

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: P843383

Luminaire Tested: **LD4C15DE010B35 EU4C15B35 4LBLDWWLI**

Issue Date: 5/7/2024



Test Information

Test Method: LM-79-08
Report Number: P843383
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: LD4C15DE010B35 EU4C15B35 4LBLDWLI
Description: 4in Downlight with BioUp LEDs
Light Source: -
Ballast/Driver:

Summary

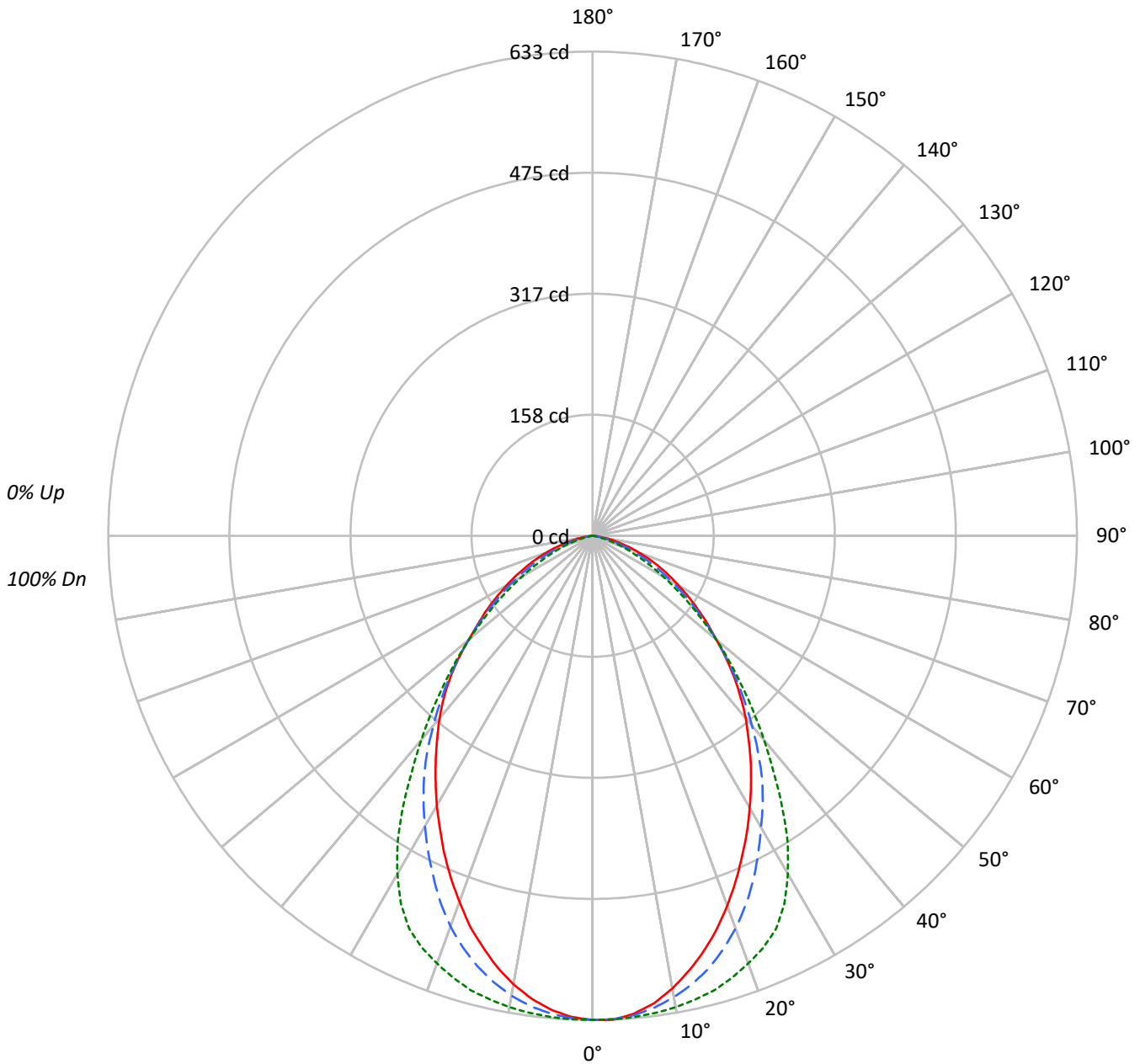
Lumens per Lamp: N/A
Luminaire Lumens: 1162.3 lumens
Efficiency: N/A
Efficacy: 68.4 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.19 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 17
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°	77754	77754	77754
5°	77299	77878	76707
10°	74937	78068	74275
15°	71492	78233	70716
20°	67265	77789	66519
25°	62667	76873	62151
30°	58219	72391	57751
35°	53992	64745	53602
40°	49924	55842	49892
45°	45485	47675	45850
50°	40175	40308	40385
55°	36005	32964	36155
60°	31819	26168	31868
65°	28023	19942	27732
70°	23204	14296	23204
75°	18085	8164	17420
80°	11744	2052	11249
85°	4370	564	3242



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.4	5.1
10°-20°	164.4	14.1
20°-30°	229.8	19.8
30°-40°	242.4	20.9
40°-50°	206.2	17.7
50°-60°	145.5	12.5
60°-70°	82.5	7.1
70°-80°	29.4	2.5
80°-90°	2.8	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°	453.6	39.0
0°-40°	695.9	59.9
0°-60°	1047.6	90.1
0°-90°	1162.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1162.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	633	633	633	633	633	
5°	627	629	632	627	622	59
15°	562	586	615	582	556	158
25°	462	497	567	492	458	213
35°	360	386	432	384	357	225
45°	262	266	274	267	264	201
55°	168	162	154	163	169	151
65°	96	83	69	83	95	95
75°	38	26	17	26	37	41
85°	3	1	0	1	2	5
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°	632.9	632.9	632.9	632.9	632.9	632.9	632.9	632.9	632.9	632.9	632.9
2.5°	633.3	632.1	632.1	632.1	632.1	632.1	632.1	632.1	632.1	632.5	632.5
5°	626.8	626.2	626.0	626.0	626.0	626.0	626.2	627.2	627.7	628.3	628.9
7.5°	616.3	615.3	615.9	615.9	616.3	616.8	617.6	618.4	619.9	620.8	622.0
10°	600.7	599.8	600.9	601.4	602.9	603.5	604.8	606.1	609.0	610.4	612.3
