

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: P856895

Luminaire Tested: **LX4C10D010 EX4C109030 4LBSWNH**

Issue Date: 2/18/2022



Test Information

Test Method: LM-79-08
Report Number: P856895
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P251634)
Test Lab: INNOVATION CENTER
Issue Date: 2/18/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LX4C10D010 EX4C109030 4LBSWNH
Description: 4 INCH 1000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS
AND 4LCSW TRIM WITH H FINISH, DIM TO WARM
Light Source: -
Ballast/Driver: -

Summary

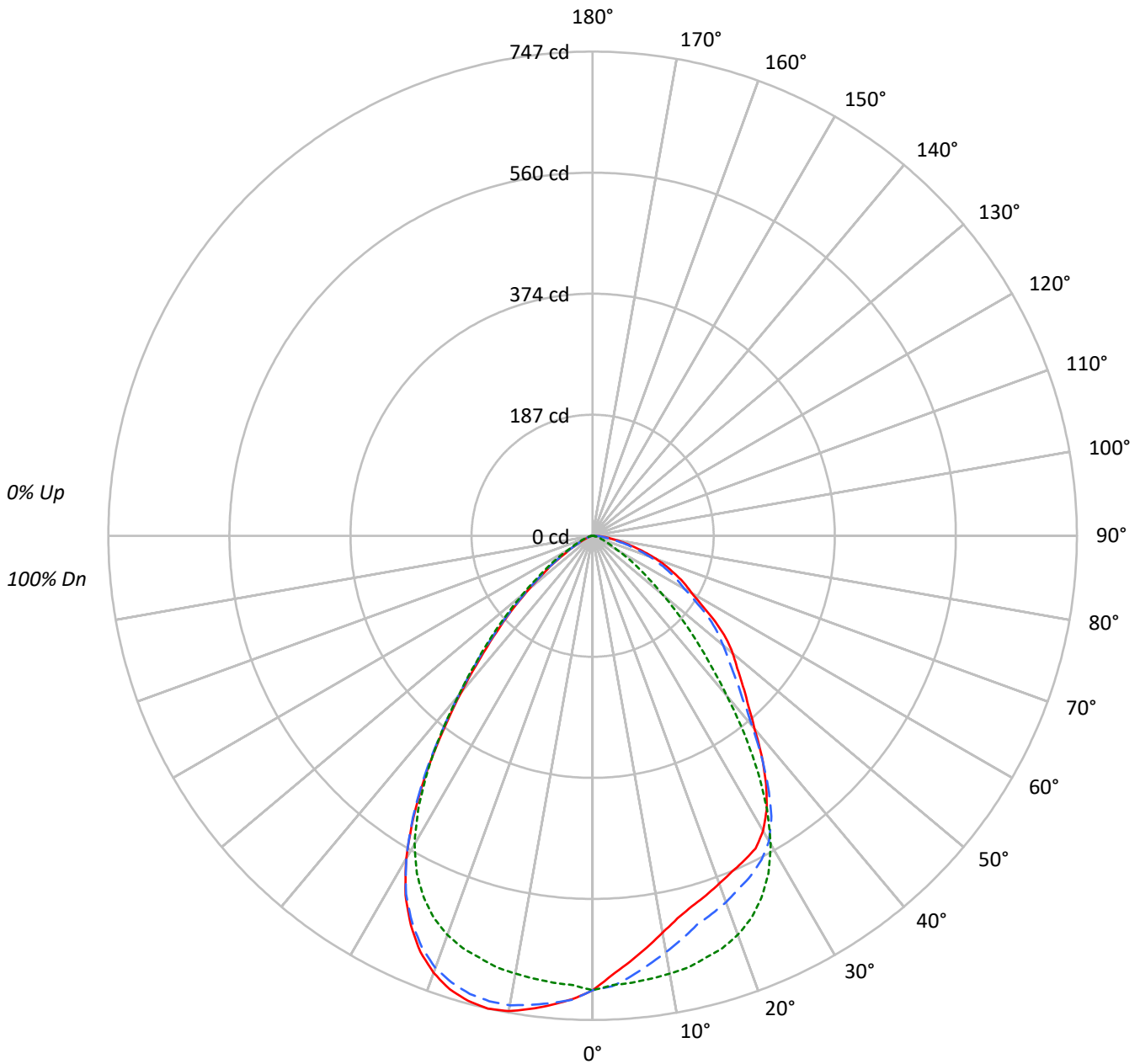
Lumens per Lamp: N/A
Luminaire Lumens: 1229.0 lumens
Efficiency: N/A
Efficacy: 72.3 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.17 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 17
Input Voltage (V):
Input Current (A_{in}): 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	108	104	101	109	106	103	100	101	99	97	98	96	94	94	93	91	89																			
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79																			
3	96	88	81	76	94	86	80	75	83	78	74	81	76	73	78	75	72	70																			
4	90	80	72	67	88	78	72	66	76	70	66	74	69	65	72	68	64	62																			
5	83	73	65	60	82	72	65	59	70	63	59	68	62	58	66	61	58	56																			
6	78	67	59	53	76	66	59	53	64	58	53	62	57	52	61	56	52	50																			
7	73	61	54	48	71	61	53	48	59	53	48	58	52	48	56	51	47	46																			
8	68	57	49	44	67	56	49	44	55	48	44	54	48	43	52	47	43	42																			
9	64	52	45	40	63	52	45	40	51	44	40	50	44	40	49	44	40	38																			
10	61	49	42	37	59	48	42	37	47	41	37	47	41	37	46	40	37	35																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	86145	86145	86145
5°	81344	85352	89594
10°	77544	85553	92888
15°	75269	85737	94462
20°	74651	85646	93778
25°	74948	83515	89886
30°	74589	77923	81526
35°	69919	66545	67204
40°	62305	51576	50438
45°	56970	38449	36103
50°	53898	26949	24369
55°	49520	18163	15293
60°	43294	10664	8452
65°	40988	6831	4709
70°	37357	4885	2910
75°	30901	3465	2183
80°	24337	1910	1273
85°	21708	1269	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.2	5.4
10°-20°	190.1	15.5
20°-30°	281.7	22.9
30°-40°	282.1	23.0
40°-50°	197.2	16.0
50°-60°	117.3	9.5
60°-70°	61.2	5.0
70°-80°	27.2	2.2
80°-90°	5.9	0.5
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°	538.0	43.8
0°-40°	820.1	66.7
0°-60°	1134.6	92.3
0°-90°	1229.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1229.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	701	701	701	701	701	
