

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: P843315

Luminaire Tested: **LD4C10DE010B35 EU4C10B35 4LBLWWLI**

Issue Date: 5/7/2024

Test Information

Test Method: LM-79-08
Report Number: P843315
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2107-320-1)
Test Lab: INNOVATION CENTER
Issue Date: 5/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C10DE010B35 EU4C10B35 4LBLWWLI
Description: 4in Downlight with BioUp LEDs
Light Source: -
Ballast/Driver:

Summary

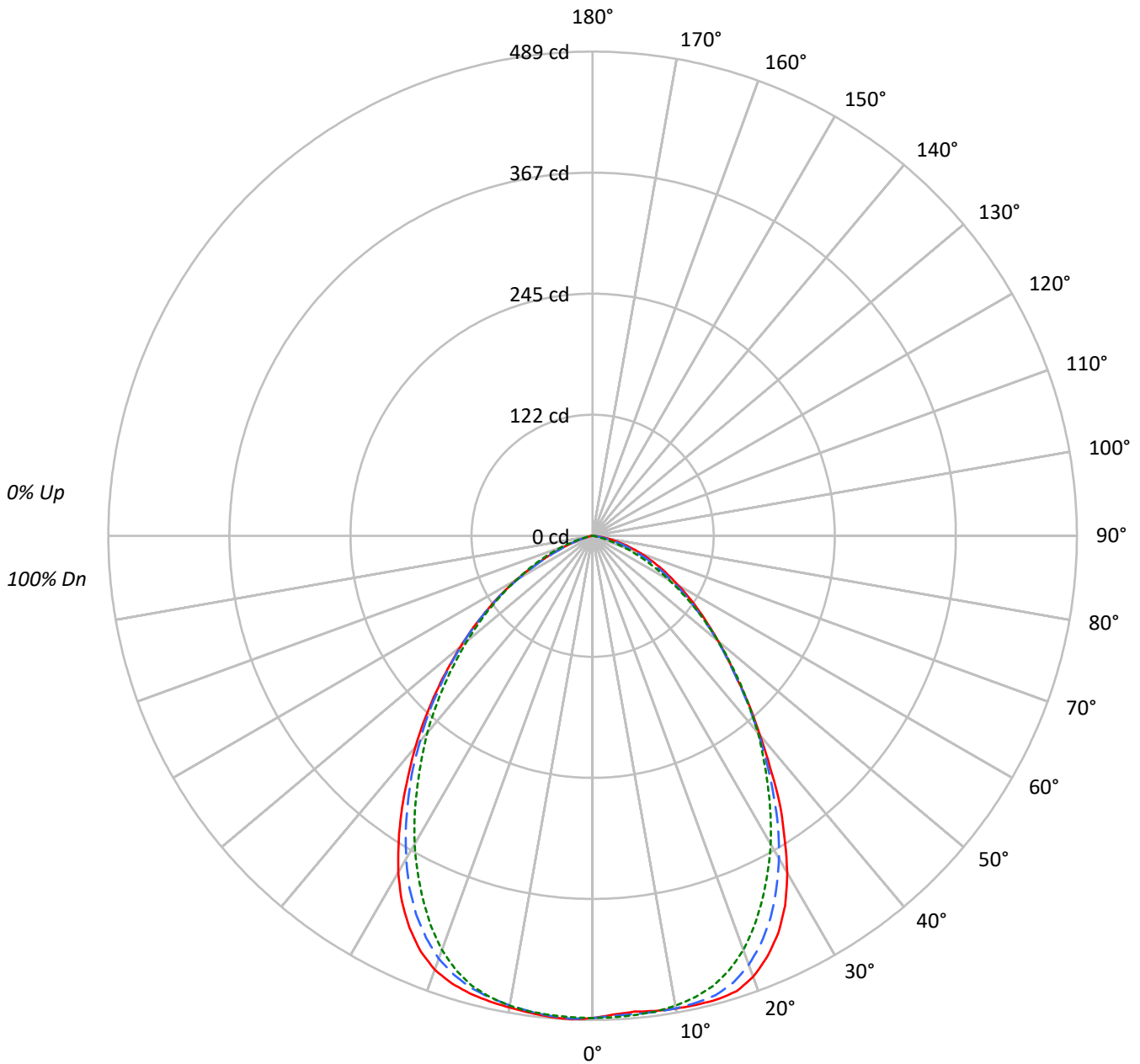
Lumens per Lamp: N/A
Luminaire Lumens: 933.9 lumens
Efficiency: N/A
Efficacy: 70.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.12 / 1.18
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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				
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			
1	111	107	104	101	109	105	102	99	101	99	96	97	95	93	94	92	91	89			
2	103	96	91	86	101	95	89	85	91	87	83	88	84	81	85	82	80	78			
3	95	87	80	74	93	85	79	74	82	77	72	80	75	71	77	73	70	68			
4	88	78	71	65	86	77	70	65	75	69	64	72	67	63	70	66	62	60			
5	82	71	63	57	80	70	63	57	68	61	57	66	60	56	64	59	55	54			
6	76	65	57	51	75	64	56	51	62	56	51	61	55	50	59	54	50	48			
7	71	59	51	46	70	59	51	46	57	50	46	56	50	45	54	49	45	43			
8	67	55	47	42	65	54	47	42	53	46	41	52	46	41	50	45	41	39			
9	63	51	43	38	61	50	43	38	49	42	38	48	42	38	47	41	37	36			
10	59	47	40	35	58	46	39	35	45	39	35	45	39	35	44	38	34	33			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	59842	59842	59842
5°	59503	59923	60145
10°	60491	60129	60366
15°	61673	59854	60859
20°	61983	58191	60963
25°	60091	54954	59264
30°	55765	50998	55665
35°	49372	46253	50317
40°	42098	41665	44632
45°	36156	36590	38866
50°	31574	31631	33313
55°	27887	26731	27609
60°	24448	21794	21696
65°	21657	16919	15029
70°	18463	11638	8944
75°	14905	6266	4082
80°	10259	1556	1061
85°	3101	423	423



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.3	5.0
10°-20°	134.0	14.4
20°-30°	193.6	20.7
30°-40°	200.2	21.4
40°-50°	165.4	17.7
50°-60°	114.2	12.2
60°-70°	59.8	6.4
70°-80°	18.8	2.0
80°-90°	1.6	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°	374.0	40.0
0°-40°	574.1	61.5
0°-60°	853.7	91.4
0°-90°	933.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	933.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	487	487	487	487	487	
5°	482	485	486	487	488	46
15°	485	480	471	473	478	137
