

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: P843285

Luminaire Tested: **LD4C10DE010B2750 EU4C10B27 4LBDWWLI**

Issue Date: 5/7/2024

Test Information

Test Method: LM-79-08
Report Number: P843285
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: LD4C10DE010B2750 EU4C10B27 4LBLDWWLI
Description: 4in Downlight with BioUp LEDs
Light Source: -
Ballast/Driver:

Summary

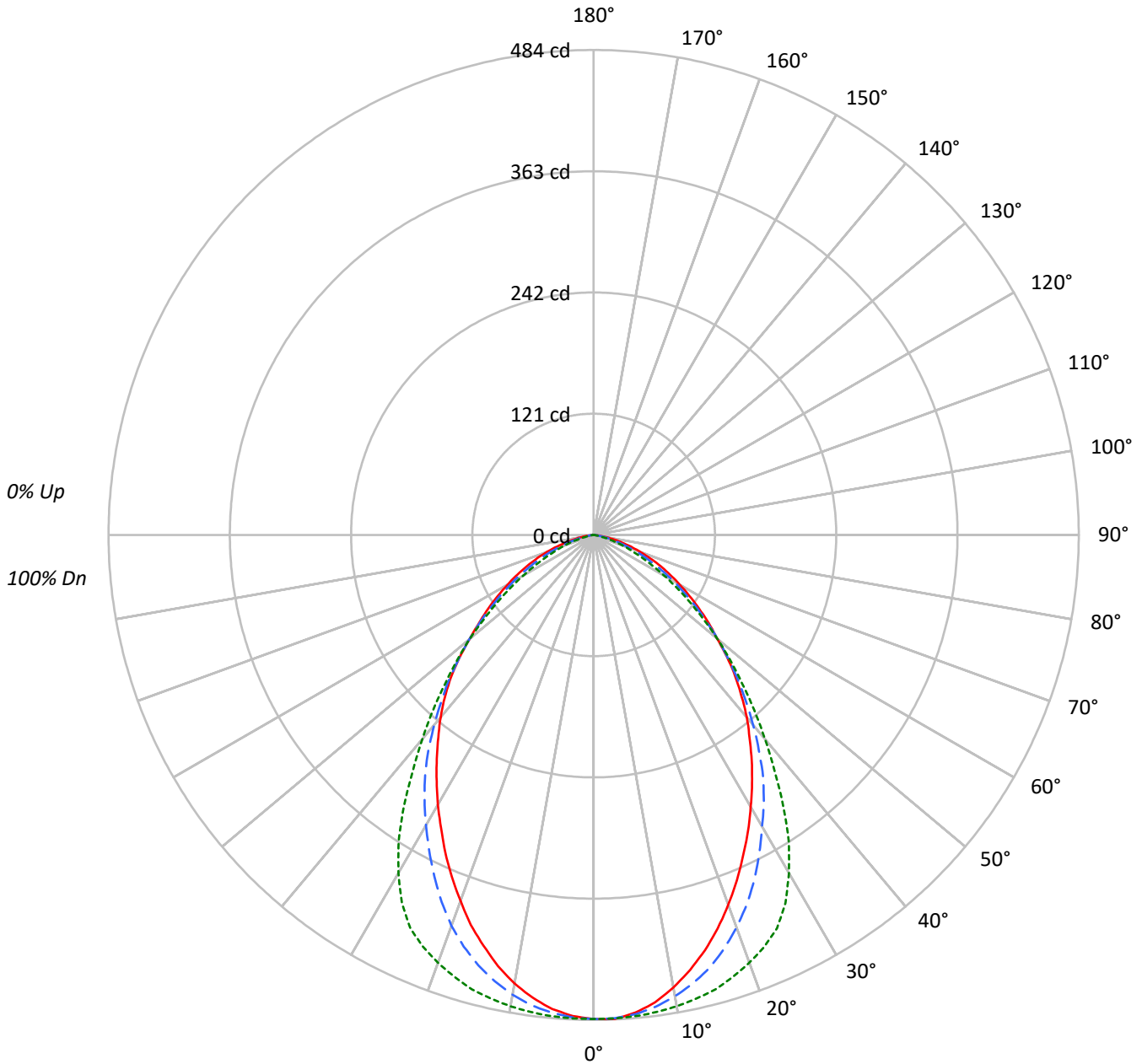
Lumens per Lamp: N/A
Luminaire Lumens: 887.4 lumens
Efficiency: N/A
Efficacy: 66.7 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.19 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 13.3
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°	59351	59351	59351
5°	59010	59454	58566
10°	57210	59592	56711
15°	54576	59727	53978
20°	51354	59394	50792
25°	47837	58681	47444
30°	44444	55254	44076
35°	41229	49432	40929
40°	38121	42627	38073
45°	34731	36381	35009
50°	30657	30771	30848
55°	27480	25146	27587
60°	24300	19976	24325
65°	21366	15232	21163
70°	17709	10920	17709
75°	13813	6266	13291
80°	8985	1556	8561
85°	3242	423	2537



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.4	5.1
10°-20°	125.5	14.1
20°-30°	175.4	19.8
30°-40°	185.0	20.9
40°-50°	157.4	17.7
50°-60°	111.1	12.5
60°-70°	63.0	7.1
70°-80°	22.5	2.5
80°-90°	2.2	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°	346.3	39.0
0°-40°	531.3	59.9
0°-60°	799.8	90.1
0°-90°	887.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	887.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	483	483	483	483	483	
5°	478	480	482	479	475	45
15°	429	447	470	445	424	120
25°	353	379	433	376	350	162
35°	275	295	330	293	273	172
45°	200	203	209	204	202	154
55°	128	124	117	124	129	115
65°	74	63	52	63	73	73
75°	29	20	13	20	28	31
85°	2	1	0	1	2	4
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°	483.1	483.1	483.1	483.1	483.1	483.1	483.1	483.1	483.1	483.1	483.1
2.5°	483.6	482.6	482.6	482.6	482.6	482.6	482.6	482.6	482.6	482.8	482.8
5°	478.5	478.1	477.9	477.9	477.9	477.9	478.1	478.8	479.2	479.7	480.1
7.5°	470.5	469.8	470.1	470.1	470.5	470.9	471.4	472.1	473.2	473.9	474.9
10°	458.6	457.8	458.8	459.1	460.2	460.7	461.7	462.7	464.9	466.0	467.5
