

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: P843229

Luminaire Tested: **LD4C08DE010B2750 EU4C08B30 4LBDWWLI**

Issue Date: 5/7/2024



Test Information

Test Method: LM-79-08
Report Number: P843229
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 EU4C08B30 4LBLDWWLI
Description: 4in Downlight with BioUp LEDs
Light Source: -
Ballast/Driver:

Summary

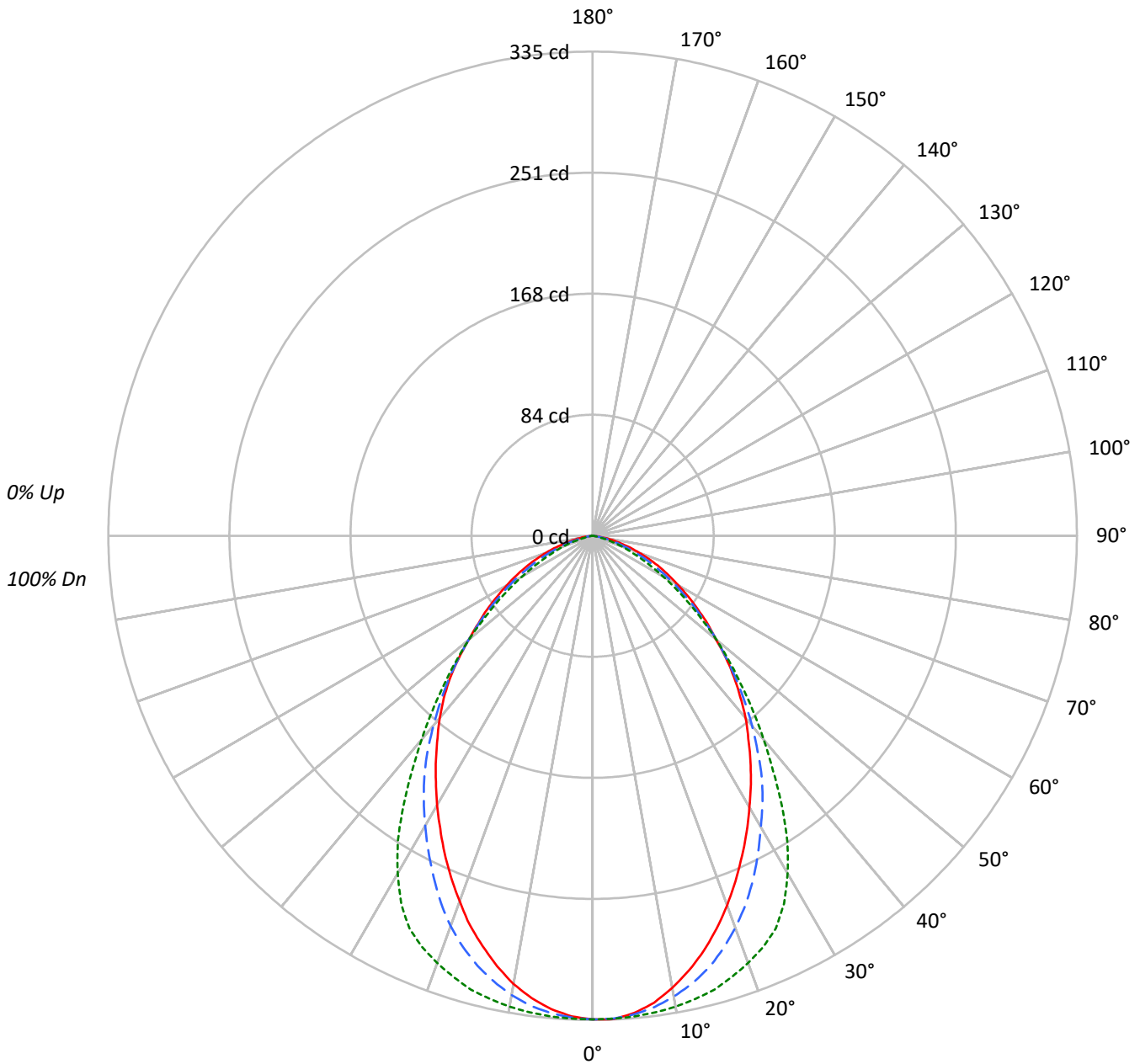
Lumens per Lamp: N/A
Luminaire Lumens: 614.5 lumens
Efficiency: N/A
Efficacy: 64.0 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.19 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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				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	108	105	102	99	101	98	96	97	95	93	93	92	90	88				88
2	103	96	90	85	100	94	89	84	91	86	83	87	84	81	85	82	79	77				77
3	95	86	79	74	93	84	78	73	82	76	72	79	74	70	77	73	69	67				67
4	88	78	70	64	86	76	69	64	74	68	63	72	66	62	70	65	61	59				59
5	82	70	62	57	80	69	62	56	67	61	56	65	60	55	64	59	55	53				53
6	76	64	56	50	74	63	56	50	61	55	50	60	54	49	58	53	49	47				47
7	71	59	51	45	69	58	50	45	56	50	45	55	49	45	54	48	44	42				42
8	66	54	46	41	65	53	46	41	52	45	41	51	45	40	50	44	40	38				38
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35				35
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32				32

