

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: P843215

Luminaire Tested: **LD4C08DE010B2750 EU4C08B27 4LBDWWLI**

Issue Date: 5/7/2024



Test Information

Test Method: LM-79-08
Report Number: P843215
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2107-320-5)
Test Lab: INNOVATION CENTER
Issue Date: 5/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C08DE010B2750 EU4C08B27 4LBLDWWLI
Description: 4in Downlight with BioUp LEDs
Light Source: -
Ballast/Driver:

Summary

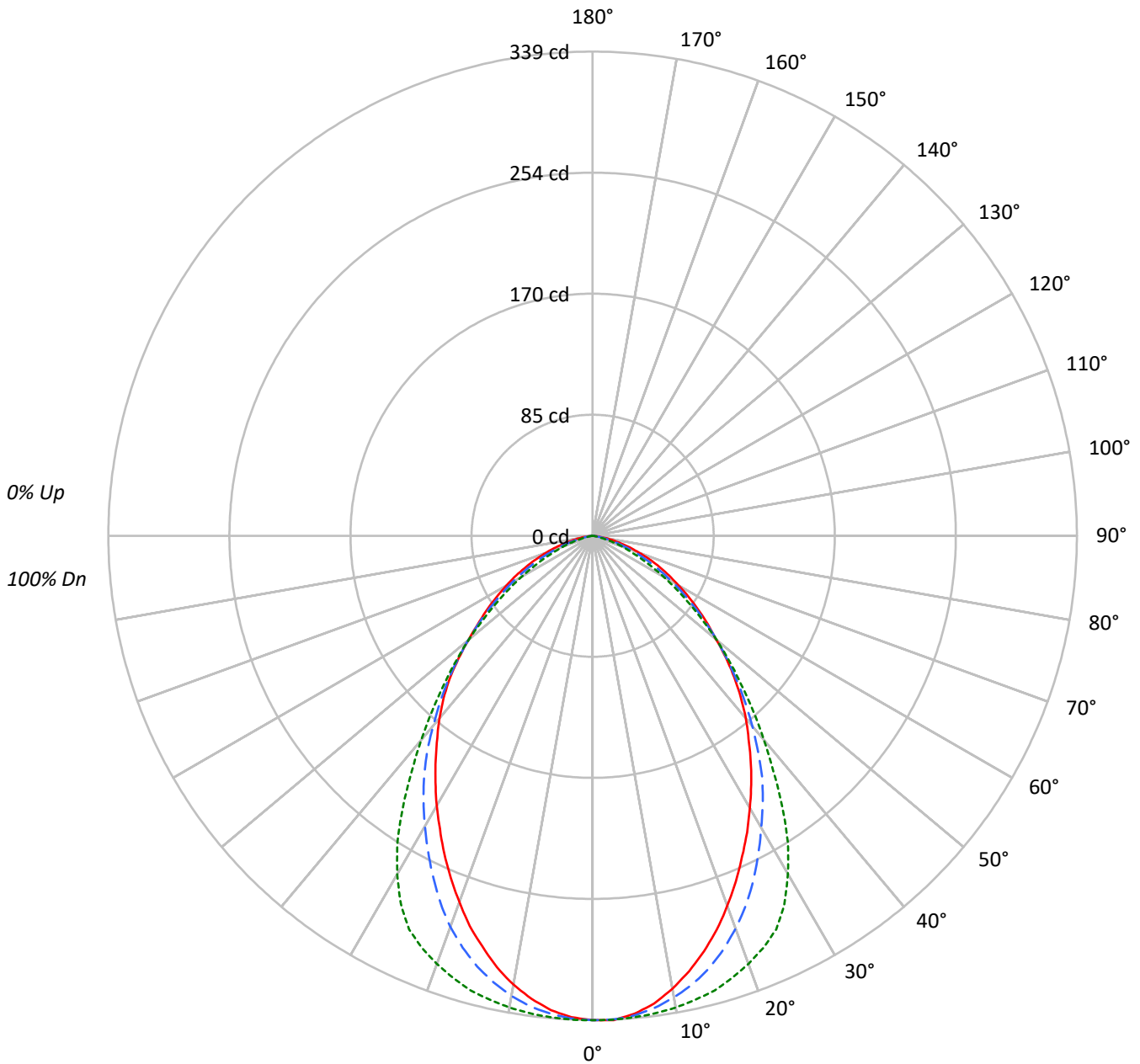
Lumens per Lamp: N/A
Luminaire Lumens: 622.9 lumens
Efficiency: N/A
Efficacy: 64.9 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.19 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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	93	92	90	88																			
2	103	96	90	85	100	94	89	84	91	86	83	87	84	81	85	82	79	77																			
3	95	86	79	74	93	84	78	73	82	76	72	79	74	70	77	73	69	67																			
4	88	78	70	64	86	76	69	64	74	68	63	72	66	62	70	65	61	59																			
5	82	70	62	57	80	69	62	56	67	61	56	65	60	55	64	59	55	53																			
6	76	64	56	50	74	63	56	50	61	55	50	60	54	49	58	53	49	47																			
7	71	59	51	45	69	58	50	45	56	50	45	55	49	45	54	48	44	42																			
8	66	54	46	41	65	53	46	41	52	45	41	51	45	40	50	44	40	38																			
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35																			
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	41672	41672	41672
5°	41424	41732	41116
10°	40157	41841	39820
15°	38309	41934	37889
20°	36044	41692	35665
25°	33577	41208	33306
30°	31209	38798	30954
35°	28930	34705	28720
40°	26750	29926	26734
45°	24358	25540	24567
50°	21521	21616	21655
55°	19298	17671	19363
60°	17052	14030	17077
65°	15000	10698	14855
70°	12428	7651	12428
75°	9683	4414	9351
80°	6297	1061	6014
85°	2396	282	1832



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.8	5.1
10°-20°	88.1	14.1
20°-30°	123.1	19.8
30°-40°	129.9	20.9
40°-50°	110.5	17.7
50°-60°	78.0	12.5
60°-70°	44.2	7.1
70°-80°	15.8	2.5
80°-90°	1.5	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°	243.1	39.0
0°-40°	373.0	59.9
0°-60°	561.5	90.1
0°-90°	622.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	622.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	339	339	339	339	339	