12.5°	444.6	444.3	444.6	446.1	447.2	447.9	449.0	451.4	453.5	455.8	458.4
15°	429.1	428.2	428.8	430.6	432.4	433.6	434.6	437.6	440.5	444.1	447.2
17.5°	411.7	410.6	411.9	413.4	415.8	416.8	418.1	421.6	425.5	429.5	432.9
20°	392.8	392.5	393.3	395.3	397.7	399.2	400.2	404.0	407.4	412.9	416.8
22.5°	373.1	373.5	374.2	376.4	378.0	380.0	381.6	385.1	389.0	394.1	399.2
25°	352.9	353.5	354.7	356.1	358.9	359.9	361.9	365.5	369.0	373.7	379.3
27.5°	333.4	333.6	335.0	335.7	338.2	340.6	341.5	345.3	349.2	352.9	357.8
30°	313.3	313.9	314.8	316.8	319.3	320.1	321.3	324.7	327.8	332.3	336.1
32.5°	294.1	293.8	294.9	295.9	298.9	300.5	301.0	305.0	307.7	312.2	315.8
35°	274.9	273.9	275.5	276.7	279.2	280.6	281.3	284.4	286.9	290.7	294.7
37.5°	255.5	256.3	256.9	257.9	259.1	259.4	261.7	262.4	265.6	268.5	270.6
40°	237.7	237.2	236.9	237.8	239.4	240.1	240.3	242.3	243.0	245.9	247.6
42.5°	218.4	218.6	218.4	218.6	219.6	219.6	220.1	221.4	221.9	222.7	224.7
45°	199.9	199.9	199.3	199.5	199.7	199.5	199.7	200.2	201.3	201.3	202.7
47.5°	180.5	180.1	180.9	180.3	180.0	179.8	180.3	179.8	180.9	180.9	181.3
50°	160.4	160.4	161.4	161.2	161.5	160.8	161.0	161.0	161.2	161.0	161.7
52.5°	144.9	144.6	144.2	143.3	143.6	142.9	142.9	143.1	142.6	142.4	141.5
55°	128.3	128.6	128.1	127.8	127.8	127.0	126.8	125.8	125.0	124.5	124.0
57.5°	113.3	113.7	113.5	112.5	111.5	111.7	111.3	110.2	108.6	107.6	106.6
60°	98.9	99.2	98.9	97.9	97.6	96.9	96.7	95.2	93.9	92.5	91.4
62.5°	85.8	85.8	85.7	84.4	83.4	83.7	82.7	81.6	80.1	78.1	76.5
65°	73.5	73.4	72.4	71.9	71.2	70.3	69.7	68.1	66.8	65.3	63.0
67.5°	61.2	60.7	60.4	59.8	58.2	58.0	57.3	55.8	54.0	52.8	51.0
70°	49.3	49.2	48.4	48.4	47.2	46.6	45.6	44.3	42.6	40.8	39.3
72.5°	39.0	38.7	38.0	37.2	36.2	35.7	34.9	33.6	32.2	30.4	28.6
75°	29.1	28.8	28.6	27.6	26.8	25.8	25.5	24.2	22.7	21.5	19.9
77.5°	20.4	20.1	19.6	18.9	18.4	17.9	17.3	16.3	15.0	14.0	12.5
80°	12.7	12.3	12.0	11.7	11.2	11.0	10.3	9.7	8.7	7.9	7.1
82.5°	6.6	6.6	6.1	5.9	5.6	5.4	5.3	4.7	4.1	3.6	3.1
85°	2.3	2.3	2.2	2.0	2.0	1.8	1.8	1.6	1.3	1.3	1.0
87.5°	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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°	483.1	483.1	483.1	483.1	483.1	483.1	483.1	483.1	483.1	483.1	483.1
2.5°	483.0	482.8	483.0	483.0	483.1	483.1	483.1	483.0	483.1	483.0	483.0
