121.2	121.2	121.2	121.6	121.1	121.7	121.9	123.0	123.6
52.5°	106.9	106.3	106.7	106.4	105.9	105.6	105.9	106.0	106.8	107.1	107.9
55°	93.1	93.1	92.0	91.7	92.1	92.0	91.9	91.9	92.2	92.6	93.4
57.5°	80.9	80.1	79.2	79.1	78.7	78.8	78.8	78.7	78.4	78.6	78.7
60°	69.3	68.7	67.6	67.6	67.4	67.3	66.6	66.4	65.8	65.9	65.4
62.5°	58.7	58.5	56.8	56.3	56.3	55.8	55.2	55.0	54.0	54.0	53.5
65°	49.2	48.3	47.4	46.4	46.4	45.9	45.5	44.3	43.6	43.3	42.4
67.5°	40.5	39.2	38.3	37.5	36.9	36.8	35.9	35.1	34.0	33.3	32.0
70°	32.0	31.1	30.1	29.4	28.8	28.2	27.3	26.1	25.3	24.0	23.3
72.5°	24.2	23.4	22.5	21.5	20.8	20.4	19.5	18.3	17.0	16.2	15.1
75°	17.3	16.4	15.3	14.4	14.0	13.5	12.5	11.7	10.8	9.8	8.7
77.5°	11.3	10.2	9.4	8.2	8.1	7.9	6.8	6.0	5.3	4.8	4.1
80°	6.0	5.4	4.8	4.1	3.8	3.4	2.9	2.4	2.0	1.6	1.4
82.5°	2.5	2.2	1.8	1.5	1.4	1.3	1.0	0.8	0.6	0.6	0.5
85°	0.6	0.5	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3
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°	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9
2.5°	361.9	362.0	362.1	362.1	362.3	362.5	362.5	362.6	362.7	362.9	362.9
5°	361.2	361.2	361.2	361.4	361.4	361.4	361.4	361.6	361.6	361.7	361.9
7.5°	359.8	359.8	359.8	359.8	359.7	359.8	359.7	359.7	360.0	360.1	360.2
10°	357.7	357.6	357.6	357.4	357.4	357.4	357.6	357.7	357.8	357.9	358.3
12.5°	354.3	354.1	354.1	354.0	354.0	354.1	354.3	354.5	355.0	355.4	355.9
15°	348.8	348.7	348.8	349.0	349.2	349.7	350.1	350.5	351.2	352.0	352.6
17.5°	341.0	341.1	341.2	341.5	341.9	342.5	343.5	344.7	345.5	346.7	347.7
20°	330.1	330.6	330.7	331.7	332.0	333.3	334.4	336.1	337.6	339.0	340.5
22.5°	317.1	317.5	318.0	319.1	319.7	321.4	322.9	324.8	326.4	328.2	330.4
25°	302.3	302.4	304.0	304.0	305.7	307.0	308.7	310.8	313.3	315.6	317.1
27.5°	285.3	286.1	287.3	287.8	289.1	291.3	292.8	295.2	297.6	299.6	301.3
30°	267.7	268.2	270.3	270.5	271.5	273.4	275.4	277.7	279.6	282.0	283.4
32.5°	249.1	250.6	251.8	252.8	253.0	255.8	257.0	258.6	260.8	263.1	264.6
35°	231.0	231.7	233.4	234.1	234.8	236.5	238.6	240.0	241.0	242.6	244.3
37.5°	211.8	213.9	214.3	216.0	216.2	217.7	218.8	220.4	221.8	223.2	223.4
40°	194.1	194.7	196.2	196.6	196.9	198.9	200.3	200.7	201.4	202.6	204.2
42.5°	176.0	176.6	178.3	177.9	179.1	180.0	180.7	182.3	183.1	183.5	183.5
45°	158.2	158.4	159.5	160.1	160.8	161.3	162.6	163.3	163.6	164.9	165.2
47.5°	141.2	141.5	142.3	143.2	143.0	143.6	145.0	145.4	145.5	146.4	146.8
50°	124.5	125.1	126.3	126.0	126.8	127.2	128.4	128.7	128.7	128.8	128.9
52.5°	108.8	109.4	109.7	109.9	110.3	111.1	111.6	111.3	111.8	112.4	112.0
55°	93.4	93.8	94.4	94.8	94.8	94.9	94.6	95.8	95.3	95.1	95.3
