

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: P843216

Luminaire Tested: **LD4C08DE010B2750 EU4C08B27 4LBLWWH**

Issue Date: 5/7/2024

Test Information

Test Method: LM-79-08
Report Number: P843216
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: LD4C08DE010B2750 EU4C08B27 4LBLWWH
Description: 4in Downlight with BioUp LEDs
Light Source: -
Ballast/Driver:

Summary

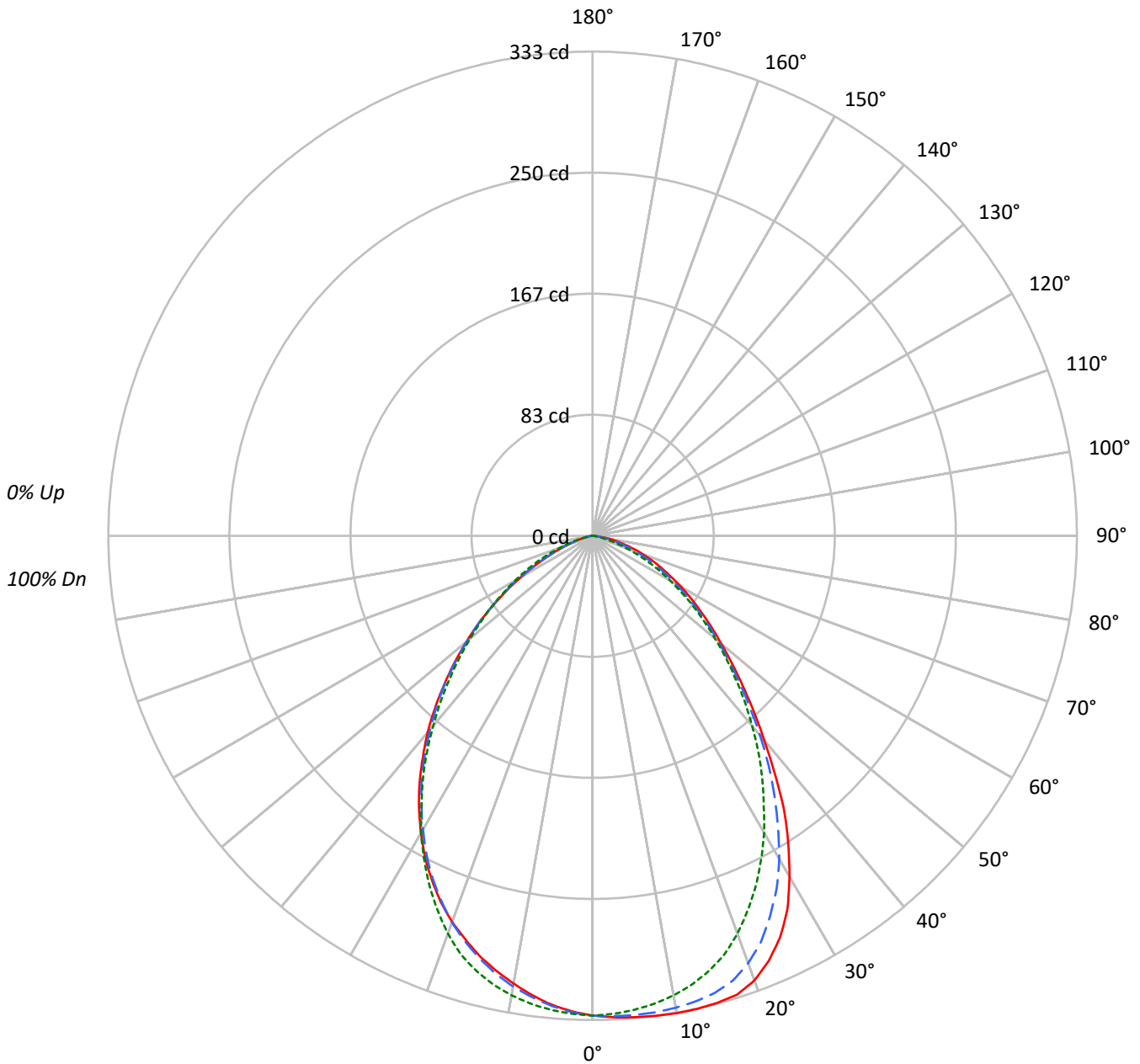
Lumens per Lamp: N/A
Luminaire Lumens: 621.9 lumens
Efficiency: N/A
Efficacy: 64.8 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.09 / 1.17
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P843216