5°	336	337	338	336	333	32
15°	301	314	330	312	298	84
25°	248	266	304	264	246	114
35°	193	207	231	206	192	121
45°	140	142	147	143	141	108
55°	90	87	82	87	90	81
65°	52	44	37	44	51	51
75°	20	14	9	14	20	22
85°	2	1	0	1	1	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°	339.2	339.2	339.2	339.2	339.2	339.2	339.2	339.2	339.2	339.2	339.2
2.5°	339.4	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8	339.0	339.0
5°	335.9	335.6	335.5	335.5	335.5	335.5	335.6	336.1	336.4	336.8	337.1
7.5°	330.3	329.8	330.1	330.1	330.3	330.6	330.9	331.5	332.2	332.7	333.4
10°	321.9	321.4	322.0	322.4	323.1	323.4	324.1	324.9	326.4	327.1	328.2
12.5°	312.2	311.9	312.2	313.2	313.9	314.4	315.2	316.9	318.3	320.0	321.8
15°	301.2	300.6	301.0	302.3	303.5	304.4	305.0	307.2	309.3	311.8	313.9
17.5°	289.1	288.2	289.3	290.2	291.9	292.6	293.5	295.9	298.7	301.5	304.0
20°	275.7	275.5	276.1	277.5	279.2	280.2	281.0	283.7	286.1	289.9	292.6
22.5°	262.0	262.2	262.7	264.2	265.4	266.7	267.9	270.3	273.1	276.7	280.2
25°	247.7	248.1	249.0	250.0	251.9	252.7	254.0	256.6	259.0	262.3	266.2
27.5°	234.1	234.2	235.2	235.6	237.4	239.1	239.8	242.4	245.2	247.7	251.2
30°	220.0	220.3	220.9	222.3	224.1	224.7	225.5	227.9	230.1	233.3	236.0
32.5°	206.6	206.2	207.0	207.8	209.8	211.0	211.3	214.2	216.0	219.1	221.7
35°	192.9	192.3	193.4	194.2	196.0	197.0	197.5	199.7	201.5	204.1	206.9
37.5°	179.4	179.9	180.3	181.0	181.9	182.1	183.7	184.1	186.5	188.5	190.1
40°	166.8	166.6	166.3	166.9	168.1	168.6	168.7	170.1	170.6	172.6	173.8
42.5°	153.4	153.5	153.4	153.5	154.1	154.1	154.5	155.4	155.8	156.4	157.8
45°	140.2	140.2	139.9	140.0	140.1	140.0	140.1	140.6	141.3	141.3	142.4
47.5°	126.7	126.5	127.0	126.6	126.4	126.2	126.6	126.2	127.0	127.0	127.2
50°	112.6	112.6	113.3	113.2	113.4	112.8	113.1	113.1	113.2	113.1	113.5
52.5°	101.7	101.4	101.2	100.6	100.8	100.4	100.4	100.5	100.1	99.9	99.3
55°	90.1	90.3	89.9	89.7	89.7	89.2	89.1	88.3	87.8	87.4	87.0
57.5°	79.5	79.7	79.6	79.0	78.3	78.4	78.2	77.4	76.3	75.5	74.9
60°	69.4	69.6	69.4	68.7	68.5	68.0	67.9	66.8	66.0	64.9	64.2
62.5°	60.3	60.3	60.1	59.2	58.6	58.7	58.1	57.3	56.2	54.8	53.6
65°	51.6	51.5	50.9	50.4	50.0	49.4	49.0	47.8	47.0	45.8	44.3
67.5°	43.0	42.6	42.4	42.0	40.8	40.7	40.2	39.2	38.0	37.0	35.7
70°	34.6	34.5	34.0	34.0	33.1	32.7	31.9	31.1	29.9	28.7	27.6
72.5°	27.4	27.2	26.7	26.1	25.4	25.1	24.4	23.6	22.5	21.3	20.0