5°	660	682	692	724	726	62
15°	592	622	674	732	743	168
25°	553	578	616	659	663	255
35°	466	472	444	452	448	289
45°	328	312	221	214	208	255
55°	231	217	85	74	71	205
65°	141	129	24	17	16	139
75°	65	57	7	5	5	70
85°	15	12	1	1	0	17
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°	701.2	701.2	701.2	701.2	701.2	701.2	701.2	701.2	701.2	701.2	701.2
2.5°	678.5	686.7	678.5	681.2	692.1	682.2	687.5	687.5	684.8	691.2	695.7
5°	659.6	667.7	659.6	663.1	674.9	665.0	671.4	669.6	670.4	675.9	682.2
7.5°	640.6	646.9	639.6	644.2	655.1	646.9	652.2	652.2	653.2	661.4	666.9
10°	621.6	627.0	621.6	625.3	637.1	629.7	633.3	634.3	637.1	644.2	652.2
12.5°	604.5	609.0	603.5	609.0	618.9	611.6	616.1	617.1	619.9	628.0	637.1
15°	591.8	596.4	590.9	595.5	604.5	599.0	602.7	604.5	606.3	613.4	621.6
17.5°	581.8	585.5	581.0	586.3	593.6	587.3	592.7	592.7	595.5	602.7	611.6
20°	571.0	574.7	571.0	575.5	583.8	578.3	582.8	582.8	585.5	593.6	601.8
22.5°	561.1	562.9	561.1	564.6	572.8	568.4	571.0	572.0	574.7	581.8	589.2
25°	552.9	556.6	554.8	558.3	563.8	559.4	561.9	562.9	565.7	572.0	578.3
27.5°	543.9	545.7	543.9	548.5	552.9	549.3	552.0	551.2	552.9	558.3	563.8
30°	525.8	527.7	527.7	530.4	534.0	532.3	534.8	532.3	534.0	538.4	543.9
32.5°	499.8	500.6	501.5	504.2	506.9	504.2	506.1	506.1	506.1	509.6	513.2
35°	466.2	468.0	467.2	468.9	471.7	470.8	470.8	469.7	468.0	469.7	471.7
37.5°	428.3	425.6	425.6	428.3	430.1	426.5	428.3	426.5	426.5	427.3	427.3
40°	388.5	385.9	388.5	389.5	390.3	388.5	387.7	385.9	383.2	384.0	382.2
42.5°	355.1	353.4	354.2	354.2	355.1	353.4	354.2	350.6	347.9	346.1	343.3
45°	327.9	325.3	327.9	326.1	326.1	325.3	324.4	322.6	319.0	316.2	311.8
47.5°	302.6	302.6	303.6	303.6	303.6	301.8	301.8	298.1	294.6	291.0	284.7
50°	282.0	280.1	283.7	283.7	281.0	280.1	281.0	276.5	273.8	269.3	262.9
52.5°	259.3	259.3	260.2	260.2	259.3	257.5	258.5	254.7	252.2	247.6	241.3
55°	231.2	229.5	232.2	232.2	231.2	230.4	231.2	228.7	225.9	222.4	216.9
57.5°	199.7	198.7	200.6	201.4	199.7	199.7	200.6	197.8	196.9	193.4	188.0
60°	176.2	175.3	177.2	178.0	176.2	176.2	176.2	172.6	170.7	167.1	163.6
62.5°	160.0	159.0	160.8	160.0	159.0	158.1	159.0	155.4	153.7	149.9	146.4
65°	141.0	141.9	142.8	142.8	141.9	141.0	141.0	139.2	137.3	133.8	129.2
67.5°	122.9	122.9	123.7	124.7	123.7	123.7	123.7	121.1	119.2	116.6	111.1
70°	104.0	102.9	105.8	105.8	104.0	104.8	104.0	102.9	101.2	97.7	93.1
72.5°	84.0	84.0	84.8	84.8	84.0	84.0	84.0	83.1	80.4	78.5	74.2