CATALOG NUMBER: LD4C08DE010B2750 EU4C08B27 4LBLWWH

Luminous Intensity Polar Plot





TEST NUMBER: P843216

CATALOG NUMBER: LD4C08DE010B2750 EU4C08B27 4LBLWWH

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°	40542	40542	40542
5°	40992	40364	39920
10°	41591	40032	39009
15°	42277	39390	38080
20°	42542	38058	36947
25°	41317	35990	35434
30°	38415	33465	33479
35°	34375	30490	31135
40°	29429	27344	28322
45°	25331	24115	25001
50°	22037	20986	21616
55°	19384	18056	17906
60°	17249	15062	13882
65°	15116	12064	10029
70°	13003	8513	6789
75°	10538	4937	3987
80°	7570	2193	1910
85°	2819	846	846



TEST NUMBER: P843216

CATALOG NUMBER: LD4C08DE010B2750 EU4C08B27 4LBLWWH

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.1	5.0
10°-20°	88.0	14.2
20°-30°	125.7	20.2
30°-40°	131.5	21.1
40°-50°	110.2	17.7
50°-60°	77.1	12.4
60°-70°	42.0	6.8
70°-80°	14.6	2.3
80°-90°	1.7	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°	244.8	39.4
0°-40°	376.3	60.5
0°-60°	563.6	90.6
0°-90°	621.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	621.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	330	330	330	330	330	
5°	332	331	327	324	324	32
15°	332	325	310	301	299	94
25°	305	289	266	260	261	139
35°	229	218	203	205	208	142
45°	146	143	139	143	144	113
55°	90	88	84	84	84	82
65°	52	48	42	35	34	52
75°	22	18	10	8	8	24
85°	2	1	1	1	1	4
90°	0	0	0	0	0	



TEST NUMBER: P843216

CATALOG NUMBER: LD4C08DE010B2750 EU4C08B27 4LBLWWH

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	330.0	330.0	330.0	330.0	330.0	330.0	330.0	330.0	330.0	330.0	330.0
2.5°	331.5	331.1	331.3	331.3	331.3	331.1	331.3	331.1	331.1	331.0	330.7
5°	332.4	332.1	332.1	332.1	332.0	331.9	331.9	331.8	331.5	331.4	330.8
7.5°	333.0	332.7	332.7	332.6	332.5	332.4	332.3	331.9	331.5	331.3	330.6
10°	333.4	333.0	333.0	332.7	332.5	332.4	332.1	331.7	331.1	330.5	329.6
12.5°	333.2	332.7	332.6	332.4	331.9	331.7	331.4	330.7	329.9	328.9	327.9
15°	332.4	332.1	331.9	331.5	330.8	330.5	330.2	329.2	328.1	326.8	325.4
17.5°	330.8	330.5	330.0	329.5	328.6	328.2	327.5	326.3	324.7	322.9	320.7
20°	325.4	325.1	324.7	323.7	322.4	321.8	321.0	319.3	317.2	315.0	312.7
22.5°	316.4	316.0	315.3	314.5	313.3	312.3	311.6	309.3	306.9	304.6	302.5
25°	304.8	304.5	303.4	302.5	301.2	299.6	298.9	297.1	294.7	291.8	288.6
27.5°	290.0	288.7	288.3	287.3	285.3	284.8	283.7	281.3	279.1	276.6	273.9
30°	270.8	270.8	269.9	269.5	267.7	267.2	265.9	263.5	262.2	258.7	256.6
32.5°	250.2	250.0	249.4	249.0	248.0	247.1	245.8	244.5	241.8	240.0	237.2
35°	229.2	227.7	227.9	227.2	226.5	225.5	225.4	224.0	221.5	220.4	217.9
37.5°	205.2	204.5	205.5	204.3	203.7	203.8	202.9	201.9	201.0	199.2	198.6
40°	183.5	184.0	183.9	182.9	183.4	182.8	181.7	180.9	180.3	179.2	178.8
42.5°	164.1	163.3	163.1	163.1	163.2	163.2	162.7	162.0	162.0	161.0	159.8
45°	145.8	145.8	145.5	146.4	145.2	145.2	144.8	144.7	144.2	143.9	142.6
47.5°	130.1	130.0	129.9	129.7	129.6	129.6	128.8	128.2	128.1	127.3	126.5
50°	115.3	116.0	115.7	115.1	114.9	115.0	114.4	114.1	114.0	112.7	112.8
52.5°	102.8	102.7	102.9	102.6	102.0	102.1	101.5	101.0	100.5	99.8	99.4
55°	90.5	91.2	90.9	90.5	90.3	90.1	89.7	89.1	88.9	87.6	87.5
57.5°	80.2	80.1	79.9	79.2	79.1	78.7	78.7	78.2	77.4	76.7	76.0
60°	70.2	70.2	69.8	69.7	69.2	69.1	69.0	68.4	67.5	66.8	65.9
62.5°	60.5	60.8	60.5	60.2	59.8	59.2	59.0	58.6	57.9	57.2	56.4
65°	52.0	51.9	51.8	51.3	51.2	50.7	50.6	49.7	49.0	48.4	47.5
67.5°	43.9	43.6	43.6	43.3	43.0	42.6	42.4	41.7	40.7	40.2	39.2
70°	36.2	36.0	36.0	36.0	35.3	34.9	34.8	34.4	33.1	32.6	31.6
72.5°	29.1	29.0	28.8	28.5	28.0	28.0	27.5	26.8	26.1	25.5	24.7
75°	22.2	22.4	22.2	21.7	21.6	21.4	20.9	20.3	19.7	18.9	18.0
77.5°	16.3	16.0	15.8	15.8	15.4	15.0	14.8	14.4	13.5	13.1	12.2
80°	10.7	10.6	10.3	10.0	9.9	9.7	9.6	9.1	8.4	8.0	7.2
82.5°	5.8	5.7	5.7	5.6	5.2	5.2	5.1	4.5	4.2	3.9	3.6
85°	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.7	1.5	1.4	1.2
87.5°	0.2	0.1	0.2	0.1	0.2	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