25°	443	425	405	422	437	202
35°	329	318	308	324	336	204
45°	208	207	211	220	224	162
55°	130	126	125	128	129	117
65°	74	68	58	48	52	74
75°	31	25	13	9	9	34
85°	2	1	0	0	0	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°	487.1	487.1	487.1	487.1	487.1	487.1	487.1	487.1	487.1	487.1	487.1
2.5°	484.0	484.2	484.2	484.6	484.6	484.6	484.7	484.7	484.9	485.1	485.2
5°	482.5	482.5	482.9	483.1	483.4	483.7	484.0	484.2	484.6	484.7	484.9
7.5°	484.0	484.0	484.2	484.4	484.4	484.6	484.6	484.7	484.9	485.1	485.1
10°	484.9	484.9	484.9	484.9	485.1	485.1	485.1	484.9	484.9	484.9	484.7
12.5°	485.2	485.2	485.1	484.9	485.1	484.9	484.9	484.4	484.0	483.7	483.1
15°	484.9	484.9	484.7	484.6	484.4	484.0	483.9	482.9	482.2	481.1	480.4
17.5°	482.5	482.2	481.9	481.4	480.7	480.2	479.8	478.2	476.9	475.1	473.1
20°	474.1	473.7	473.2	472.3	471.4	470.6	469.6	467.2	465.9	463.1	461.1
22.5°	460.4	460.1	460.2	458.6	456.8	455.6	454.9	452.9	450.8	447.3	445.1
25°	443.3	442.1	442.1	439.6	438.6	437.9	437.0	434.6	431.3	428.2	425.3
27.5°	420.9	419.5	418.7	418.3	416.2	414.5	413.2	411.4	408.7	405.9	401.9
30°	393.1	392.9	392.0	390.4	388.7	387.9	386.5	383.4	380.9	378.8	376.3
32.5°	360.3	360.1	360.1	360.1	359.1	358.9	356.7	355.0	353.0	350.0	348.3
35°	329.2	329.0	329.2	326.5	325.8	325.2	325.0	324.0	321.2	319.7	318.2
37.5°	294.1	294.7	294.3	293.6	294.6	292.9	294.1	291.8	290.6	290.3	288.6
40°	262.5	264.0	262.5	262.7	263.6	262.0	262.0	261.6	260.8	260.5	260.1
42.5°	235.4	233.6	234.7	233.7	234.7	234.2	233.2	233.7	233.9	233.2	233.0
45°	208.1	208.6	208.9	208.4	208.4	207.8	209.3	208.4	208.4	208.6	207.3
47.5°	186.0	185.5	185.8	185.5	185.6	185.3	185.6	185.8	185.5	185.5	184.3
50°	165.2	164.8	166.0	165.0	165.0	164.8	165.0	164.7	164.0	164.0	164.5
52.5°	147.1	146.4	146.2	147.1	145.7	145.7	146.0	145.6	144.9	144.5	143.6
55°	130.2	130.1	130.2	129.6	129.1	129.1	128.2	127.9	127.7	126.8	126.2
57.5°	114.5	113.9	114.1	113.9	113.3	113.1	112.3	112.3	111.6	110.8	109.9
60°	99.5	99.5	100.1	99.3	98.8	98.4	98.0	97.7	96.4	95.1	94.0
62.5°	86.2	86.3	86.2	85.6	85.2	84.8	84.5	83.4	82.3	81.5	80.3
65°	74.5	74.2	73.7	73.4	72.4	72.4	71.7	71.2	69.9	68.7	67.5
67.5°	62.4	62.0	62.0	62.0	60.9	60.7	60.4	59.2	58.2	56.7	55.6
70°	51.4	51.7	51.2	50.7	50.1	49.9	49.4	48.3	47.0	45.6	44.6
72.5°	40.9	41.4	40.8	40.6	39.6	39.1	38.9	38.1	36.6	35.6	34.2
75°	31.4	31.6	31.3	30.9	30.1	30.0	29.1	28.3	27.4	26.0	24.6
77.5°	22.6	22.3	22.3	21.6	20.8	20.8	20.6	19.6	18.3	17.2	16.1
