

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: P857163

Luminaire Tested: **LX4C20D010 EX4C209035 4LBLWW***

Issue Date: 2/9/2022



Test Information

Test Method: LM-79-08
Report Number: P857163
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2107-320-1)
Test Lab: INNOVATION CENTER
Issue Date: 2/9/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LX4C20D010 EX4C209035 4LBLWW*
Description: 4 INCH 2000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS
AND 4LRLWW TRIM WITH * FINISH
Light Source: -
Ballast/Driver: -

Summary

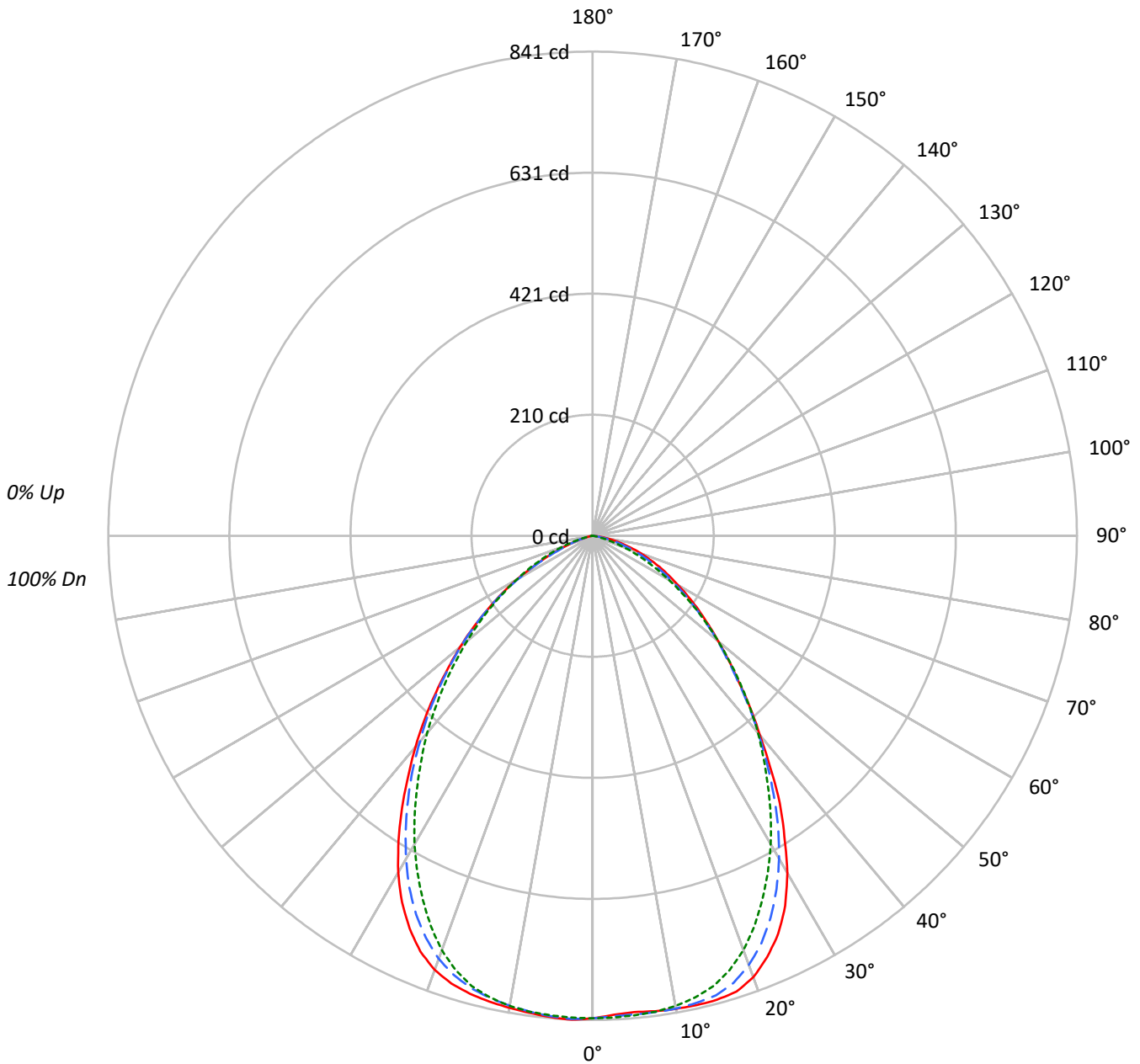
Lumens per Lamp: N/A
Luminaire Lumens: 1607.0 lumens
Efficiency: N/A
Efficacy: 73.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.12 / 1.18
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 21.8
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	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°	102976	102976	102976
5°	102395	103098	103492
10°	104090	103467	103853
15°	106125	103009	104726
20°	106669	100119	104891
25°	103387	94549	101977
30°	95953	87740	95783
35°	84977	79592	86581
40°	72441	71687	76787
45°	62234	62946	66890
50°	54318	54452	57338
55°	48000	45986	47528
60°	42065	37519	37347
65°	37238	29099	25901
70°	31753	20007	15374
75°	25680	10775	7025
80°	17616	2688	1769
85°	5356	846	846



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.7	5.0
10°-20°	230.6	14.4
20°-30°	333.2	20.7
30°-40°	344.5	21.4
40°-50°	284.6	17.7
50°-60°	196.4	12.2
60°-70°	102.8	6.4
70°-80°	32.4	2.0
80°-90°	2.7	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°	643.5	40.0
0°-40°	988.0	61.5
0°-60°	1469.0	91.4
0°-90°	1607.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1607.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	838	838	838	838	838	
5°	830	834	836	838	839	79
15°	834	827	810	814	823	235
25°	763	732	698	726	752	348
35°	567	548	531	558	577	352
45°	358	357	362	379	385	279
55°	224	217	215	221	222	201
65°	128	116	100	83	89	127
75°	54	42	23	15	15	58
85°	4	2	1	1	1	8
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°	838.2	838.2	838.2	838.2	838.2	838.2	838.2	838.2	838.2	838.2	838.2
2.5°	832.9	833.2	833.2	833.8	833.8	833.8	834.1	834.1	834.4	834.7	835.1
5°	830.3	830.3	831.0	831.3	831.9	832.2	832.9	833.2	833.8	834.1	834.4