5°	480.1	480.6	481.0	481.3	481.5	481.8	481.8	481.9	482.1	482.1	481.9
7.5°	475.6	476.7	477.7	478.5	478.8	479.2	479.7	480.1	480.5	480.3	480.1
10°	469.6	471.4	472.9	474.3	475.0	475.6	476.5	477.2	477.5	477.7	477.2
12.5°	461.1	463.7	466.0	468.3	469.4	470.1	471.9	473.2	473.9	473.9	473.4
15°	450.4	454.0	457.5	460.6	462.4	463.5	466.2	468.0	469.1	469.6	468.7
17.5°	437.6	441.8	445.9	449.9	451.7	453.3	457.1	459.6	462.0	462.4	461.3
20°	421.1	426.4	431.1	436.0	438.0	440.5	444.8	449.0	452.7	454.3	451.2
22.5°	402.7	408.6	412.9	418.8	421.6	424.2	429.8	435.1	441.5	444.8	439.4
25°	383.6	388.5	393.8	399.5	403.3	406.2	412.7	419.4	427.9	432.9	425.4
27.5°	363.0	367.3	373.7	380.0	382.9	386.5	394.3	401.5	409.6	414.2	408.6
30°	341.7	347.1	353.0	358.9	363.0	366.5	372.7	379.0	385.7	389.5	385.4
32.5°	320.6	325.8	330.8	337.2	339.5	342.6	348.2	353.5	358.6	362.1	357.3
35°	298.4	303.0	307.7	312.0	313.2	316.8	321.3	324.4	326.9	329.6	326.3
37.5°	274.1	277.7	280.1	284.7	286.6	287.1	290.7	292.9	295.6	296.1	295.9
40°	249.5	252.8	254.8	257.6	259.1	259.1	261.7	263.7	265.6	265.8	265.6
42.5°	226.5	228.2	229.8	231.6	231.3	233.4	234.6	235.4	236.9	236.9	237.2
45°	203.5	204.8	206.1	206.6	207.9	207.9	208.9	209.2	209.9	209.4	208.7
47.5°	181.9	182.5	182.7	184.3	184.7	183.4	184.5	184.7	184.5	184.5	184.1
50°	161.5	161.9	161.7	161.2	161.4	161.9	161.4	160.7	161.0	161.0	161.4
52.5°	141.6	141.0	140.6	140.6	139.8	139.8	139.0	138.6	138.4	137.7	138.6
55°	123.4	122.4	120.7	120.4	119.8	119.6	118.6	117.6	117.3	117.4	117.3
57.5°	105.9	104.3	103.2	102.8	102.3	101.2	99.9	99.0	98.9	98.5	98.5
60°	90.0	88.2	86.5	84.9	85.1	84.4	83.1	82.6	82.1	81.3	81.9
62.5°	75.5	73.5	71.7	70.1	69.1	68.4	67.6	66.6	66.1	65.6	66.3
65°	61.2	59.7	57.6	56.1	55.4	54.9	54.0	52.6	52.4	52.4	52.8
67.5°	48.4	46.6	44.8	43.7	43.0	42.3	41.9	41.2	40.6	40.3	40.5
70°	37.2	35.4	34.0	32.9	32.4	32.2	30.9	30.7	30.6	30.4	30.1
72.5°	27.1	25.7	24.4	23.7	23.0	22.4	22.0	21.5	21.4	21.4	21.4
75°	18.6	17.6	16.1	15.2	14.8	14.3	13.7	13.3	13.0	13.2	13.2
77.5°	11.2	10.2	9.2	8.5	8.4	7.7	7.2	6.9	6.3	6.3	6.6
80°	6.1	5.3	4.5	4.0	3.6	3.4	2.9	2.7	2.3	2.2	2.2
82.5°	2.7	2.2	1.8	1.6	1.5	1.3	1.1	1.0	1.0	0.7	1.0