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	41107	41107	41107
5°	40869	41165	40549
10°	39620	41267	39283
15°	37800	41361	37380
20°	35561	41117	35182
25°	33129	40639	32858
30°	30769	38274	30528
35°	28541	34225	28331
40°	26398	29509	26381
45°	24028	25192	24237
50°	21253	21311	21349
55°	19020	17414	19127
60°	16806	13833	16831
65°	14826	10552	14651
70°	12285	7543	12285
75°	9541	4319	9209
80°	6226	1061	5943
85°	2255	282	1832



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.4	5.1
10°-20°	86.9	14.1
20°-30°	121.5	19.8
30°-40°	128.1	20.9
40°-50°	109.0	17.7
50°-60°	76.9	12.5
60°-70°	43.6	7.1
70°-80°	15.6	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°	239.8	39.0
0°-40°	367.9	59.9
0°-60°	553.8	90.1
0°-90°	614.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	614.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	335	335	335	335	335	
5°	331	332	334	332	329	31
15°	297	310	325	308	294	83
25°	244	263	300	260	242	112
35°	190	204	228	203	189	119
45°	138	140	145	141	140	106
55°	89	86	81	86	89	80
65°	51	44	36	44	50	50
75°	20	14	9	14	19	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°	334.6	334.6	334.6	334.6	334.6	334.6	334.6	334.6	334.6	334.6	334.6
2.5°	334.8	334.2	334.2	334.2	334.2	334.2	334.2	334.2	334.2	334.3	334.3
5°	331.4	331.0	330.9	330.9	330.9	330.9	331.0	331.6	331.8	332.2	332.4
7.5°	325.9	325.3	325.5	325.5	325.9	326.1	326.5	326.9	327.7	328.2	328.8
10°	317.6	317.1	317.7	317.9	318.7	319.1	319.7	320.5	321.9	322.7	323.7
12.5°	308.0	307.7	308.0	308.9	309.7	310.2	310.9	312.5	314.0	315.7	317.4
15°	297.2	296.6	296.9	298.1	299.4	300.3	300.9	303.0	305.0	307.6	309.7
17.5°	285.1	284.3	285.2	286.3	287.9	288.6	289.6	291.9	294.7	297.4	299.8
20°	272.0	271.8	272.4	273.8	275.4	276.4	277.1	279.7	282.2	285.9	288.6
22.5°	258.4	258.6	259.1	260.6	261.8	263.1	264.3	266.6	269.4	272.9	276.4
25°	244.4	244.7	245.6	246.6	248.5	249.3	250.7	253.1	255.5	258.8	262.6
27.5°	230.9	231.0	231.9	232.5	234.3	235.9	236.5	239.1	241.9	244.4	247.7
30°	216.9	217.3	218.0	219.4	221.0	221.7	222.4	224.9	227.0	230.1	232.7
32.5°	203.7	203.5	204.2	205.0	207.0	208.0	208.5	211.2	213.1	216.2	218.7
35°	190.3	189.7	190.8	191.5	193.3	194.3	194.8	196.9	198.7	201.4	204.1
37.5°	176.9	177.5	177.9	178.5	179.5	179.7	181.2	181.7	183.9	185.9	187.4
40°	164.6	164.3	164.0	164.7	165.8	166.3	166.4	167.7	168.3	170.3	171.4
42.5°	151.2	151.5	151.2	151.5	152.0	152.0	152.4	153.3	153.7	154.3	155.7
45°	138.3	138.3	138.0	138.1	138.2	138.1	138.2	138.7	139.4	139.4	140.3