TEST NUMBER: P843216

CATALOG NUMBER: LD4C08DE010B2750 EU4C08B27 4LBLWWH

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	330.0	330.0	330.0	330.0	330.0	330.0	330.0	330.0	330.0	330.0	330.0
2.5°	330.5	330.2	330.1	330.0	329.9	329.8	329.6	329.3	329.2	329.1	328.8
5°	330.5	330.0	329.8	329.3	329.1	328.8	328.5	328.1	327.7	327.3	326.9
7.5°	330.0	329.2	328.7	328.0	327.7	327.3	326.6	326.1	325.4	324.7	323.7
10°	328.7	327.9	326.8	325.8	325.4	324.8	323.7	322.9	321.8	320.9	319.9
12.5°	326.7	325.3	324.1	322.6	321.8	321.2	319.8	318.6	317.3	316.1	314.6
15°	323.6	321.9	320.4	318.5	317.5	316.8	314.8	313.3	311.2	309.7	308.2
17.5°	318.7	316.1	314.1	311.7	310.4	309.6	307.8	305.3	303.4	301.8	300.1
20°	310.2	307.8	305.0	302.3	300.9	299.7	297.2	294.7	292.8	291.1	289.2
22.5°	299.0	295.9	293.9	290.6	289.5	288.1	285.0	282.8	280.6	278.8	277.1
25°	285.5	282.8	280.0	276.9	275.5	273.9	271.4	269.0	267.6	265.5	263.4
27.5°	269.8	267.7	264.2	261.6	260.2	258.9	256.5	254.4	252.4	250.9	248.9
30°	253.3	250.8	247.7	244.9	244.2	242.6	240.5	238.8	236.7	235.9	234.9
32.5°	235.2	232.3	229.9	228.2	226.7	225.4	224.2	221.6	221.3	218.9	218.7
35°	215.3	214.1	211.9	210.5	209.2	208.2	206.3	205.1	203.7	203.3	202.4
37.5°	196.7	195.2	193.1	191.7	190.9	190.8	189.3	188.6	187.6	187.1	186.0
40°	177.2	176.5	174.7	174.5	173.1	173.0	172.2	171.3	170.5	170.5	170.6
42.5°	159.2	158.4	157.6	156.7	156.0	156.0	155.6	155.4	155.0	154.7	155.4
45°	142.3	141.3	140.8	139.8	140.2	139.5	139.2	139.2	138.9	138.8	139.6
47.5°	126.5	125.4	124.9	124.6	124.6	124.8	123.6	124.0	123.8	124.2	124.5
50°	112.2	111.2	110.4	110.4	110.5	110.0	109.6	109.9	109.6	109.8	110.6
52.5°	98.9	97.8	97.5	97.5	96.7	96.6	96.9	96.4	96.5	96.6	97.1
55°	86.5	85.9	85.2	84.6	84.8	84.5	84.0	83.9	84.2	84.3	84.9
57.5°	75.5	74.7	73.7	73.5	73.2	73.2	72.6	72.4	72.8	72.1	72.1
60°	64.9	64.5	63.4	62.9	62.9	62.3	61.8	62.1	61.4	61.3	61.4
62.5°	55.2	54.8	54.0	53.3	53.1	52.8	52.1	51.9	51.6	51.2	50.3
65°	46.7	45.8	44.9	44.4	44.0	43.4	43.0	42.5	41.8	41.5	40.7
67.5°	38.2	37.3	36.4	36.1	35.6	35.3	34.7	34.1	33.1	32.2	31.2
70°	30.7	29.6	29.1	28.0	27.8	27.3	26.4	25.8	24.9	23.7	22.8
72.5°	23.5	22.7	22.0	21.0	20.4	20.1	19.2	18.3	17.2	16.6	15.8
75°	16.9	16.5	15.4	14.5	14.2	13.7	12.8	12.2	11.4	10.4	9.6
77.5°	11.4	10.7	10.0	9.1	8.9	8.4	7.8	7.2	6.8	6.1	5.6
80°	6.8	6.1	5.7	5.1	4.9	4.5	4.2	3.7	3.3	3.1	3.0
82.5°	3.3	2.7	2.6	2.3	2.1	2.0	1.8	1.7	1.4	1.4	1.4
85°	1.2	0.8	0.8	0.7	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	0.2	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