75°	20.4	20.2	20.0	19.5	18.8	18.2	17.9	17.0	16.0	15.1	14.0
77.5°	14.4	14.1	13.7	13.3	12.9	12.6	12.2	11.4	10.6	9.7	8.8
80°	8.9	8.7	8.4	8.2	7.8	7.7	7.2	6.9	6.1	5.6	5.0
82.5°	4.5	4.5	4.3	4.2	3.9	3.8	3.7	3.3	3.0	2.5	2.1
85°	1.7	1.7	1.5	1.4	1.4	1.3	1.3	1.2	0.8	0.8	0.6
87.5°	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	339.2	339.2	339.2	339.2	339.2	339.2	339.2	339.2	339.2	339.2	339.2
2.5°	339.1	339.0	339.1	339.1	339.2	339.2	339.2	339.1	339.2	339.1	339.1
5°	337.1	337.4	337.7	337.9	338.0	338.1	338.1	338.3	338.4	338.4	338.3
7.5°	333.9	334.6	335.4	335.9	336.1	336.4	336.8	337.1	337.3	337.2	337.1
10°	329.7	330.9	332.0	332.9	333.5	333.9	334.5	335.0	335.3	335.4	335.0
12.5°	323.7	325.5	327.1	328.8	329.6	330.1	331.4	332.2	332.7	332.7	332.3
15°	316.2	318.8	321.2	323.3	324.6	325.3	327.2	328.5	329.3	329.7	329.0
17.5°	307.2	310.1	313.1	315.8	317.1	318.2	320.9	322.7	324.4	324.6	323.8
20°	295.7	299.3	302.7	306.1	307.5	309.3	312.3	315.2	317.7	318.9	316.8
22.5°	282.7	286.8	289.9	294.0	295.9	297.8	301.7	305.4	309.9	312.3	308.5
25°	269.3	272.8	276.4	280.5	283.1	285.1	289.7	294.4	300.4	304.0	298.6
27.5°	254.9	257.9	262.3	266.7	268.7	271.3	276.8	281.9	287.6	290.7	286.8
30°	239.9	243.7	247.9	251.9	254.9	257.2	261.7	266.0	270.9	273.5	270.5
32.5°	225.1	228.7	232.3	236.7	238.4	240.5	244.4	248.1	251.8	254.3	250.8
35°	209.4	212.7	216.0	219.0	219.8	222.3	225.5	227.7	229.5	231.4	229.1
37.5°	192.4	194.9	196.6	199.9	201.2	201.6	204.1	205.6	207.5	207.9	207.8
40°	175.1	177.5	178.8	180.9	181.9	181.9	183.7	185.1	186.5	186.6	186.5
42.5°	159.1	160.2	161.4	162.7	162.3	163.9	164.7	165.3	166.3	166.3	166.6
45°	142.8	143.7	144.7	145.0	146.0	146.0	146.6	146.9	147.4	147.0	146.5
47.5°	127.8	128.1	128.3	129.3	129.7	128.7	129.6	129.7	129.6	129.6	129.2
50°	113.4	113.7	113.5	113.2	113.3	113.7	113.3	112.7	113.1	113.1	113.3
52.5°	99.4	98.9	98.7	98.7	98.1	98.1	97.5	97.3	97.2	96.7	97.3
55°	86.6	85.9	84.7	84.5	84.1	84.0	83.2	82.6	82.3	82.5	82.3
57.5°	74.4	73.2	72.4	72.1	71.8	71.1	70.1	69.5	69.4	69.2	69.2
60°	63.1	61.9	60.7	59.7	59.8	59.2	58.4	58.0	57.6	57.1	57.4
62.5°	53.0	51.6	50.3	49.2	48.4	48.1	47.5	46.9	46.4	46.0	46.5
65°	43.0	41.9	40.5	39.3	38.9	38.6	38.0	36.9	36.8	36.8	37.0
67.5°	34.0	32.7	31.4	30.7	30.1	29.7	29.4	28.9	28.6	28.2	28.5
70°	26.1	24.9	23.8	23.1	22.7	22.5	21.7	21.6	21.5	21.3	21.2