80°	14.5	14.3	13.7	13.3	12.8	12.6	12.5	11.5	10.6	9.8	9.1
82.5°	7.3	7.1	7.0	6.8	6.5	6.0	6.2	5.5	5.1	4.4	3.8
85°	2.2	2.3	2.3	2.2	2.0	2.0	2.0	1.8	1.5	1.3	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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	487.1	487.1	487.1	487.1	487.1	487.1	487.1	487.1	487.1	487.1	487.1
2.5°	485.5	485.7	485.9	486.0	486.0	486.2	486.4	486.6	486.7	486.7	486.9
5°	485.1	485.5	485.5	485.7	485.7	485.7	485.9	485.9	485.9	485.9	486.0
7.5°	485.2	485.2	485.2	485.1	485.1	484.9	484.9	484.9	484.6	484.6	484.6
10°	484.4	484.2	484.0	483.7	483.4	483.2	482.9	482.5	482.2	482.0	481.6
12.5°	482.5	481.9	481.1	480.4	480.0	479.8	479.1	478.5	477.9	477.4	477.1
15°	478.9	477.8	476.5	475.1	474.7	474.3	473.1	471.9	471.2	470.6	469.7
17.5°	471.6	469.4	467.9	465.7	464.8	464.4	462.4	461.3	460.1	459.6	458.9
20°	458.6	456.6	453.8	451.8	450.8	449.6	448.0	446.5	445.1	445.1	444.1
22.5°	442.3	439.8	436.3	433.7	433.5	431.3	429.8	428.2	427.7	426.5	426.5
25°	421.8	419.7	415.8	413.5	412.5	411.9	409.5	407.4	406.2	405.4	406.1
27.5°	399.2	395.9	392.9	390.2	389.2	388.2	385.9	385.1	383.1	382.9	382.7
30°	373.1	369.9	366.9	365.6	363.8	362.9	361.3	360.1	359.5	359.5	359.1
32.5°	346.0	343.0	341.5	338.8	337.8	336.5	335.5	334.4	334.7	334.4	334.5
35°	316.4	315.7	313.0	311.4	311.4	311.2	309.4	308.6	308.2	308.4	309.4
37.5°	288.4	286.3	284.4	283.3	284.3	283.1	283.0	283.0	284.1	283.3	284.8
40°	258.7	258.5	257.7	258.1	258.3	257.0	257.3	257.5	258.3	259.8	260.0
42.5°	232.7	232.5	232.5	232.5	232.2	231.4	232.2	233.4	233.2	234.4	235.2
45°	207.6	207.3	207.9	207.4	208.6	208.9	208.4	208.7	209.8	210.6	212.1
47.5°	184.8	184.8	185.0	185.3	184.2	185.1	185.5	186.2	186.8	187.1	187.8
50°	163.5	163.5	163.2	163.2	163.2	163.7	163.0	163.9	164.0	165.5	166.5
52.5°	143.9	143.0	143.6	143.2	142.5	142.1	142.5	142.7	143.7	144.2	145.2
55°	125.3	125.3	123.8	123.4	124.1	123.8	123.6	123.6	124.2	124.8	125.6
57.5°	108.8	107.8	106.6	106.5	105.9	106.1	106.1	105.9	105.6	105.8	105.9
60°	93.3	92.5	91.0	91.0	90.7	90.5	89.6	89.5	88.5	88.7	88.0
62.5°	79.0	78.7	76.5	75.7	75.7	75.2	74.2	74.0	72.8	72.8	72.0
65°	66.2	65.2	63.9	62.5	62.5	61.9	61.2	59.7	58.7	58.2	57.1
67.5°	54.5	52.9	51.6	50.4	49.7	49.6	48.3	47.2	45.7	44.8	43.2
70°	43.2	41.9	40.6	39.6	38.8	38.1	36.8	35.1	34.1	32.4	31.3
72.5°	32.6	31.4	30.4	28.9	28.0	27.4	26.1	24.6	22.8	21.8	20.3