TEST NUMBER: P843216

CATALOG NUMBER: LD4C08DE010B2750 EU4C08B27 4LBLWWH

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	330.0	330.0	330.0	330.0	330.0	330.0	330.0	330.0	330.0	330.0	330.0
2.5°	328.7	328.6	328.5	328.3	328.3	328.2	328.2	328.1	328.1	328.0	328.0
5°	326.4	326.1	325.8	325.5	325.5	325.1	324.9	324.7	324.5	324.5	324.3
7.5°	323.2	322.8	322.3	321.8	321.7	321.1	320.6	320.6	320.0	319.8	319.6
10°	319.1	318.1	317.4	317.1	316.5	316.1	315.5	315.2	314.8	314.1	314.0
12.5°	313.4	312.7	311.6	311.1	310.8	310.1	309.0	308.5	308.4	307.9	307.6
15°	306.9	305.4	304.5	303.9	303.9	302.6	302.1	301.3	300.8	300.4	300.3
17.5°	298.5	297.1	296.1	295.2	295.0	293.9	293.2	293.0	292.3	292.5	291.9
20°	287.7	286.6	285.8	284.7	284.7	284.1	283.8	283.1	282.9	282.6	282.9
22.5°	276.1	274.8	273.5	273.4	273.4	272.4	272.3	272.2	271.7	272.1	272.0
25°	262.6	261.6	260.8	260.7	260.7	260.2	259.6	260.0	260.3	260.2	260.6
27.5°	248.5	247.5	247.3	247.1	246.9	246.7	247.0	247.0	247.4	247.9	248.3
30°	233.3	233.0	232.7	232.5	232.3	232.9	233.1	233.5	233.4	234.2	234.7
32.5°	218.1	217.6	217.4	217.7	218.1	217.9	218.7	218.9	219.1	220.1	220.4
35°	202.6	202.5	202.3	202.3	202.4	203.5	203.5	204.3	204.9	205.1	206.1
37.5°	186.1	186.7	187.0	187.3	187.4	187.8	188.0	189.0	189.5	190.0	190.5
40°	171.1	170.8	172.0	171.2	171.4	172.6	173.1	173.0	173.8	174.5	175.0
42.5°	154.9	155.4	155.6	155.9	156.5	156.6	157.3	158.1	158.4	159.3	159.5
45°	139.4	139.5	140.0	140.5	140.9	141.9	142.1	142.6	143.3	143.3	143.6
47.5°	124.6	125.1	125.1	125.9	126.5	126.4	127.3	127.6	127.4	128.1	128.3
50°	110.5	111.3	111.2	111.7	111.9	112.1	112.8	113.1	112.5	113.2	113.4
52.5°	97.1	97.5	97.9	98.1	97.8	98.5	98.3	98.8	98.6	99.1	98.6
55°	84.8	84.6	84.6	84.9	84.6	84.9	85.1	84.6	84.3	84.8	84.6
57.5°	72.4	72.4	72.2	72.6	72.2	71.8	71.7	71.3	71.0	71.0	70.9
60°	60.9	60.7	60.2	60.1	60.1	59.4	59.1	58.6	58.6	58.2	57.6
62.5°	50.1	49.5	49.1	49.1	48.9	48.2	47.1	46.3	46.1	45.3	45.2
65°	40.0	39.3	38.9	38.2	37.5	37.3	36.2	35.3	34.9	34.2	34.3
67.5°	30.7	29.7	28.6	28.0	27.7	26.8	26.4	25.8	25.4	25.4	25.4
70°	22.1	21.2	20.1	19.7	19.5	18.6	18.3	18.2	18.5	18.4	18.5
72.5°	14.8	14.0	13.4	13.2	12.9	12.6	12.8	12.9	12.7	12.8	12.9
75°	9.0	8.8	8.4	8.2	8.2	8.4	8.2	8.2	8.4	8.4	8.5
77.5°	5.2	5.0	5.0	4.9	5.1	5.0	5.0	5.0	5.1	5.1	5.1
80°	2.7	2.7	2.7	2.7	3.0	2.7	3.0	3.0	3.0	3.0	3.0
82.5°	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.4
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	0.2	0.2	0.2	0.2	0.2	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