72.5°	19.0	18.0	17.1	16.6	16.1	15.8	15.4	15.1	15.0	15.0	15.0
75°	13.1	12.3	11.3	10.7	10.4	10.0	9.6	9.4	9.1	9.3	9.3
77.5°	7.8	7.1	6.5	5.9	5.8	5.5	5.1	4.9	4.4	4.4	4.5
80°	4.3	3.7	3.2	2.7	2.5	2.4	2.0	1.9	1.7	1.5	1.5
82.5°	1.9	1.5	1.3	1.2	1.1	0.8	0.7	0.6	0.6	0.5	0.6
85°	0.6	0.5	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
87.5°	0.1	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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	339.2	339.2	339.2	339.2	339.2	339.2	339.2	339.2	339.2	339.2	339.2
2.5°	339.0	339.0	338.8	338.8	338.8	338.5	338.5	338.4	338.3	338.1	337.9
5°	338.0	337.9	337.7	337.5	337.4	337.1	336.6	336.4	336.0	335.5	335.3
7.5°	336.8	336.4	335.9	335.6	335.3	334.3	333.7	333.2	332.5	331.6	330.6
10°	334.6	333.9	333.2	332.6	332.0	330.8	329.6	328.5	327.1	325.9	324.5
12.5°	331.6	330.7	329.1	328.4	327.7	326.0	324.4	322.2	320.3	318.6	316.9
15°	327.8	326.2	324.4	323.3	322.2	319.5	317.0	314.8	312.2	310.0	307.3
17.5°	322.2	319.8	317.3	316.1	314.5	311.6	308.5	305.3	302.4	299.7	296.5
20°	313.8	311.2	307.9	306.1	304.8	300.8	297.8	294.2	291.3	288.0	284.3
22.5°	304.1	300.4	296.7	294.1	292.8	288.7	284.8	281.6	278.3	274.5	271.8
25°	293.1	288.4	284.0	281.4	279.3	275.0	271.2	267.9	263.9	260.5	257.9
27.5°	280.6	275.4	270.2	267.7	265.6	260.9	256.9	253.4	249.5	246.6	243.8
30°	265.8	261.0	256.1	254.0	251.7	246.9	242.2	239.1	234.8	231.7	228.7
32.5°	247.3	244.2	240.3	237.4	236.2	231.7	227.8	224.1	220.4	218.1	215.0
35°	227.0	224.2	220.9	219.5	217.8	215.0	211.8	208.7	205.7	203.5	200.6
37.5°	206.3	203.7	201.7	200.0	199.0	196.5	194.6	192.2	190.2	187.9	186.5
40°	185.1	184.3	182.1	181.4	181.2	178.3	176.7	174.8	173.6	172.3	171.3
42.5°	166.2	164.9	163.3	163.4	162.7	161.1	159.9	158.6	157.8	157.2	156.3
45°	147.5	146.5	145.7	146.4	145.1	144.6	143.7	143.6	143.0	141.8	141.4
47.5°	129.8	129.7	129.8	129.3	129.1	128.9	129.0	128.4	127.8	127.3	126.8
50°	113.5	113.7	113.9	114.3	113.4	113.8	113.7	113.5	113.5	113.2	113.4
52.5°	97.8	97.9	98.1	98.6	98.7	98.7	99.1	99.3	99.8	100.5	100.5
55°	82.9	83.9	84.4	85.0	84.6	85.4	85.8	86.9	87.3	87.3	87.8
57.5°	69.8	70.6	71.1	71.8	72.0	72.7	73.7	74.4	75.2	75.9	76.8
60°	57.7	58.1	59.1	60.3	60.0	61.6	62.3	63.2	64.4	64.9	66.0
62.5°	47.0	47.5	48.2	48.5	49.5	50.2	52.0	53.0	54.0	55.3	56.4
65°	37.3	37.8	38.6	39.3	39.7	40.8	41.8	43.5	44.4	45.8	47.0