47.5°	125.0	124.8	125.2	124.9	124.6	124.5	124.9	124.5	125.2	125.2	125.5
50°	111.2	111.2	111.7	111.6	111.9	111.4	111.5	111.5	111.6	111.5	112.0
52.5°	100.4	100.1	99.8	99.2	99.5	99.0	99.0	99.1	98.7	98.6	97.9
55°	88.8	89.1	88.7	88.4	88.4	88.0	87.9	87.0	86.6	86.2	85.9
57.5°	78.5	78.7	78.6	77.9	77.2	77.3	77.1	76.4	75.2	74.5	73.8
60°	68.4	68.7	68.4	67.8	67.6	67.1	66.9	65.9	65.0	64.1	63.4
62.5°	59.4	59.4	59.3	58.4	57.9	58.0	57.3	56.6	55.4	54.0	52.9
65°	51.0	50.8	50.1	49.8	49.3	48.7	48.3	47.2	46.3	45.2	43.7
67.5°	42.4	42.1	41.8	41.5	40.3	40.2	39.7	38.7	37.4	36.5	35.3
70°	34.2	34.1	33.5	33.5	32.7	32.3	31.5	30.7	29.5	28.2	27.3
72.5°	27.1	26.8	26.2	25.8	25.1	24.7	24.1	23.3	22.3	21.0	19.8
75°	20.1	19.9	19.8	19.1	18.5	17.9	17.7	16.8	15.8	14.9	13.7
77.5°	14.2	13.9	13.5	13.1	12.8	12.4	12.1	11.2	10.4	9.6	8.7
80°	8.8	8.5	8.2	8.1	7.7	7.6	7.1	6.8	6.0	5.5	4.9
82.5°	4.5	4.5	4.2	4.1	3.9	3.7	3.6	3.3	2.9	2.5	2.1
85°	1.6	1.6	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°	334.6	334.6	334.6	334.6	334.6	334.6	334.6	334.6	334.6	334.6	334.6
2.5°	334.4	334.3	334.4	334.4	334.6	334.6	334.6	334.4	334.6	334.4	334.4
5°	332.4	332.8	333.0	333.4	333.5	333.6	333.6	333.7	333.8	333.8	333.7
7.5°	329.3	330.1	330.8	331.4	331.6	331.8	332.2	332.4	332.7	332.6	332.4
10°	325.2	326.5	327.4	328.5	328.9	329.3	330.0	330.4	330.7	330.8	330.4
12.5°	319.3	321.1	322.7	324.3	325.1	325.5	326.8	327.7	328.2	328.2	327.9
15°	311.9	314.4	316.9	319.0	320.1	321.0	322.8	324.1	324.8	325.2	324.6
17.5°	303.0	306.0	308.8	311.6	312.8	313.9	316.5	318.3	319.9	320.1	319.4
20°	291.7	295.3	298.6	302.0	303.3	305.0	308.1	310.9	313.5	314.5	312.4
22.5°	278.9	282.9	285.9	290.0	291.9	293.8	297.7	301.3	305.7	308.1	304.3
25°	265.7	269.1	272.7	276.7	279.3	281.3	285.8	290.4	296.2	299.8	294.6
27.5°	251.4	254.4	258.8	263.1	265.1	267.7	273.0	278.1	283.7	286.8	282.9
30°	236.6	240.4	244.5	248.5	251.4	253.7	258.2	262.4	267.2	269.8	266.8
32.5°	222.0	225.6	229.1	233.5	235.1	237.2	241.1	244.7	248.3	250.8	247.4
35°	206.6	209.8	213.1	216.1	216.8	219.4	222.4	224.6	226.3	228.2	226.0
37.5°	189.8	192.3	194.0	197.2	198.4	198.8	201.4	202.9	204.7	205.1	205.0
40°	172.8	175.0	176.4	178.4	179.5	179.5	181.2	182.5	183.9	184.0	183.9
42.5°	157.0	158.0	159.2	160.4	160.1	161.7	162.5	163.1	164.0	164.0	164.3
45°	140.9	141.7	142.8	143.0	144.0	144.0	144.7	144.9	145.4	145.0	144.5
47.5°	126.0	126.4	126.5	127.7	127.9	127.0	127.8	127.9	127.8	127.8	127.6