12.5°	582.4	582.0	582.4	584.3	585.8	586.8	588.2	591.2	594.1	597.1	600.4
15°	562.1	561.0	561.6	564.0	566.4	568.1	569.2	573.2	577.0	581.8	585.8
17.5°	539.4	537.7	539.6	541.5	544.6	546.1	547.6	552.2	557.4	562.6	567.1
20°	514.5	514.1	515.3	517.8	520.9	522.8	524.3	529.2	533.7	540.8	546.1
22.5°	488.7	489.3	490.2	493.0	495.2	497.7	499.8	504.4	509.6	516.2	522.8
25°	462.3	462.9	464.6	466.5	470.0	471.5	474.0	478.8	483.3	489.5	496.8
27.5°	436.7	436.9	438.8	439.8	443.0	446.1	447.4	452.3	457.5	462.3	468.6
30°	410.4	411.1	412.3	414.9	418.2	419.4	420.8	425.3	429.3	435.2	440.2
32.5°	385.3	384.9	386.2	387.7	391.4	393.7	394.3	399.5	403.1	409.0	413.7
35°	360.0	358.9	361.0	362.3	365.6	367.5	368.5	372.5	375.9	380.9	386.0
37.5°	334.6	335.6	336.5	337.7	339.4	339.9	342.7	343.6	348.0	351.7	354.5
40°	311.3	310.7	310.3	311.5	313.6	314.5	314.8	317.4	318.3	322.2	324.3
42.5°	286.2	286.4	286.2	286.4	287.6	287.6	288.3	289.9	290.6	291.8	294.4
45°	261.8	261.8	261.0	261.3	261.6	261.3	261.6	262.3	263.7	263.7	265.6
47.5°	236.5	236.0	236.9	236.2	235.7	235.5	236.2	235.5	236.9	236.9	237.4
50°	210.2	210.2	211.3	211.1	211.6	210.7	210.9	210.9	211.1	210.9	211.8
52.5°	189.8	189.3	188.9	187.7	188.2	187.2	187.2	187.4	186.8	186.5	185.3
55°	168.1	168.5	167.8	167.3	167.3	166.4	166.2	164.8	163.8	163.1	162.3
57.5°	148.4	148.9	148.6	147.4	146.1	146.3	145.8	144.4	142.3	140.9	139.6
60°	129.5	130.0	129.5	128.3	127.8	126.8	126.6	124.7	123.1	121.2	119.7
62.5°	112.4	112.4	112.2	110.5	109.4	109.6	108.4	107.0	104.8	102.3	100.2
65°	96.4	96.1	94.9	94.2	93.3	92.1	91.4	89.3	87.6	85.5	82.6
67.5°	80.3	79.5	79.0	78.4	76.3	75.9	75.0	73.1	70.8	69.1	66.7
70°	64.6	64.4	63.5	63.5	61.8	61.0	59.7	58.0	55.8	53.5	51.6
72.5°	51.1	50.7	49.7	48.8	47.4	46.9	45.7	44.0	42.1	39.8	37.4
75°	38.1	37.7	37.4	36.2	35.0	33.8	33.4	31.7	29.8	28.1	26.0
77.5°	26.8	26.2	25.6	24.9	24.1	23.5	22.7	21.3	19.7	18.2	16.3
80°	16.6	16.1	15.7	15.3	14.7	14.5	13.5	12.8	11.3	10.4	9.2
82.5°	8.6	8.6	8.0	7.8	7.3	7.1	6.9	6.1	5.4	4.8	4.0
85°	3.1	3.1	2.9	2.6	2.6	2.3	2.3	2.1	1.7	1.7	1.2
87.5°	0.2	0.2	0.4	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°	632.9	632.9	632.9	632.9	632.9	632.9	632.9	632.9	632.9	632.9	632.9
2.5°	632.7	632.5	632.7	632.7	632.9	632.9	632.9	632.7	632.9	632.7	632.7