57.5°	79.2	78.7	78.6	79.2	79.5	79.3	79.0	79.5	79.5	79.2	78.8
60°	65.5	65.0	64.9	65.0	64.5	64.1	64.4	64.1	63.5	63.1	63.4
62.5°	53.0	52.6	51.5	51.5	51.2	51.1	50.0	50.1	49.6	48.8	49.1
65°	41.5	40.4	39.8	39.7	38.7	37.9	37.7	36.7	35.9	35.7	35.9
67.5°	31.1	29.9	29.0	28.6	28.0	27.3	26.3	25.6	25.8	25.7	26.2
70°	21.6	20.8	19.9	19.1	19.5	18.6	18.1	18.1	18.2	18.3	18.6
72.5°	14.4	13.3	12.9	12.5	12.3	11.7	12.0	12.0	11.8	12.0	11.7
75°	8.1	7.6	7.2	7.1	6.8	6.8	6.8	6.8	6.7	6.6	6.6
77.5°	3.7	3.4	3.3	3.2	3.2	3.2	3.0	2.9	2.9	2.9	2.7
80°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
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°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
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°	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9
2.5°	363.0	363.1	363.1	363.1	363.3	363.3	363.3	363.3
5°	362.0	362.1	362.1	362.1	362.3	362.3	362.3	362.3
7.5°	360.4	360.5	360.5	360.7	360.7	360.8	360.8	361.0
10°	358.5	358.7	358.9	359.1	359.2	359.3	359.3	359.5
12.5°	356.4	356.7	356.8	357.2	357.4	357.6	357.7	357.8
15°	353.5	354.0	354.3	354.4	354.9	355.3	355.4	355.5
17.5°	348.7	349.8	350.2	350.5	351.0	351.6	352.0	352.1
20°	341.9	343.1	343.7	344.4	345.2	345.8	346.2	346.4
22.5°	332.4	333.8	334.5	335.4	336.1	336.8	337.8	337.4
25°	318.8	321.1	322.0	322.5	324.0	324.8	325.3	324.8
27.5°	303.5	304.9	305.8	306.7	307.8	308.6	308.9	309.7
30°	285.2	287.6	287.5	288.4	289.7	290.5	290.8	291.5
32.5°	266.2	267.3	268.1	268.0	268.5	270.0	269.5	270.8
35°	246.0	246.1	247.5	247.4	248.4	248.4	248.4	249.3
37.5°	224.3	226.0	225.3	227.0	226.4	226.8	226.8	227.1
40°	204.7	205.2	205.2	205.7	206.1	205.7	206.0	206.7
42.5°	184.2	184.8	185.0	184.7	185.1	186.4	185.4	186.1
45°	165.2	165.6	166.2	165.8	166.5	166.0	166.5	166.2
47.5°	147.3	147.2	147.0	148.2	147.2	147.3	147.9	146.9
50°	128.9	129.8	129.2	129.7	129.9	129.9	129.6	129.6
52.5°	112.6	112.5	112.1	112.5	112.2	112.4	112.6	112.4
55°	95.8	96.4	96.0	95.9	96.0	96.0	96.9	95.8
57.5°	79.2	79.0	79.3	80.3	79.3	80.1	80.5	80.6
60°	63.5	63.5	64.3	63.9	64.7	65.4	65.9	65.7
62.5°	48.3	49.1	49.3	49.5	50.2	50.9	50.9	50.7
65°	35.9	36.8	36.8	37.3	37.7	37.7	37.9	38.5
67.5°	26.5	26.5	26.7	26.9	26.8	26.8	27.1	27.2
70°	18.5	18.2	18.6	18.5	18.5	18.3	18.5	18.5
72.5°	11.7	11.7	11.8	11.7	11.4	11.5	11.5	11.8
75°	6.2	6.6	6.2	6.2	6.3	6.1	6.2	6.3
77.5°	2.5	2.5	2.5	2.5	2.5	2.4	2.4	2.4
80°	1.3	1.3	1.3	1.3	1.3	1.3	1.1	1.1
82.5°	0.5	0.6	0.5	0.6	0.5	0.5	0.5	0.5
85°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
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)