7.5°	832.9	832.9	833.2	833.5	833.5	833.8	833.8	834.1	834.4	834.7	834.7
10°	834.4	834.4	834.4	834.4	834.7	834.7	834.7	834.4	834.4	834.4	834.1
12.5°	835.1	835.1	834.7	834.4	834.7	834.4	834.4	833.5	832.9	832.2	831.3
15°	834.4	834.4	834.1	833.8	833.5	832.9	832.5	831.0	829.7	827.8	826.6
17.5°	830.3	829.7	829.1	828.5	827.2	826.2	825.6	822.8	820.6	817.4	814.0
20°	815.9	815.2	814.3	812.7	811.1	809.9	808.0	803.9	801.7	797.0	793.5
22.5°	792.3	791.6	791.9	789.1	786.0	784.1	782.8	779.3	775.6	769.6	765.8
25°	762.7	760.8	760.8	756.4	754.8	753.5	752.0	747.9	742.2	736.9	731.8
27.5°	724.3	721.7	720.5	719.9	716.1	713.2	711.0	707.9	703.2	698.5	691.5
30°	676.4	676.1	674.5	671.7	668.9	667.6	665.1	659.7	655.3	651.9	647.5
32.5°	620.1	619.8	619.8	619.8	617.9	617.6	613.8	611.0	607.5	602.1	599.3
35°	566.6	566.3	566.6	561.8	560.6	559.6	559.3	557.4	552.7	550.2	547.7
37.5°	506.1	507.1	506.5	505.2	506.8	503.9	506.1	502.0	500.2	499.5	496.7
40°	451.7	454.2	451.7	452.0	453.6	450.7	450.7	450.1	448.8	448.2	447.6
42.5°	405.1	401.9	403.8	402.3	403.8	402.9	401.3	402.3	402.6	401.3	401.0
45°	358.2	358.8	359.5	358.5	358.5	357.6	360.1	358.5	358.5	358.8	356.6
47.5°	320.1	319.2	319.8	319.2	319.5	318.9	319.5	319.8	319.2	319.2	317.3
50°	284.2	283.6	285.8	283.9	283.9	283.6	283.9	283.3	282.3	282.3	283.0
52.5°	253.1	251.8	251.5	253.1	250.9	250.9	251.2	250.5	249.3	248.7	247.1
55°	224.1	223.8	224.1	222.9	222.2	222.2	220.6	220.0	219.7	218.1	217.2
57.5°	197.0	196.1	196.4	196.1	194.8	194.5	193.3	193.3	192.0	190.7	189.2
60°	171.2	171.2	172.2	170.9	170.0	169.3	168.7	168.1	165.9	163.7	161.8
62.5°	148.3	148.6	148.3	147.3	146.7	146.0	145.4	143.5	141.6	140.4	138.2
65°	128.1	127.8	126.8	126.2	124.6	124.6	123.4	122.4	120.2	118.4	116.1
67.5°	107.3	106.7	106.7	106.7	104.8	104.5	103.9	102.0	100.1	97.6	95.7
70°	88.4	89.1	88.1	87.2	86.2	85.9	85.0	83.1	80.9	78.4	76.8
72.5°	70.5	71.1	70.2	69.9	68.0	67.4	67.0	65.5	63.0	61.4	58.9
75°	54.1	54.5	53.8	53.2	51.9	51.6	50.0	48.8	47.2	44.7	42.5
77.5°	39.0	38.4	38.4	37.1	35.9	35.9	35.6	33.7	31.5	29.6	27.7
80°	24.9	24.6	23.6	23.0	22.0	21.7	21.4	19.8	18.3	17.0	15.7
82.5°	12.6	12.3	12.0	11.6	11.0	10.4	10.7	9.4	8.8	7.6	6.6
85°	3.8	4.1	4.1	3.8	3.5	3.5	3.5	3.1	2.5	2.2	1.9
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°	838.2	838.2	838.2	838.2	838.2	838.2	838.2	838.2	838.2	838.2	838.2