5°	628.9	629.6	630.0	630.6	630.8	631.0	631.0	631.2	631.5	631.5	631.2
7.5°	622.9	624.3	625.8	626.8	627.2	627.7	628.3	628.9	629.3	629.1	628.9
10°	615.1	617.6	619.4	621.3	622.2	622.9	624.1	625.1	625.6	625.8	625.1
12.5°	604.0	607.3	610.4	613.4	614.9	615.9	618.2	619.9	620.8	620.8	620.1
15°	590.1	594.8	599.3	603.3	605.7	607.1	610.7	613.0	614.4	615.1	614.0
17.5°	573.2	578.7	584.1	589.3	591.7	593.9	598.8	602.1	605.2	605.7	604.2
20°	551.7	558.5	564.7	571.1	573.8	577.0	582.8	588.2	592.9	595.0	591.0
22.5°	527.5	535.2	540.8	548.6	552.2	555.7	563.1	570.0	578.2	582.8	575.6
25°	502.5	508.8	515.7	523.3	528.3	532.1	540.6	549.3	560.4	567.1	557.2
27.5°	475.5	481.2	489.5	497.7	501.5	506.3	516.4	525.9	536.5	542.5	535.2
30°	447.6	454.7	462.5	470.0	475.5	480.0	488.3	496.3	505.3	510.3	504.8
32.5°	419.9	426.8	433.3	441.7	444.7	448.8	456.1	462.9	469.8	474.3	467.9
35°	390.8	396.9	403.1	408.8	410.2	414.9	420.8	424.9	428.1	431.7	427.5
37.5°	359.1	363.8	366.9	373.0	375.4	376.1	380.9	383.7	387.2	387.9	387.7
40°	326.8	331.1	333.7	337.5	339.4	339.4	342.7	345.3	348.0	348.2	348.0
42.5°	296.8	298.9	301.1	303.4	302.9	305.8	307.2	308.4	310.3	310.3	310.7
45°	266.5	268.1	270.0	270.5	272.4	272.4	273.6	274.0	275.0	274.4	273.4
47.5°	238.4	239.0	239.2	241.5	241.9	240.2	241.7	241.9	241.7	241.7	241.1
50°	211.6	212.1	211.8	211.1	211.3	212.1	211.3	210.4	210.9	210.9	211.3
52.5°	185.5	184.7	184.1	184.1	183.2	183.2	182.0	181.5	181.3	180.3	181.5
55°	161.6	160.2	158.1	157.6	157.0	156.6	155.3	154.1	153.6	153.9	153.6
57.5°	138.7	136.5	135.2	134.6	134.0	132.5	130.9	129.7	129.5	129.0	129.0
60°	117.8	115.5	113.4	111.3	111.5	110.5	108.8	108.2	107.5	106.5	107.2
62.5°	98.9	96.4	93.9	91.8	90.4	89.7	88.5	87.4	86.6	85.9	86.8
65°	80.3	78.1	75.5	73.4	72.7	71.9	70.8	68.9	68.6	68.6	69.1
67.5°	63.5	61.0	58.7	57.3	56.4	55.4	54.9	53.9	53.3	52.8	53.0
70°	48.8	46.4	44.5	43.0	42.4	42.1	40.5	40.2	40.0	39.8	39.6
72.5°	35.5	33.6	31.9	31.0	30.0	29.3	28.9	28.1	27.9	27.9	27.9
75°	24.3	23.0	21.0	19.9	19.5	18.7	18.0	17.6	17.0	17.2	17.2
77.5°	14.7	13.2	12.1	11.1	10.9	10.2	9.5	9.0	8.2	8.2	8.6
80°	8.0	6.9	5.9	5.2	4.8	4.5	3.8	3.6	3.1	2.9	2.9
82.5°	3.6	2.9	2.3	2.1	1.9	1.7	1.4	1.2	1.2	1.0	1.2
