

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: P843245

Luminaire Tested: **LD4C08DE010B35 EU4C08B35 4LBLWWLI**

Issue Date: 5/7/2024

Test Information

Test Method: LM-79-08
Report Number: P843245
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: LD4C08DE010B35 EU4C08B35 4LBLWWLI
Description: 4in Downlight with BioUp LEDs
Light Source: -
Ballast/Driver:

Summary

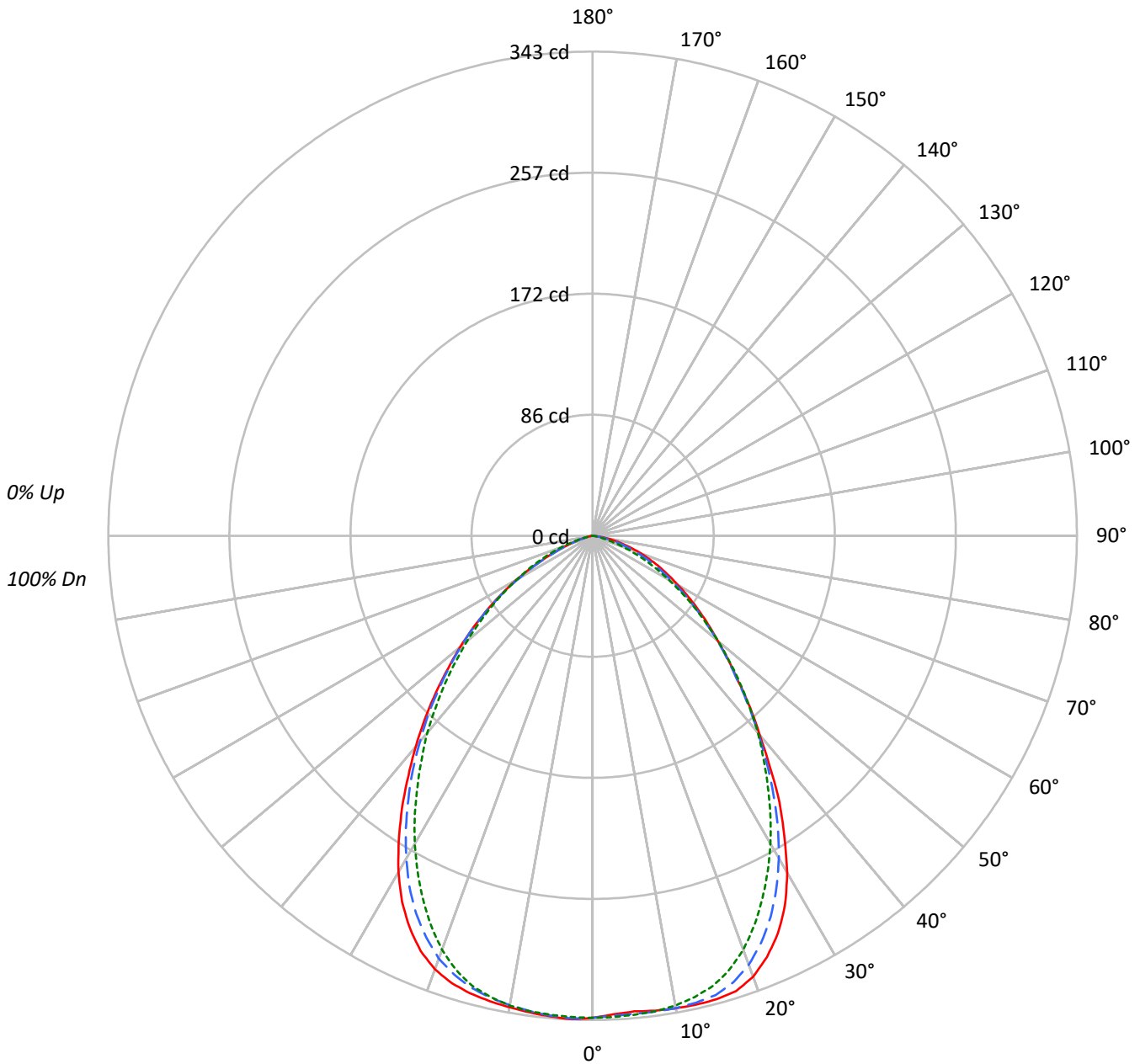
Lumens per Lamp: N/A
Luminaire Lumens: 654.7 lumens
Efficiency: N/A
Efficacy: 68.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.12 / 1.18
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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°	41954	41954	41954
5°	41708	42004	42152
10°	42402	42153	42315
15°	43231	41972	42671
20°	43457	40790	42725
25°	42117	38524	41547
30°	39096	35734	39025
35°	34615	32425	35274
40°	29509	29204	31273
45°	25366	25644	27243
50°	22132	22171	23356
55°	19555	18741	19363
60°	17150	15283	15234
65°	15145	11860	10552
70°	12967	8154	6286
75°	10490	4367	2848
80°	7216	1132	778
85°	2255	282	282



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.5	5.0
10°-20°	93.9	14.4
20°-30°	135.7	20.7
30°-40°	140.3	21.4
40°-50°	116.0	17.7
50°-60°	80.0	12.2
60°-70°	41.9	6.4
70°-80°	13.2	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°	262.2	40.0
0°-40°	402.5	61.5
0°-60°	598.5	91.4
0°-90°	654.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	654.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	342	342	342	342	342	
5°	338	340	341	341	342	32
15°	340	337	330	332	336	96
25°	311	298	284	296	306	142
35°	231	223	216	228	235	143
45°	146	145	148	154	157	114
55°	91	88	88	90	90	82
65°	52	47	41	34	36	52
75°	22	17	9	6	6	24
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°	341.5	341.5	341.5	341.5	341.5	341.5	341.5	341.5	341.5	341.5	341.5
2.5°	339.3	339.4	339.4	339.7	339.7	339.7	339.8	339.8	339.9	340.0	340.2
5°	338.2	338.2	338.5	338.7	338.9	339.1	339.3	339.4	339.7	339.8	339.9
7.5°	339.3	339.3	339.4	339.6	339.6	339.7	339.7	339.8	339.9	340.0	340.0