75°	65.1	65.1	65.9	66.8	65.1	65.1	65.9	64.1	62.4	59.6	56.9
77.5°	48.7	47.9	48.7	48.7	47.9	47.9	47.9	47.0	46.2	43.4	40.7
80°	34.4	33.4	34.4	34.4	34.4	33.4	33.4	32.6	32.6	30.7	28.0
82.5°	23.5	22.7	23.5	23.5	23.5	22.7	22.7	22.7	21.7	20.8	18.9
85°	15.4	14.4	14.4	15.4	14.4	14.4	14.4	14.4	13.6	12.6	11.8
87.5°	7.3	7.3	7.3	7.3	7.3	7.3	7.3	6.3	6.3	6.3	5.4
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°	701.2	701.2	701.2	701.2	701.2	701.2	701.2	701.2	701.2	701.2	701.2
2.5°	692.1	690.3	695.7	693.9	694.8	690.3	697.6	693.9	698.4	693.9	703.0
5°	680.3	678.5	686.7	685.8	686.7	683.0	691.2	690.3	695.7	692.1	702.0
7.5°	667.7	665.9	674.9	675.9	677.7	674.1	684.8	684.8	690.3	689.4	700.2
10°	653.2	654.2	663.1	665.0	668.6	666.9	676.7	679.5	686.7	685.8	699.4
12.5°	639.6	639.6	651.4	655.1	657.8	656.8	668.6	672.2	680.3	682.2	694.8
15°	626.2	627.0	637.9	643.4	646.9	646.1	658.7	663.1	673.2	674.1	689.4
17.5°	615.3	614.4	626.2	630.8	636.1	635.2	648.7	654.2	664.1	666.9	681.2
20°	606.3	605.3	616.1	621.6	625.3	624.4	637.9	644.2	653.2	655.1	669.6
22.5°	595.5	593.6	604.5	609.0	612.6	611.6	623.4	628.0	637.1	638.8	652.2
25°	582.8	581.0	590.9	593.6	596.4	594.5	604.5	607.3	614.4	616.1	629.7
27.5°	568.4	563.8	572.0	572.0	573.7	571.0	578.3	581.0	587.3	587.3	599.9
30°	545.7	539.4	543.9	543.0	543.9	540.3	544.9	545.7	550.2	549.3	558.3
32.5°	514.1	505.0	507.8	505.0	502.3	497.0	502.3	500.6	504.2	500.6	508.6
35°	470.8	461.7	460.9	457.1	454.5	450.0	450.0	445.4	446.3	443.7	449.0
37.5°	423.8	412.0	410.1	403.0	398.5	393.0	393.0	389.5	384.9	383.2	387.7
40°	377.6	365.0	360.5	348.8	344.2	338.7	335.2	330.7	328.9	321.6	325.3
42.5°	337.9	324.4	314.5	301.8	297.3	289.1	283.7	278.3	275.6	267.5	271.1
45°	304.4	288.3	277.4	261.0	254.7	245.8	237.6	231.2	224.9	221.3	219.6
47.5°	276.5	259.3	244.8	226.7	216.9	208.7	197.8	191.5	183.5	178.9	176.2
50°	253.0	234.0	217.8	196.9	187.1	178.0	165.3	155.4	148.2	141.0	139.2
52.5°	232.2	212.3	194.3	170.7	159.0	148.2	134.6	123.7	117.4	109.3	108.4
55°	207.8	190.6	170.7	146.4	134.6	123.7	109.3	98.5	90.3	84.8	83.1
57.5°	181.7	165.3	146.4	122.0	110.3	98.5	84.8	75.0	67.7	63.3	62.4
60°	157.3	141.9	123.7	99.4	87.6	77.7	63.3	53.3	47.0	43.4	41.6
62.5°	139.2	124.7	107.5	84.8	74.2	64.1	50.7	41.6	36.1	32.6	30.7
65°	122.0	107.5	92.2	71.4	62.4	53.3	40.7	32.6	27.1	23.5	21.7
67.5°	104.0	91.3	76.8	59.6	50.7	43.4	32.6	25.2	20.8	18.1	16.2
70°	85.9	74.2	62.4	47.9	41.6	34.4	25.2	19.9	15.4	13.6	11.8
72.5°	67.7	58.8	48.7	37.0	31.5	27.1	19.9	14.4	11.8	9.9	8.1