85°	1.0	0.7	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
87.5°	0.2	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°	483.1	483.1	483.1	483.1	483.1	483.1	483.1	483.1	483.1	483.1	483.1
2.5°	482.8	482.8	482.6	482.6	482.6	482.3	482.3	482.1	481.9	481.8	481.3
5°	481.5	481.3	481.0	480.8	480.6	480.1	479.5	479.2	478.7	477.9	477.5
7.5°	479.7	479.2	478.5	478.1	477.5	476.3	475.4	474.5	473.6	472.3	470.9
10°	476.7	475.6	474.5	473.7	472.9	471.3	469.4	468.0	466.0	464.2	462.2
12.5°	472.3	471.1	468.8	467.8	466.7	464.4	462.0	458.9	456.3	453.7	451.4
15°	466.9	464.5	462.0	460.6	458.9	455.2	451.5	448.3	444.6	441.6	437.8
17.5°	458.9	455.5	451.9	450.2	448.1	443.8	439.4	434.9	430.8	427.0	422.3
20°	447.1	443.3	438.5	436.0	434.2	428.4	424.2	419.2	414.9	410.2	405.0
22.5°	433.1	427.9	422.6	419.0	417.0	411.2	405.6	401.2	396.4	391.0	387.2
25°	417.3	410.9	404.5	400.9	397.9	391.7	386.4	381.6	375.9	371.1	367.3
27.5°	399.7	392.3	384.9	381.3	378.3	371.7	365.9	361.0	355.4	351.2	347.3
30°	378.5	371.9	364.8	361.9	358.4	351.7	344.9	340.6	334.4	330.1	325.8
32.5°	352.2	347.9	342.3	338.2	336.4	330.1	324.5	319.3	314.0	310.6	306.3
35°	323.2	319.4	314.8	312.6	310.2	306.3	301.7	297.2	293.1	289.8	285.9
37.5°	294.0	290.2	287.3	284.9	283.6	279.8	277.2	273.7	270.9	267.8	265.6
40°	263.7	262.5	259.4	258.4	258.1	254.0	251.7	249.0	247.2	245.4	244.1
42.5°	236.7	234.9	232.6	232.7	231.6	229.5	227.8	226.0	224.7	223.9	222.6
45°	210.2	208.7	207.6	208.6	206.7	206.0	204.8	204.5	203.6	202.0	201.5
47.5°	184.9	184.7	184.9	184.3	183.9	183.6	183.7	182.9	181.9	181.4	180.6
50°	161.7	161.9	162.2	162.8	161.5	162.0	161.9	161.7	161.7	161.2	161.5
52.5°	139.3	139.5	139.8	140.3	140.6	140.6	141.1	141.5	142.3	143.1	143.1
55°	118.1	119.4	120.1	121.1	120.6	121.6	122.2	123.7	124.3	124.3	125.0
57.5°	99.4	100.7	101.2	102.3	102.6	103.5	105.0	105.9	107.1	108.2	109.4
60°	82.2	82.7	84.2	85.8	85.5	87.7	88.7	90.1	91.8	92.5	93.9
62.5°	66.8	67.6	68.6	69.2	70.4	71.6	74.0	75.5	77.0	78.8	80.3
65°	53.1	53.8	54.9	56.1	56.6	58.2	59.4	62.0	63.2	65.3	66.8
67.5°	40.6	41.8	42.6	43.4	43.7	45.4	47.4	48.4	50.8	52.8	54.0
70°	30.4	31.3	32.4	32.2	32.9	34.2	35.6	37.2	39.0	40.8	42.3
72.5°	21.2	22.0	22.7	23.0	23.7	24.5	25.7	27.0	28.3	30.1	32.2