67.5°	28.6	29.3	29.9	30.5	30.7	31.8	33.2	34.0	35.6	37.0	38.0
70°	21.3	21.9	22.7	22.5	23.1	24.0	25.0	26.1	27.4	28.7	29.7
72.5°	14.8	15.4	16.0	16.1	16.6	17.2	18.0	18.9	19.9	21.2	22.5
75°	9.4	9.5	10.0	10.3	10.6	11.3	12.0	12.8	13.7	14.7	15.7
77.5°	4.7	5.1	5.3	5.6	5.7	6.3	7.0	7.7	8.5	9.5	10.4
80°	1.8	1.9	2.3	2.4	2.6	3.1	3.6	3.9	4.5	5.3	5.8
82.5°	0.6	0.7	0.8	0.8	1.1	1.3	1.4	1.8	2.1	2.4	2.6
85°	0.2	0.2	0.2	0.2	0.2	0.4	0.4	0.5	0.6	0.7	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):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	339.2	339.2	339.2	339.2	339.2	339.2	339.2	339.2
2.5°	337.8	337.8	337.7	337.5	337.5	337.5	337.4	337.4
5°	334.7	334.3	334.2	334.0	333.9	333.7	333.4	333.4
7.5°	329.8	329.3	328.9	328.5	328.1	327.7	327.7	327.1
10°	323.2	322.2	321.7	321.2	320.6	319.8	319.5	319.2
12.5°	315.2	313.2	312.6	311.8	310.7	310.3	309.4	309.4
15°	305.3	303.1	302.1	301.5	300.3	299.3	299.0	297.9
17.5°	293.8	292.1	290.3	289.6	288.2	287.0	286.5	286.4
20°	282.1	279.4	278.3	277.2	275.5	274.5	273.7	272.8
22.5°	268.6	266.2	264.6	263.9	262.4	260.7	259.4	259.4
25°	254.5	252.4	251.4	249.8	248.1	247.5	246.0	245.7
27.5°	240.9	238.7	236.9	236.1	234.2	233.3	232.0	231.5
30°	226.8	224.2	222.9	222.8	220.6	219.7	218.7	218.2
32.5°	212.7	210.6	209.3	208.6	207.5	206.0	205.1	204.7
35°	198.7	197.4	196.2	195.3	193.7	192.9	192.2	191.5
37.5°	184.1	182.9	182.4	181.6	180.9	179.5	179.3	178.7
40°	170.1	168.5	168.5	168.0	167.2	167.1	166.7	166.7
42.5°	155.4	154.6	154.5	154.6	154.1	153.9	153.5	154.4
45°	140.8	141.2	140.6	140.7	140.5	140.9	140.9	141.4
47.5°	127.3	126.8	127.1	127.3	127.8	127.8	127.7	127.4
50°	113.1	113.5	114.0	113.4	113.7	113.8	113.2	113.3
52.5°	100.7	100.8	101.2	100.8	101.2	101.1	101.3	100.8
55°	88.8	88.8	89.3	89.5	89.6	89.9	90.1	90.4
57.5°	77.2	77.8	78.5	78.4	78.9	79.4	79.0	79.4
60°	67.3	67.7	68.3	68.6	69.0	69.3	69.3	69.5
62.5°	57.1	58.1	58.6	59.1	59.1	59.7	60.1	60.3
65°	47.9	49.1	49.5	49.8	50.1	50.7	51.3	51.1
67.5°	39.3	40.1	40.6	40.8	41.6	41.9	42.4	42.8
70°	30.8	31.8	32.3	32.7	33.3	33.8	34.4	34.6
72.5°	23.6	24.3	24.6	25.1	25.7	26.2	26.5	26.9
75°	16.5	17.8	17.9	18.3	18.8	19.5	19.8	19.7
77.5°	10.9	11.8	12.0	12.5	12.9	13.4	13.5	13.7
80°	6.5	7.0	7.1	7.4	7.7	8.0	8.2	8.5
82.5°	3.1	3.3	3.6	3.6	3.8	4.0	4.0	4.2
85°	1.1	1.1	1.2	1.2	1.3	1.3	1.4	1.3
87.5°	0.1	0.1	0.0	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)