85°	1.2	1.0	0.7	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
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°	632.9	632.9	632.9	632.9	632.9	632.9	632.9	632.9	632.9	632.9	632.9
2.5°	632.5	632.5	632.1	632.1	632.1	631.7	631.7	631.5	631.2	631.0	630.6
5°	630.8	630.6	630.0	629.8	629.6	628.9	628.1	627.7	627.0	626.0	625.6
7.5°	628.3	627.7	626.8	626.2	625.6	623.9	622.7	621.6	620.3	618.7	616.8
10°	624.3	622.9	621.6	620.6	619.4	617.2	614.9	613.0	610.4	608.0	605.4
12.5°	618.7	617.0	614.2	612.8	611.3	608.2	605.2	601.2	597.7	594.3	591.2
15°	611.6	608.5	605.2	603.3	601.2	596.2	591.4	587.2	582.4	578.4	573.4
17.5°	601.2	596.7	592.0	589.8	587.0	581.3	575.6	569.6	564.2	559.3	553.1
20°	585.5	580.5	574.4	571.1	568.8	561.2	555.7	549.1	543.4	537.3	530.4
22.5°	567.3	560.4	553.6	548.9	546.3	538.7	531.4	525.4	519.3	512.2	507.2
25°	546.7	538.2	530.0	525.2	521.2	513.2	506.1	499.8	492.3	486.2	481.2
27.5°	523.5	513.8	504.2	499.4	495.6	486.8	479.3	472.9	465.6	460.1	454.9
30°	495.8	487.0	477.8	474.0	469.6	460.6	451.8	446.1	438.1	432.5	426.8
32.5°	461.3	455.6	448.2	443.0	440.7	432.5	425.1	418.2	411.3	406.9	401.2
35°	423.4	418.5	412.3	409.4	406.3	401.2	395.2	389.3	383.9	379.6	374.4
37.5°	385.1	380.1	376.3	373.2	371.3	366.6	363.1	358.5	354.8	350.7	348.0
40°	345.3	343.9	339.9	338.4	338.0	332.7	329.7	326.2	323.7	321.4	319.7
42.5°	310.1	307.7	304.6	304.8	303.4	300.6	298.5	296.1	294.4	293.3	291.6
45°	275.3	273.4	271.9	273.1	270.8	269.8	268.1	267.9	266.7	264.6	263.9
47.5°	242.1	241.9	242.1	241.5	240.9	240.5	240.7	239.6	238.4	237.7	236.7
50°	211.8	212.1	212.6	213.2	211.6	212.3	212.1	211.8	211.8	211.1	211.6
52.5°	182.4	182.8	183.2	183.9	184.1	184.1	184.9	185.3	186.2	187.4	187.4
55°	154.8	156.4	157.4	158.5	157.9	159.3	160.0	162.1	162.9	162.9	163.8
57.5°	130.2	131.8	132.5	134.0	134.4	135.6	137.5	138.7	140.3	141.7	143.2
60°	107.7	108.4	110.3	112.4	111.9	114.8	116.2	118.1	120.3	121.2	123.1
62.5°	87.6	88.5	89.9	90.6	92.3	93.7	97.1	98.9	100.8	103.2	105.1
65°	69.6	70.5	71.9	73.4	74.0	76.3	77.8	81.2	82.8	85.5	87.6
67.5°	53.3	54.7	55.8	56.8	57.3	59.4	62.0	63.5	66.5	69.1	70.8
70°	39.8	40.9	42.4	42.1	43.0	44.7	46.6	48.8	51.1	53.5	55.4