2.5°	835.4	835.7	836.0	836.3	836.3	836.6	836.9	837.3	837.6	837.6	837.9
5°	834.7	835.4	835.4	835.7	835.7	835.7	836.0	836.0	836.0	836.0	836.3
7.5°	835.1	835.1	835.1	834.7	834.7	834.4	834.4	834.4	833.8	833.8	833.8
10°	833.5	833.2	832.9	832.2	831.9	831.6	831.0	830.3	829.7	829.4	828.8
12.5°	830.3	829.1	827.8	826.6	825.9	825.6	824.4	823.4	822.5	821.5	820.9
15°	824.0	822.2	820.0	817.4	816.8	816.2	814.0	812.1	810.8	809.9	808.3
17.5°	811.5	807.7	805.2	801.4	799.8	799.2	795.7	793.8	791.6	791.0	789.7
20°	789.1	785.6	780.9	777.5	775.6	773.7	770.8	768.3	765.8	765.8	764.2
22.5°	761.1	756.7	750.7	746.3	746.0	742.2	739.7	736.9	735.9	734.0	734.0
25°	725.8	722.1	715.5	711.7	709.8	708.8	704.7	701.0	699.1	697.5	698.8
27.5°	686.8	681.1	676.1	671.4	669.8	667.9	664.1	662.6	659.1	658.8	658.5
30°	642.1	636.4	631.4	629.2	626.1	624.5	621.7	619.8	618.5	618.5	617.9
32.5°	595.2	590.2	587.7	582.9	581.4	579.2	577.3	575.4	576.0	575.4	575.7
35°	544.5	543.3	538.6	535.7	535.7	535.4	532.3	531.0	530.4	530.7	532.3
37.5°	496.4	492.6	489.5	487.6	489.1	487.3	486.9	486.9	488.8	487.6	490.1
40°	445.1	444.8	443.5	444.1	444.4	442.2	442.9	443.2	444.4	447.0	447.3
42.5°	400.4	400.1	400.1	400.1	399.4	398.2	399.4	401.6	401.3	403.2	404.8
45°	357.3	356.6	357.9	356.9	358.8	359.5	358.5	359.1	361.0	362.3	364.8
47.5°	317.9	317.9	318.2	318.9	317.0	318.5	319.2	320.4	321.4	322.0	323.3
50°	281.4	281.4	280.8	280.8	280.8	281.7	280.5	282.0	282.3	284.9	286.4
52.5°	247.7	246.1	247.1	246.5	245.2	244.6	245.2	245.5	247.4	248.0	249.9
55°	215.6	215.6	213.1	212.5	213.4	213.1	212.8	212.8	213.7	214.7	216.2
57.5°	187.3	185.4	183.5	183.2	182.2	182.6	182.6	182.2	181.6	181.9	182.2
60°	160.5	159.3	156.4	156.4	156.1	155.8	154.2	153.9	152.3	152.7	151.4
62.5°	136.0	135.3	131.6	130.3	130.3	129.4	127.8	127.5	125.3	125.3	124.0
65°	113.9	112.1	109.9	107.6	107.6	106.4	105.4	102.6	101.0	100.1	98.2
67.5°	93.8	91.0	88.8	86.9	85.6	85.3	83.1	81.2	78.7	77.1	74.3
70°	74.3	72.1	69.9	68.0	66.7	65.5	63.3	60.4	58.5	55.7	53.8
72.5°	56.0	54.1	52.3	49.7	48.2	47.2	45.0	42.5	39.3	37.5	34.9
75°	40.3	38.1	35.6	33.4	32.4	31.5	29.0	27.1	24.9	22.7	20.1
77.5°	26.1	23.6	21.7	19.2	18.9	18.3	15.7	13.8	12.3	11.0	9.4
80°	13.8	12.6	11.0	9.4	8.8	7.9	6.6	5.7	4.7	3.8	3.1