75°	50.7	44.2	36.1	28.0	23.5	19.9	14.4	10.9	9.1	7.3	6.3
77.5°	36.1	30.7	25.2	18.9	17.2	14.4	9.9	8.1	6.3	4.6	3.6
80°	24.4	21.7	17.2	13.6	10.9	9.9	7.3	5.4	3.6	2.7	2.7
82.5°	16.2	13.6	10.9	8.1	7.3	6.3	4.6	3.6	2.7	1.8	1.8
85°	9.9	8.1	6.3	4.6	4.6	3.6	2.7	1.8	0.9	0.9	0.9
87.5°	4.6	3.6	2.7	1.8	1.8	0.9	0.9	0.9	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°	701.2	701.2	701.2	701.2	701.2	701.2	701.2	701.2	701.2	701.2	701.2
2.5°	710.2	704.7	701.2	705.7	707.5	704.7	707.5	712.0	716.5	717.3	704.7
5°	711.0	705.7	703.8	709.3	710.2	709.3	712.0	718.3	723.6	725.6	712.9
7.5°	711.0	707.5	706.5	712.9	713.8	712.9	717.3	724.7	730.0	733.7	721.1
10°	709.3	707.5	708.3	713.8	715.6	715.6	721.9	730.0	735.5	739.1	726.5
12.5°	706.5	706.5	706.5	712.9	714.8	715.6	721.1	731.8	735.5	740.8	728.2
15°	702.0	702.0	702.0	708.3	711.0	711.0	717.3	727.4	731.8	737.3	724.7
17.5°	693.9	693.9	694.8	700.2	703.0	703.0	709.3	720.1	722.8	729.1	716.5
20°	682.2	682.2	683.0	688.5	691.2	689.4	697.6	706.5	709.3	714.8	702.0
22.5°	665.0	665.0	665.0	670.4	672.2	671.4	679.5	687.5	687.5	694.8	681.2
25°	639.6	641.5	639.6	645.1	646.9	646.1	653.2	660.6	658.7	666.9	653.2
27.5°	609.0	608.1	608.1	612.6	612.6	611.6	617.1	625.3	623.4	628.8	616.1
30°	566.5	569.2	564.6	571.0	568.4	566.5	570.1	577.3	574.7	579.2	569.2
32.5°	517.8	514.1	514.1	514.1	515.9	511.3	515.0	518.7	515.9	520.4	509.6
35°	453.6	454.5	451.8	452.8	453.6	448.1	451.8	455.4	451.8	454.5	444.5
37.5°	389.5	390.3	384.0	387.7	384.0	382.2	385.9	387.7	384.0	386.7	375.9
40°	325.3	323.6	322.6	322.6	323.6	319.0	321.6	324.4	321.6	323.6	313.5
42.5°	269.3	268.3	266.5	267.5	264.8	263.8	264.8	267.5	264.8	266.5	259.3
45°	220.4	218.6	216.1	216.9	216.9	212.3	215.0	216.9	214.1	215.0	208.7
47.5°	175.3	172.6	172.6	171.7	171.7	169.9	172.6	171.7	168.9	170.7	164.5
50°	136.5	134.6	134.6	134.6	134.6	131.9	132.7	134.6	131.9	131.9	128.3
52.5°	106.6	104.0	102.1	102.1	102.1	101.2	101.2	102.1	99.4	99.4	98.5
55°	80.4	79.5	76.8	76.8	76.8	74.2	75.0	75.0	74.2	74.2	71.4
57.5°	59.6	56.9	55.0	55.0	53.3	53.3	52.5	53.3	51.5	51.5	49.7
60°	39.7	37.9	37.0	36.1	36.1	35.3	36.1	35.3	35.3	34.4	33.4
62.5°	28.9	27.1	25.2	25.2	25.2	24.4	24.4	24.4	24.4	24.4	23.5
65°	20.8	18.9	18.9	18.1	18.1	17.2	17.2	17.2	17.2	17.2	16.2
67.5°	14.4	13.6	12.6	12.6	12.6	12.6	12.6	12.6	11.8	11.8	11.8
70°	10.9	9.9	9.1	9.1	9.1	9.1	9.1	8.1	9.1	9.1	8.1
72.5°	7.3	7.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
75°	5.4	5.4	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