50°	111.9	112.1	112.0	111.6	111.7	112.1	111.7	111.3	111.5	111.5	111.7
52.5°	98.1	97.6	97.3	97.3	96.9	96.9	96.2	95.9	95.8	95.3	95.9
55°	85.5	84.7	83.6	83.3	82.9	82.8	82.1	81.4	81.2	81.3	81.2
57.5°	73.3	72.2	71.5	71.2	70.9	70.1	69.2	68.5	68.4	68.2	68.2
60°	62.3	61.0	60.0	58.8	58.9	58.4	57.5	57.2	56.8	56.3	56.7
62.5°	52.4	51.0	49.7	48.5	47.8	47.4	46.7	46.2	45.8	45.4	45.9
65°	42.4	41.2	39.9	38.8	38.4	38.1	37.4	36.4	36.3	36.3	36.5
67.5°	33.5	32.3	31.0	30.2	29.8	29.3	29.0	28.6	28.1	27.9	28.0
70°	25.8	24.5	23.5	22.7	22.4	22.3	21.4	21.3	21.2	21.0	20.9
72.5°	18.7	17.8	16.9	16.4	15.9	15.5	15.2	14.9	14.8	14.8	14.8
75°	12.9	12.2	11.1	10.5	10.3	9.8	9.5	9.3	9.0	9.1	9.1
77.5°	7.7	7.0	6.3	5.9	5.7	5.4	5.0	4.8	4.3	4.3	4.5
80°	4.2	3.6	3.2	2.7	2.5	2.3	2.0	1.9	1.6	1.5	1.5
82.5°	1.9	1.5	1.3	1.2	1.0	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°	334.6	334.6	334.6	334.6	334.6	334.6	334.6	334.6	334.6	334.6	334.6
2.5°	334.3	334.3	334.2	334.2	334.2	334.0	334.0	333.8	333.7	333.6	333.4
5°	333.5	333.4	333.0	332.9	332.8	332.4	332.1	331.8	331.5	330.9	330.7
7.5°	332.2	331.8	331.4	331.0	330.7	329.9	329.2	328.6	328.0	327.1	326.1
10°	330.1	329.3	328.6	328.1	327.4	326.3	325.1	324.1	322.7	321.4	320.0
12.5°	327.1	326.2	324.7	324.0	323.2	321.5	319.9	317.8	315.9	314.2	312.5
15°	323.3	321.7	319.9	319.0	317.8	315.2	312.6	310.4	308.0	305.8	303.2
17.5°	317.8	315.5	313.0	311.8	310.3	307.3	304.3	301.2	298.3	295.7	292.4
20°	309.6	306.9	303.6	302.0	300.7	296.7	293.8	290.3	287.3	284.1	280.4
22.5°	299.9	296.2	292.6	290.2	288.8	284.8	280.9	277.7	274.6	270.8	268.1
25°	289.1	284.5	280.2	277.6	275.5	271.3	267.5	264.3	260.3	257.0	254.4
27.5°	276.8	271.6	266.5	264.0	262.0	257.4	253.4	250.0	246.1	243.3	240.5
30°	262.2	257.5	252.7	250.7	248.2	243.5	238.8	235.9	231.6	228.6	225.6
32.5°	243.9	240.8	237.0	234.3	233.0	228.6	224.7	221.0	217.4	215.1	212.1
35°	223.8	221.3	218.0	216.5	214.8	212.1	209.0	205.8	203.0	200.7	198.0
37.5°	203.6	201.0	198.9	197.4	196.3	193.9	192.0	189.5	187.5	185.4	183.9
40°	182.5	181.8	179.7	179.0	178.6	175.9	174.3	172.4	171.1	170.0	169.0
42.5°	163.9	162.7	161.1	161.2	160.4	158.9	157.8	156.5	155.7	155.0	154.2
45°	145.5	144.5	143.7	144.4	143.1	142.7	141.7	141.6	141.0	139.9	139.5
47.5°	128.0	127.9	128.0	127.7	127.3	127.1	127.2	126.6	126.0	125.6	125.1
50°	112.0	112.1	112.3	112.7	111.9	112.2	112.1	112.0	112.0	111.6	111.9
52.5°	96.5	96.6	96.9	97.2	97.3	97.3	97.7	97.9	98.5	99.1	99.1
55°	81.9	82.7	83.2	83.9	83.4	84.2	84.6	85.7	86.1	86.1	86.6