10°	339.9	339.9	339.9	339.9	340.0	340.0	340.0	339.9	339.9	339.9	339.8
12.5°	340.2	340.2	340.0	339.9	340.0	339.9	339.9	339.6	339.3	339.1	338.7
15°	339.9	339.9	339.8	339.7	339.6	339.3	339.2	338.5	338.0	337.3	336.8
17.5°	338.2	338.0	337.8	337.5	337.0	336.6	336.3	335.2	334.3	333.0	331.6
20°	332.4	332.1	331.8	331.0	330.4	330.0	329.1	327.5	326.6	324.7	323.3
22.5°	322.8	322.5	322.6	321.5	320.1	319.4	318.9	317.5	315.9	313.5	312.0
25°	310.7	309.9	309.9	308.1	307.5	307.0	306.3	304.7	302.4	300.2	298.1
27.5°	295.1	294.0	293.5	293.3	291.7	290.5	289.7	288.4	286.5	284.5	281.8
30°	275.6	275.4	274.8	273.6	272.4	272.0	271.0	268.7	266.9	265.6	263.8
32.5°	252.6	252.5	252.5	252.5	251.7	251.6	250.0	248.9	247.5	245.3	244.1
35°	230.8	230.7	230.8	228.9	228.3	228.0	227.8	227.1	225.2	224.1	223.2
37.5°	206.2	206.6	206.3	205.8	206.5	205.3	206.2	204.5	203.8	203.5	202.3
40°	184.0	185.1	184.0	184.1	184.8	183.6	183.6	183.4	182.9	182.5	182.3
42.5°	165.0	163.7	164.6	163.8	164.6	164.1	163.5	163.8	164.0	163.5	163.4
45°	146.0	146.2	146.5	146.1	146.1	145.6	146.7	146.1	146.1	146.2	145.3
47.5°	130.4	130.0	130.3	130.0	130.2	129.9	130.2	130.3	130.0	130.0	129.2
50°	115.8	115.5	116.4	115.7	115.7	115.5	115.7	115.4	115.1	115.1	115.3
52.5°	103.1	102.6	102.5	103.1	102.2	102.2	102.4	102.1	101.5	101.3	100.7
55°	91.3	91.2	91.3	90.7	90.5	90.5	89.9	89.6	89.5	88.8	88.5
57.5°	80.3	79.9	80.1	79.9	79.3	79.2	78.7	78.7	78.3	77.7	77.1
60°	69.8	69.8	70.1	69.6	69.3	69.0	68.7	68.4	67.6	66.6	65.9
62.5°	60.4	60.5	60.4	60.0	59.8	59.5	59.2	58.5	57.7	57.2	56.3
65°	52.1	52.0	51.7	51.4	50.8	50.8	50.2	49.9	49.0	48.2	47.3
67.5°	43.7	43.5	43.5	43.5	42.7	42.6	42.3	41.6	40.8	39.8	39.0
70°	36.1	36.3	35.9	35.5	35.1	35.0	34.6	33.8	33.0	31.9	31.3
72.5°	28.8	29.0	28.6	28.5	27.7	27.4	27.3	26.7	25.6	25.0	24.0
75°	22.1	22.2	21.9	21.7	21.2	21.0	20.4	19.9	19.2	18.2	17.3
77.5°	15.9	15.7	15.7	15.1	14.6	14.6	14.5	13.7	12.8	12.1	11.3
80°	10.2	10.0	9.6	9.4	9.0	8.9	8.7	8.0	7.4	6.9	6.5
82.5°	5.1	5.0	4.9	4.8	4.4	4.2	4.3	3.8	3.6	3.1	2.6