TEST NUMBER: P843216

CATALOG NUMBER: LD4C08DE010B2750 EU4C08B27 4LBLWWH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	330.0	330.0	330.0	330.0	330.0	330.0	330.0	330.0
2.5°	327.7	327.7	327.7	327.4	327.5	327.5	327.4	327.4
5°	324.2	324.1	323.7	323.7	323.5	323.7	323.6	323.7
7.5°	319.3	319.3	319.0	319.0	318.8	318.7	318.6	318.7
10°	313.6	313.6	313.4	313.3	313.4	312.8	312.8	312.7
12.5°	307.2	307.0	306.7	306.9	306.7	306.4	306.3	306.4
15°	299.9	299.5	299.6	299.3	299.3	299.1	299.4	299.4
17.5°	291.8	291.5	291.3	291.4	291.2	291.3	291.2	291.1
20°	282.8	282.6	282.6	282.2	282.3	282.2	282.3	282.6
22.5°	272.3	272.2	272.3	272.0	272.2	272.2	272.7	272.7
25°	260.9	260.8	261.0	261.2	261.3	261.7	261.3	261.4
27.5°	248.2	248.6	249.0	249.2	249.6	249.3	249.0	249.4
30°	235.4	235.4	235.3	235.9	236.2	236.6	236.0	236.0
32.5°	220.7	221.4	221.4	221.5	221.9	221.9	221.9	222.3
35°	206.7	207.0	207.1	206.7	206.9	206.8	207.6	207.6
37.5°	190.9	190.9	191.0	191.9	191.9	191.5	191.7	191.7
40°	175.9	176.0	175.6	175.8	176.4	176.2	176.4	176.6
42.5°	159.5	160.4	159.9	160.1	160.0	160.1	160.3	160.3
45°	143.9	144.2	144.2	144.3	144.6	144.8	144.0	143.9
47.5°	128.7	128.8	129.2	128.6	129.3	128.6	129.3	128.4
50°	113.4	113.8	113.5	113.7	113.4	113.4	113.2	113.1
52.5°	98.8	98.6	98.6	98.5	98.5	98.8	98.5	98.9
55°	84.2	84.3	84.0	83.9	83.8	84.2	83.8	83.6
57.5°	70.3	70.5	70.0	70.3	69.4	69.8	69.9	70.0
60°	57.5	57.1	57.1	56.6	56.6	57.0	56.5	56.5
62.5°	44.5	44.8	44.4	44.9	44.9	45.5	45.2	45.5
65°	34.2	34.3	34.4	34.4	34.4	35.1	34.9	34.5
67.5°	25.8	25.9	26.0	25.9	26.2	26.0	26.0	26.1
70°	18.6	18.8	18.9	18.9	18.8	18.9	18.9	18.9
72.5°	12.9	13.1	12.9	13.1	13.2	13.1	13.1	13.2
75°	8.5	8.5	8.4	8.4	8.4	8.4	8.5	8.4
77.5°	5.0	5.1	5.0	5.1	5.1	5.1	5.1	5.1
80°	3.0	3.0	3.0	2.7	3.0	3.0	3.0	2.7
82.5°	1.5	1.5	1.4	1.4	1.5	1.5	1.5	1.5
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)