57.5°	68.9	69.7	70.1	70.9	71.1	71.7	72.7	73.3	74.2	75.0	75.7
60°	56.9	57.3	58.3	59.4	59.2	60.7	61.4	62.4	63.6	64.1	65.0
62.5°	46.3	46.7	47.6	47.9	48.8	49.5	51.3	52.4	53.3	54.6	55.5
65°	36.8	37.3	38.1	38.8	39.1	40.3	41.1	42.9	43.8	45.2	46.3
67.5°	28.1	28.9	29.5	30.0	30.2	31.4	32.8	33.5	35.1	36.5	37.4
70°	21.0	21.7	22.4	22.3	22.7	23.7	24.6	25.8	27.1	28.2	29.3
72.5°	14.6	15.2	15.8	15.9	16.4	17.0	17.8	18.6	19.7	20.9	22.3
75°	9.3	9.4	9.8	10.2	10.4	11.1	11.7	12.6	13.5	14.5	15.4
77.5°	4.7	5.0	5.3	5.5	5.6	6.2	6.9	7.6	8.4	9.4	10.3
80°	1.8	1.9	2.2	2.3	2.6	3.0	3.5	3.9	4.5	5.3	5.7
82.5°	0.6	0.7	0.8	0.8	1.0	1.3	1.4	1.8	2.1	2.3	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°	334.6	334.6	334.6	334.6	334.6	334.6	334.6	334.6
2.5°	333.2	333.2	333.0	332.9	332.9	332.9	332.8	332.8
5°	330.2	329.9	329.7	329.5	329.3	329.2	328.8	328.8
7.5°	325.3	324.8	324.5	324.1	323.5	323.2	323.2	322.7
10°	318.8	317.8	317.3	316.9	316.2	315.5	315.2	314.9
12.5°	310.9	308.9	308.4	307.6	306.6	306.1	305.1	305.1
15°	301.2	299.1	297.9	297.4	296.1	295.3	294.9	293.9
17.5°	289.8	288.2	286.4	285.7	284.3	283.1	282.7	282.5
20°	278.3	275.6	274.6	273.4	271.8	270.8	270.0	269.1
22.5°	265.0	262.6	261.0	260.3	258.9	257.1	255.8	255.8
25°	251.0	248.9	248.0	246.3	244.7	244.1	242.6	242.4
27.5°	237.7	235.5	233.7	232.9	231.0	230.1	228.9	228.3
30°	223.7	221.3	220.0	219.9	217.6	216.7	215.8	215.2
32.5°	209.8	207.7	206.5	205.7	204.7	203.2	202.3	201.8
35°	196.1	194.7	193.5	192.7	191.1	190.3	189.5	188.9
37.5°	181.7	180.4	179.9	179.2	178.4	177.0	176.8	176.3
40°	167.7	166.2	166.2	165.6	164.9	164.8	164.5	164.5
42.5°	153.3	152.5	152.4	152.5	152.0	151.8	151.5	152.3
45°	138.9	139.3	138.7	138.8	138.6	139.0	139.0	139.5
47.5°	125.6	125.1	125.3	125.6	126.0	126.0	125.9	125.8
50°	111.5	112.0	112.5	111.9	112.1	112.2	111.6	111.7
52.5°	99.3	99.5	99.8	99.5	99.8	99.7	99.9	99.5
55°	87.6	87.6	88.1	88.2	88.3	88.7	88.8	89.3
57.5°	76.1	76.8	77.4	77.3	77.8	78.4	77.9	78.4
60°	66.3	66.8	67.5	67.7	68.1	68.3	68.3	68.5
62.5°	56.3	57.3	57.9	58.3	58.3	58.8	59.3	59.4
65°	47.3	48.4	48.8	49.2	49.4	49.9	50.6	50.4
67.5°	38.8	39.6	40.1	40.3	41.0	41.2	41.8	42.3
70°	30.4	31.4	31.7	32.3	32.9	33.4	34.0	34.2
72.5°	23.3	24.0	24.3	24.7	25.4	25.9	26.1	26.5
75°	16.3	17.6	17.7	18.0	18.5	19.1	19.6	19.4
77.5°	10.8	11.6	11.7	12.3	12.8	13.2	13.4	13.5
80°	6.3	6.9	7.0	7.3	7.6	7.9	8.1	8.4
82.5°	3.0	3.3	3.5	3.5	3.7	4.0	4.0	4.1
85°	1.0	1.0	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)