85°	1.6	1.7	1.7	1.6	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°	341.5	341.5	341.5	341.5	341.5	341.5	341.5	341.5	341.5	341.5	341.5
2.5°	340.3	340.5	340.6	340.7	340.7	340.9	341.0	341.1	341.2	341.2	341.3
5°	340.0	340.3	340.3	340.5	340.5	340.5	340.6	340.6	340.6	340.6	340.7
7.5°	340.2	340.2	340.2	340.0	340.0	339.9	339.9	339.9	339.7	339.7	339.7
10°	339.6	339.4	339.3	339.1	338.9	338.8	338.5	338.2	338.0	337.9	337.6
12.5°	338.2	337.8	337.3	336.8	336.4	336.3	335.8	335.5	335.1	334.6	334.4
15°	335.7	335.0	334.0	333.0	332.7	332.5	331.6	330.8	330.3	330.0	329.3
17.5°	330.6	329.0	328.0	326.5	325.9	325.5	324.2	323.4	322.5	322.3	321.7
20°	321.5	320.0	318.1	316.8	315.9	315.2	314.0	313.1	312.0	312.0	311.4
22.5°	310.1	308.3	305.9	304.1	303.9	302.4	301.3	300.2	299.8	299.0	299.0
25°	295.7	294.1	291.5	289.9	289.2	288.7	287.1	285.6	284.8	284.2	284.7
27.5°	279.8	277.5	275.4	273.5	272.9	272.1	270.5	269.9	268.5	268.4	268.2
30°	261.6	259.3	257.2	256.4	255.1	254.4	253.3	252.5	251.9	251.9	251.7
32.5°	242.5	240.4	239.4	237.4	236.8	236.0	235.2	234.4	234.7	234.4	234.6
35°	221.8	221.4	219.4	218.3	218.3	218.1	216.8	216.3	216.1	216.2	216.8
37.5°	202.2	200.6	199.4	198.6	199.3	198.5	198.4	198.4	199.2	198.6	199.7
40°	181.3	181.2	180.6	181.0	181.1	180.1	180.4	180.5	181.1	182.1	182.2
42.5°	163.1	163.0	163.0	163.0	162.8	162.2	162.8	163.6	163.5	164.3	164.9
45°	145.5	145.3	145.8	145.4	146.2	146.5	146.1	146.3	147.1	147.6	148.6
47.5°	129.6	129.6	129.7	129.9	129.1	129.8	130.0	130.5	130.9	131.1	131.7
50°	114.6	114.6	114.3	114.3	114.3	114.8	114.2	114.9	115.1	116.0	116.7
52.5°	100.9	100.3	100.7	100.4	99.8	99.6	99.8	100.1	100.8	101.0	101.9
55°	87.9	87.9	86.8	86.5	86.9	86.8	86.7	86.7	87.0	87.5	88.1
57.5°	76.3	75.5	74.8	74.7	74.2	74.4	74.4	74.2	74.0	74.1	74.2
60°	65.4	64.8	63.8	63.8	63.6	63.5	62.8	62.7	62.1	62.2	61.7
62.5°	55.4	55.1	53.6	53.1	53.1	52.7	52.0	51.9	51.1	51.1	50.6
65°	46.4	45.7	44.7	43.9	43.9	43.4	42.9	41.8	41.1	40.8	40.0
67.5°	38.2	37.0	36.2	35.4	34.9	34.8	33.8	33.1	32.0	31.4	30.2
70°	30.2	29.4	28.5	27.7	27.2	26.7	25.8	24.6	23.9	22.7	21.9