75°	23.4	22.1	20.6	19.4	18.8	18.3	16.8	15.8	14.5	13.2	11.7
77.5°	15.2	13.7	12.6	11.2	11.0	10.6	9.1	8.0	7.1	6.5	5.5
80°	8.0	7.3	6.5	5.5	5.1	4.5	3.8	3.3	2.7	2.2	1.8
82.5°	3.5	3.0	2.3	2.0	1.8	1.7	1.3	1.1	1.0	1.0	0.7
85°	1.0	0.7	0.7	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3
87.5°	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.0	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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	487.1	487.1	487.1	487.1	487.1	487.1	487.1	487.1	487.1	487.1	487.1
2.5°	487.1	487.3	487.5	487.5	487.7	487.9	487.9	488.0	488.2	488.4	488.4
5°	486.2	486.2	486.2	486.4	486.4	486.4	486.4	486.7	486.7	486.9	487.1
7.5°	484.4	484.4	484.4	484.4	484.2	484.4	484.2	484.2	484.6	484.7	484.9
10°	481.4	481.2	481.2	481.1	481.1	481.1	481.2	481.4	481.6	481.9	482.4
12.5°	476.9	476.7	476.7	476.5	476.5	476.7	476.9	477.2	477.9	478.4	479.1
15°	469.6	469.4	469.6	469.7	470.1	470.6	471.2	471.7	472.9	473.7	474.7
17.5°	458.9	459.1	459.3	459.6	460.2	460.9	462.4	463.9	465.1	466.6	468.1
20°	444.3	445.1	445.3	446.5	446.9	448.5	450.1	452.3	454.4	456.2	458.2
22.5°	426.8	427.3	428.0	429.5	430.5	432.6	434.6	437.2	439.3	441.8	444.6
25°	406.8	407.0	409.2	409.2	411.4	413.2	415.5	418.3	421.7	424.7	426.8
27.5°	384.1	385.1	386.7	387.4	389.1	392.0	394.0	397.4	400.6	403.4	405.5
30°	360.3	361.1	363.8	364.1	365.5	368.1	370.8	373.9	376.4	379.6	381.6
32.5°	335.3	337.3	339.0	340.2	340.6	344.5	346.0	348.1	351.0	354.1	356.1
35°	310.9	311.9	314.2	315.0	316.1	318.2	321.2	323.0	324.5	326.5	328.9
37.5°	285.1	287.9	288.4	290.6	291.1	293.1	294.6	296.7	298.6	300.4	300.7
40°	261.2	262.1	264.1	264.7	265.0	267.8	269.6	270.2	271.1	272.8	274.9
42.5°	236.9	237.8	240.0	239.4	241.1	242.4	243.3	245.5	246.4	247.0	247.0
45°	212.9	213.3	214.7	215.4	216.4	217.1	218.8	219.9	220.2	221.9	222.4
47.5°	190.1	190.4	191.5	192.8	192.4	193.3	195.1	195.8	195.9	197.0	197.6
50°	167.5	168.5	170.0	169.5	170.7	171.2	172.8	173.2	173.2	173.5	173.6
52.5°	146.5	147.2	147.6	148.0	148.5	149.4	150.2	149.8	150.5	151.2	150.7
55°	125.6	126.2	127.1	127.4	127.4	127.7	127.3	128.9	128.2	128.1	128.2
57.5°	106.6	105.9	105.8	106.6	107.0	106.8	106.3	107.0	107.0	106.6	106.1
60°	88.2	87.6	87.5	87.6	86.9	86.3	86.7	86.3	85.5	85.0	85.2
62.5°	71.4	70.8	69.3	69.3	69.0	68.7	67.3	67.5	66.7	65.7	66.0
65°	55.8	54.4	53.6	53.4	52.1	51.1	50.7	49.4	48.3	48.1	48.3
67.5°	41.9	40.2	38.9	38.4	37.7	36.8	35.5	34.4	34.8	34.6	35.3