72.5°	27.7	28.9	29.8	30.0	31.0	32.2	33.6	35.2	37.1	39.6	42.1
75°	17.6	17.8	18.7	19.1	19.7	21.0	22.2	23.9	25.6	27.5	29.1
77.5°	8.8	9.5	9.9	10.4	10.7	11.8	13.0	14.5	15.9	17.8	19.5
80°	3.3	3.6	4.2	4.5	5.0	5.7	6.7	7.3	8.6	9.9	10.9
82.5°	1.2	1.4	1.7	1.7	1.9	2.3	2.6	3.3	4.0	4.5	5.0
85°	0.4	0.4	0.4	0.4	0.4	0.7	0.7	1.0	1.2	1.4	1.4
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°	632.9	632.9	632.9	632.9	632.9	632.9	632.9	632.9
2.5°	630.2	630.2	630.0	629.8	629.8	629.8	629.6	629.6
5°	624.6	623.9	623.7	623.2	622.9	622.7	622.0	622.0
7.5°	615.3	614.4	613.7	613.0	612.1	611.3	611.3	610.4
10°	603.1	601.2	600.2	599.3	598.1	596.7	596.2	595.4
12.5°	588.2	584.3	583.4	581.8	579.9	578.9	577.3	577.3
15°	569.6	565.6	563.5	562.6	560.2	558.5	557.9	556.0
17.5°	548.2	545.1	541.7	540.3	537.7	535.6	534.6	534.4
20°	526.4	521.4	519.3	517.2	514.1	512.2	510.7	508.8
22.5°	501.3	496.8	493.7	492.3	489.7	486.4	484.0	484.0
25°	474.8	470.8	469.1	466.0	462.9	461.8	458.9	458.5
27.5°	449.5	445.5	442.1	440.5	436.9	435.2	432.9	431.9
30°	423.2	418.5	416.1	415.9	411.6	409.9	408.0	407.1
32.5°	396.9	392.9	390.5	389.1	387.2	384.3	382.8	381.8
35°	370.9	368.3	366.2	364.5	361.4	360.0	358.5	357.4
37.5°	343.6	341.3	340.3	339.0	337.5	335.0	334.4	333.5
40°	317.4	314.3	314.3	313.4	311.9	311.7	311.1	311.1
42.5°	289.9	288.5	288.3	288.5	287.6	287.1	286.4	288.0
45°	262.7	263.5	262.3	262.5	262.0	262.9	262.9	263.9
47.5°	237.7	236.7	237.1	237.7	238.4	238.4	238.1	237.9
50°	210.9	211.8	212.8	211.6	212.1	212.3	211.1	211.3
52.5°	187.9	188.2	188.9	188.2	188.9	188.7	189.1	188.2
55°	165.6	165.6	166.6	166.9	167.1	167.8	168.1	168.8
57.5°	144.2	145.3	146.5	146.3	147.2	148.2	147.4	148.2
60°	125.4	126.4	127.6	128.1	128.7	129.2	129.2	129.7
62.5°	106.5	108.4	109.4	110.3	110.3	111.3	112.2	112.4
65°	89.5	91.6	92.3	93.0	93.5	94.4	95.6	95.4
67.5°	73.4	74.8	75.7	76.3	77.6	78.1	79.0	80.0
70°	57.5	59.4	60.1	61.0	62.3	63.2	64.1	64.6
72.5°	44.0	45.5	45.9	46.9	48.0	49.0	49.5	50.1
75°	30.8	33.1	33.4	34.1	35.0	36.2	36.9	36.7
77.5°	20.3	22.0	22.2	23.2	24.1	25.1	25.3	25.6
80°	12.1	13.0	13.2	13.7	14.5	14.9	15.3	15.9
82.5°	5.7	6.1	6.7	6.7	7.1	7.6	7.6	7.8
85°	1.9	1.9	2.1	2.1	2.3	2.3	2.6	2.3
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)