82.5°	6.0	5.0	4.1	3.5	3.1	2.8	2.2	1.9	1.6	1.6	1.3
85°	1.6	1.3	1.3	0.9	0.6	0.6	0.6	0.6	0.6	0.6	0.6
87.5°	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.0	0.3	0.3	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°	838.2	838.2	838.2	838.2	838.2	838.2	838.2	838.2	838.2	838.2	838.2
2.5°	838.2	838.5	838.8	838.8	839.2	839.5	839.5	839.8	840.1	840.4	840.4
5°	836.6	836.6	836.6	836.9	836.9	836.9	836.9	837.6	837.6	837.9	838.2
7.5°	833.5	833.5	833.5	833.5	833.2	833.5	833.2	833.2	833.8	834.1	834.4
10°	828.5	828.1	828.1	827.8	827.8	827.8	828.1	828.5	828.8	829.1	830.0
12.5°	820.6	820.3	820.3	820.0	820.0	820.3	820.6	821.2	822.5	823.1	824.4
15°	808.0	807.7	808.0	808.3	808.9	809.9	810.8	811.8	813.7	815.2	816.8
17.5°	789.7	790.1	790.4	791.0	791.9	793.2	795.7	798.2	800.4	803.0	805.5
20°	764.6	765.8	766.1	768.3	769.0	771.8	774.6	778.4	781.9	785.0	788.5
22.5°	734.3	735.3	736.5	739.1	740.6	744.4	747.9	752.3	756.1	760.1	765.2
25°	700.0	700.3	704.1	704.1	707.9	711.0	715.1	719.9	725.5	730.9	734.3
27.5°	661.0	662.6	665.4	666.7	669.5	674.5	678.0	683.7	689.3	694.0	697.8
30°	620.1	621.3	626.1	626.7	628.9	633.3	638.0	643.4	647.8	653.1	656.6
32.5°	577.0	580.4	583.3	585.5	586.1	592.7	595.2	599.0	604.0	609.4	612.8
35°	535.1	536.7	540.8	542.0	543.9	547.7	552.7	555.9	558.4	561.8	565.9
37.5°	490.7	495.4	496.4	500.2	500.8	504.2	506.8	510.5	513.7	516.8	517.5
40°	449.5	451.1	454.5	455.5	456.1	460.8	464.0	464.9	466.5	469.3	473.1
42.5°	407.6	409.2	413.0	412.0	414.9	417.1	418.6	422.4	424.0	424.9	424.9
45°	366.4	367.0	369.5	370.8	372.4	373.6	376.5	378.3	379.0	381.8	382.7
47.5°	327.0	327.7	329.6	331.8	331.1	332.7	335.9	336.8	337.1	339.0	339.9
50°	288.3	289.9	292.4	291.8	293.7	294.6	297.4	298.1	298.1	298.4	298.7
52.5°	252.1	253.4	254.0	254.6	255.6	257.2	258.4	257.8	259.0	260.3	259.4
55°	216.2	217.2	218.8	219.4	219.4	219.7	219.1	221.9	220.6	220.3	220.6
57.5°	183.5	182.2	181.9	183.5	184.1	183.8	182.9	184.1	184.1	183.5	182.6
60°	151.7	150.8	150.5	150.8	149.5	148.6	149.2	148.6	147.0	146.4	146.7
62.5°	122.8	121.8	119.3	119.3	118.7	118.4	115.8	116.1	114.9	113.0	113.6
65°	96.0	93.5	92.2	91.9	89.7	87.8	87.2	85.0	83.1	82.8	83.1
67.5°	72.1	69.2	67.0	66.1	64.8	63.3	61.1	59.2	59.8	59.5	60.7
70°	50.0	48.2	46.0	44.4	45.0	43.1	41.9	41.9	42.2	42.5	43.1