75°	13.3	13.5	14.3	14.6	15.0	16.1	17.0	18.3	19.6	20.9	22.2
77.5°	6.7	7.2	7.6	7.9	8.1	9.0	9.9	11.0	12.1	13.5	14.8
80°	2.5	2.7	3.3	3.4	3.8	4.3	5.1	5.6	6.6	7.6	8.4
82.5°	1.0	1.1	1.3	1.3	1.5	1.8	2.0	2.5	3.1	3.4	3.8
85°	0.3	0.3	0.3	0.3	0.3	0.5	0.5	0.7	1.0	1.1	1.1
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°	483.1	483.1	483.1	483.1	483.1	483.1	483.1	483.1
2.5°	481.2	481.2	481.0	480.8	480.8	480.8	480.6	480.6
5°	476.9	476.3	476.1	475.7	475.6	475.4	474.9	474.9
7.5°	469.8	469.1	468.5	468.0	467.3	466.7	466.7	466.0
10°	460.4	458.9	458.3	457.5	456.6	455.5	455.2	454.6
12.5°	449.0	446.1	445.4	444.1	442.7	442.0	440.7	440.7
15°	434.9	431.8	430.2	429.5	427.7	426.4	425.9	424.4
17.5°	418.5	416.1	413.6	412.5	410.6	408.9	408.1	408.0
20°	401.9	398.1	396.4	394.8	392.5	391.0	389.9	388.5
22.5°	382.7	379.3	376.9	375.9	373.9	371.3	369.5	369.5
25°	362.5	359.4	358.1	355.8	353.5	352.5	350.4	350.0
27.5°	343.1	340.0	337.5	336.2	333.6	332.3	330.5	329.8
30°	323.1	319.4	317.6	317.5	314.2	313.0	311.5	310.7
32.5°	303.0	299.9	298.1	297.1	295.6	293.4	292.2	291.5
35°	283.1	281.1	279.5	278.3	275.9	274.9	273.7	272.9
37.5°	262.4	260.6	259.9	258.7	257.6	255.6	255.3	254.6
40°	242.3	240.0	240.0	239.2	238.2	238.0	237.4	237.4
42.5°	221.4	220.3	220.1	220.3	219.6	219.1	218.6	219.9
45°	200.5	201.1	200.2	200.4	200.0	200.7	200.7	201.5
47.5°	181.4	180.6	181.1	181.4	181.9	181.9	181.8	181.6
50°	161.0	161.7	162.5	161.5	161.9	162.0	161.2	161.4
52.5°	143.4	143.6	144.2	143.6	144.2	144.0	144.4	143.6
55°	126.5	126.5	127.2	127.3	127.6	128.1	128.3	128.8
57.5°	110.0	110.9	111.9	111.7	112.4	113.1	112.5	113.1
60°	95.7	96.5	97.4	97.7	98.3	98.7	98.7	99.0
62.5°	81.3	82.7	83.4	84.2	84.2	84.9	85.7	85.8
65°	68.3	69.9	70.4	71.0	71.4	72.1	73.0	72.8
67.5°	56.1	57.1	57.9	58.2	59.2	59.7	60.4	61.0
70°	43.9	45.4	45.9	46.6	47.5	48.2	49.0	49.3
72.5°	33.6	34.7	35.0	35.7	36.7	37.4	37.8	38.3
75°	23.5	25.3	25.5	26.0	26.8	27.6	28.2	28.0
77.5°	15.5	16.8	17.0	17.7	18.4	19.1	19.4	19.6
80°	9.2	9.9	10.2	10.5	11.0	11.4	11.7	12.1
82.5°	4.3	4.7	5.1	5.1	5.4	5.8	5.8	5.9
85°	1.5	1.5	1.6	1.6	1.8	1.8	2.0	1.8
87.5°	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.2
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)