72.5°	22.8	22.1	21.3	20.3	19.7	19.2	18.3	17.3	16.1	15.2	14.3
75°	16.4	15.5	14.5	13.6	13.2	12.8	11.8	11.0	10.2	9.2	8.2
77.5°	10.7	9.6	8.9	7.8	7.7	7.4	6.5	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	1.6	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°	341.5	341.5	341.5	341.5	341.5	341.5	341.5	341.5	341.5	341.5	341.5
2.5°	341.5	341.6	341.7	341.7	341.8	342.0	342.0	342.1	342.3	342.4	342.4
5°	340.9	340.9	340.9	341.0	341.0	341.0	341.0	341.2	341.2	341.3	341.5
7.5°	339.6	339.6	339.6	339.6	339.4	339.6	339.4	339.4	339.7	339.8	339.9
10°	337.5	337.4	337.4	337.3	337.3	337.3	337.4	337.5	337.6	337.8	338.1
12.5°	334.3	334.2	334.2	334.0	334.0	334.2	334.3	334.5	335.1	335.3	335.8
15°	329.1	329.0	329.1	329.3	329.6	330.0	330.3	330.7	331.5	332.1	332.7
17.5°	321.7	321.8	321.9	322.3	322.6	323.1	324.2	325.2	326.1	327.1	328.2
20°	311.5	312.0	312.1	313.1	313.3	314.4	315.6	317.1	318.6	319.8	321.2
22.5°	299.2	299.5	300.1	301.1	301.7	303.2	304.7	306.5	308.0	309.7	311.7
25°	285.1	285.3	286.8	286.8	288.4	289.7	291.4	293.3	295.6	297.7	299.2
27.5°	269.3	269.9	271.1	271.6	272.8	274.8	276.3	278.5	280.8	282.7	284.3
30°	252.6	253.1	255.1	255.3	256.2	258.0	260.0	262.1	263.9	266.1	267.5
32.5°	235.0	236.5	237.7	238.5	238.8	241.5	242.5	244.0	246.1	248.2	249.7
35°	218.0	218.6	220.3	220.8	221.6	223.2	225.2	226.4	227.5	228.9	230.6
37.5°	199.9	201.8	202.2	203.8	204.0	205.4	206.5	208.0	209.3	210.6	210.8
40°	183.1	183.7	185.2	185.5	185.8	187.7	189.0	189.4	190.1	191.2	192.7
42.5°	166.0	166.7	168.3	167.8	169.0	169.9	170.6	172.1	172.7	173.1	173.1
45°	149.2	149.5	150.5	151.0	151.7	152.2	153.4	154.1	154.4	155.6	155.9
47.5°	133.3	133.5	134.2	135.2	134.8	135.6	136.9	137.2	137.4	138.1	138.4
50°	117.5	118.1	119.1	118.9	119.6	120.0	121.2	121.4	121.4	121.5	121.7
52.5°	102.7	103.2	103.4	103.8	104.1	104.8	105.2	105.0	105.6	106.1	105.7
55°	88.1	88.5	89.2	89.4	89.4	89.5	89.3	90.4	89.9	89.8	89.9
57.5°	74.8	74.2	74.1	74.8	75.0	74.9	74.5	75.0	75.0	74.8	74.4
60°	61.8	61.4	61.3	61.4	60.9	60.5	60.8	60.5	59.9	59.7	59.8