77.5°	3.6	3.6	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
80°	2.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
82.5°	1.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
85°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.0
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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CATALOG NUMBER: LX4C10D010 EX4C109030 4LBSWNH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	701.2	701.2	701.2	701.2	701.2	701.2	701.2	701.2
2.5°	718.3	717.3	715.6	718.3	711.0	708.3	707.5	715.6
5°	728.2	726.5	726.5	729.1	721.1	719.2	717.3	726.5
7.5°	737.3	735.5	735.5	738.3	731.0	729.1	727.4	736.4
10°	742.7	742.7	742.7	744.6	738.3	736.4	735.5	744.6
12.5°	745.4	745.4	744.6	748.2	740.0	740.0	738.3	747.1
15°	741.8	741.8	741.8	744.6	737.3	735.5	735.5	742.7
17.5°	732.8	732.8	731.8	734.5	726.5	726.5	725.6	733.7
20°	719.2	719.2	717.3	721.1	712.9	710.2	709.3	717.3
22.5°	697.6	696.7	695.7	697.6	690.3	688.5	687.5	694.8
25°	669.6	668.6	666.9	668.6	660.6	657.8	657.8	663.1
27.5°	629.7	629.7	627.0	629.7	620.7	619.9	618.9	625.3
30°	581.0	577.3	575.5	579.2	570.1	570.1	568.4	574.7
32.5°	520.4	516.8	515.9	517.8	509.6	506.9	510.4	514.1
35°	450.8	451.8	448.1	448.1	441.0	441.8	442.7	448.1
37.5°	384.0	382.2	381.3	382.2	376.8	375.0	373.1	378.6
40°	321.6	317.1	316.2	316.2	311.8	310.9	311.8	314.5
42.5°	262.9	262.0	258.5	260.2	255.7	257.5	256.6	256.6
45°	212.3	213.3	209.5	212.3	208.7	206.0	206.0	207.8
47.5°	168.0	168.0	167.1	167.1	164.5	165.3	163.6	166.3
50°	130.0	130.0	128.3	129.2	127.5	127.5	126.4	127.5
52.5°	99.4	98.5	98.5	97.7	95.7	96.6	97.7	95.7
55°	72.2	73.2	71.4	72.2	70.5	71.4	70.5	71.4
57.5°	49.7	50.7	48.7	50.7	48.7	49.7	48.7	48.7
60°	34.4	34.4	33.4	34.4	33.4	33.4	32.6	34.4
62.5°	23.5	23.5	23.5	23.5	23.5	22.7	23.5	23.5
65°	17.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2
67.5°	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
70°	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1
72.5°	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
75°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
77.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
80°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
82.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
85°	0.9	0.9	0.9	0.0	0.9	0.0	0.0	0.0
87.5°	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



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— 0°-180° - - 45°-225° - - - - 90°-270°













(END OF REPORT)