72.5°	33.4	30.8	29.9	29.0	28.3	27.1	27.7	27.7	27.4	27.7	27.1
75°	18.9	17.6	16.7	16.4	15.7	15.7	15.7	15.7	15.4	15.1	15.1
77.5°	8.5	7.9	7.6	7.2	7.2	7.2	6.9	6.6	6.6	6.6	6.3
80°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
82.5°	1.3	1.3	1.6	1.6	1.6	1.3	1.6	1.6	1.3	1.3	1.6
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°	0.3	0.3	0.3	0.0	0.3	0.3	0.3	0.3	0.0	0.3	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°	838.2	838.2	838.2	838.2	838.2	838.2	838.2	838.2
2.5°	840.7	841.0	841.0	841.0	841.4	841.4	841.4	841.4
5°	838.5	838.8	838.8	838.8	839.2	839.2	839.2	839.2
7.5°	834.7	835.1	835.1	835.4	835.7	835.7	835.7	836.0
10°	830.3	831.0	831.3	831.6	831.9	832.2	832.2	832.5
12.5°	825.6	826.2	826.6	827.2	827.8	828.1	828.5	828.8
15°	818.7	820.0	820.6	820.9	822.2	822.8	823.1	823.4
17.5°	807.7	810.2	811.1	811.8	813.0	814.3	815.2	815.5
20°	791.9	794.8	796.0	797.6	799.5	801.1	801.7	802.3
22.5°	769.9	773.1	774.9	776.8	778.4	780.0	782.5	781.6
25°	738.4	743.8	746.0	746.9	750.4	752.3	753.5	752.3
27.5°	703.2	706.3	708.2	710.4	712.9	714.8	715.5	717.3
30°	660.7	666.0	665.7	667.9	671.1	673.0	673.6	675.2
32.5°	616.6	619.1	621.0	620.7	622.0	625.4	624.2	627.0
35°	569.7	570.0	573.2	572.9	575.4	575.4	575.4	577.3
37.5°	519.7	523.4	521.9	525.7	524.4	525.3	525.3	526.0
40°	474.0	475.3	475.3	476.5	477.5	476.5	477.2	478.8
42.5°	426.8	428.1	428.4	427.8	428.7	431.5	429.3	431.2
45°	382.7	383.7	385.0	384.0	385.6	384.6	385.6	385.0
47.5°	341.2	340.9	340.6	343.1	340.9	341.2	342.5	340.3
50°	298.7	300.6	299.3	300.3	300.9	300.9	300.0	300.0
52.5°	260.9	260.6	259.7	260.6	260.0	260.3	260.9	260.3
55°	221.9	223.2	222.5	222.2	222.5	222.5	224.4	221.9
57.5°	183.5	182.9	183.8	186.0	183.8	185.4	186.3	186.7
60°	147.0	147.0	148.9	147.9	149.8	151.4	152.7	152.0
62.5°	112.1	113.6	114.3	114.6	116.5	117.7	117.7	117.4
65°	83.1	85.3	85.3	86.6	87.2	87.2	87.8	89.1
67.5°	61.4	61.4	61.7	62.3	62.0	62.0	62.6	63.0
70°	42.8	42.2	43.1	42.8	42.8	42.5	42.8	42.8
72.5°	27.1	27.1	27.4	27.1	26.4	26.8	26.8	27.4
75°	14.5	15.1	14.5	14.5	14.8	14.2	14.5	14.8
77.5°	6.0	6.0	6.0	6.0	6.0	5.7	5.7	5.7
80°	2.8	2.8	2.8	2.8	2.8	2.8	2.5	2.5
82.5°	1.3	1.6	1.3	1.6	1.3	1.3	1.3	1.3
85°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
87.5°	0.0	0.3	0.0	0.3	0.0	0.0	0.0	0.3
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)