70°	29.1	28.0	26.8	25.8	26.1	25.1	24.3	24.3	24.5	24.6	25.1
72.5°	19.4	17.9	17.3	16.8	16.5	15.8	16.1	16.1	15.9	16.1	15.8
75°	11.0	10.3	9.7	9.5	9.1	9.1	9.1	9.1	9.0	8.8	8.8
77.5°	5.0	4.5	4.4	4.2	4.2	4.2	4.0	3.8	3.8	3.8	3.7
80°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
82.5°	0.7	0.7	1.0	1.0	1.0	0.7	1.0	1.0	0.7	0.7	1.0
85°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
87.5°	0.2	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.0	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):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	487.1	487.1	487.1	487.1	487.1	487.1	487.1	487.1
2.5°	488.6	488.7	488.7	488.7	488.9	488.9	488.9	488.9
5°	487.3	487.5	487.5	487.5	487.7	487.7	487.7	487.7
7.5°	485.1	485.2	485.2	485.5	485.5	485.7	485.7	485.9
10°	482.5	482.9	483.1	483.2	483.4	483.7	483.7	483.9
12.5°	479.8	480.2	480.4	480.7	481.1	481.2	481.4	481.6
15°	475.7	476.5	476.9	477.1	477.8	478.2	478.4	478.5
17.5°	469.4	470.9	471.4	471.7	472.4	473.2	473.7	473.9
20°	460.2	461.9	462.6	463.6	464.6	465.6	465.9	466.3
22.5°	447.4	449.3	450.3	451.4	452.3	453.3	454.8	454.1
25°	429.1	432.3	433.5	434.1	436.1	437.2	437.9	437.2
27.5°	408.7	410.5	411.5	412.9	414.3	415.4	415.8	416.9
30°	383.9	387.1	386.9	388.2	389.9	391.1	391.4	392.4
32.5°	358.3	359.8	360.9	360.8	361.5	363.5	362.8	364.4
35°	331.0	331.3	333.0	332.9	334.4	334.4	334.4	335.5
37.5°	302.0	304.2	303.3	305.4	304.7	305.3	305.3	305.7
40°	275.5	276.3	276.3	276.9	277.5	276.9	277.3	278.3
42.5°	248.0	248.8	249.0	248.5	249.2	250.8	249.5	250.6
45°	222.4	222.9	223.7	223.2	224.1	223.5	224.1	223.7
47.5°	198.3	198.1	197.9	199.4	198.1	198.3	199.0	197.8
50°	173.6	174.7	174.0	174.5	174.8	174.8	174.3	174.3
52.5°	151.7	151.5	150.9	151.5	151.1	151.2	151.7	151.2
55°	128.9	129.7	129.3	129.1	129.3	129.3	130.4	128.9
57.5°	106.6	106.3	106.8	108.1	106.8	107.8	108.3	108.5
60°	85.5	85.5	86.5	86.0	87.0	88.0	88.7	88.3
62.5°	65.2	66.0	66.4	66.6	67.7	68.4	68.4	68.2
65°	48.3	49.6	49.6	50.3	50.7	50.7	51.1	51.7
67.5°	35.6	35.6	35.9	36.2	36.1	36.1	36.4	36.6
70°	24.9	24.5	25.1	24.9	24.9	24.6	24.9	24.9
72.5°	15.8	15.8	15.9	15.8	15.3	15.5	15.5	15.9
75°	8.5	8.8	8.5	8.5	8.6	8.2	8.5	8.6
77.5°	3.5	3.5	3.5	3.5	3.5	3.3	3.3	3.3
80°	1.7	1.7	1.7	1.7	1.7	1.7	1.5	1.5
82.5°	0.7	1.0	0.7	1.0	0.7	0.7	0.7	0.7
85°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
87.5°	0.0	0.2	0.0	0.2	0.0	0.0	0.0	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)