62.5°	50.0	49.6	48.7	48.7	48.3	48.2	47.2	47.3	46.9	46.0	46.3
65°	39.1	38.1	37.5	37.4	36.6	35.7	35.5	34.6	33.8	33.7	33.8
67.5°	29.4	28.2	27.3	27.0	26.4	25.8	24.9	24.1	24.3	24.2	24.7
70°	20.4	19.7	18.7	18.1	18.3	17.6	17.0	17.0	17.1	17.3	17.6
72.5°	13.6	12.6	12.2	11.8	11.5	11.0	11.3	11.3	11.1	11.3	11.0
75°	7.7	7.2	6.8	6.7	6.5	6.5	6.5	6.5	6.2	6.1	6.1
77.5°	3.5	3.2	3.1	3.0	3.0	3.0	2.9	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°	341.5	341.5	341.5	341.5	341.5	341.5	341.5	341.5
2.5°	342.5	342.7	342.7	342.7	342.8	342.8	342.8	342.8
5°	341.6	341.7	341.7	341.7	341.8	341.8	341.8	341.8
7.5°	340.0	340.2	340.2	340.3	340.3	340.5	340.5	340.6
10°	338.2	338.5	338.7	338.8	338.9	339.1	339.1	339.2
12.5°	336.3	336.6	336.8	337.0	337.3	337.4	337.5	337.6
15°	333.6	334.0	334.3	334.4	335.0	335.2	335.3	335.5
17.5°	329.0	330.1	330.4	330.7	331.3	331.8	332.1	332.2
20°	322.6	323.7	324.3	324.9	325.8	326.4	326.6	326.8
22.5°	313.7	315.0	315.7	316.4	317.1	317.7	318.8	318.3
25°	300.8	303.0	303.9	304.3	305.7	306.5	307.0	306.5
27.5°	286.5	287.8	288.5	289.4	290.4	291.2	291.5	292.2
30°	269.2	271.3	271.2	272.1	273.4	274.1	274.5	275.1
32.5°	251.2	252.2	253.0	252.9	253.4	254.8	254.3	255.4
35°	232.0	232.3	233.5	233.4	234.4	234.4	234.4	235.2
37.5°	211.7	213.2	212.6	214.2	213.6	214.1	214.1	214.3
40°	193.1	193.7	193.7	194.2	194.5	194.2	194.4	195.0
42.5°	173.9	174.4	174.5	174.3	174.6	175.8	174.9	175.7
45°	155.9	156.3	156.8	156.4	157.1	156.7	157.1	156.8
47.5°	139.0	138.9	138.8	139.8	138.9	139.0	139.5	138.7
50°	121.7	122.5	121.9	122.4	122.6	122.6	122.2	122.2
52.5°	106.3	106.2	105.8	106.2	105.9	106.1	106.3	106.1
55°	90.4	91.0	90.6	90.5	90.6	90.6	91.4	90.4
57.5°	74.8	74.5	74.9	75.8	74.9	75.5	75.9	76.0
60°	59.9	59.9	60.6	60.3	61.0	61.7	62.2	62.0
62.5°	45.7	46.3	46.5	46.6	47.5	47.9	47.9	47.8
65°	33.8	34.8	34.8	35.2	35.5	35.5	35.7	36.3
67.5°	25.0	25.0	25.2	25.4	25.3	25.3	25.5	25.6
70°	17.5	17.1	17.6	17.5	17.5	17.3	17.5	17.5
72.5°	11.0	11.0	11.1	11.0	10.8	10.9	10.9	11.1
75°	5.9	6.1	5.9	5.9	6.0	5.8	5.9	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)