

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: P858379

Luminaire Tested: **LD4C15W2N2050D010 4LBSWNL1_2000K**

Issue Date: 11/9/2023



Test Information

Test Method: LM-79-08
Report Number: P858379
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P251556)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 11/9/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C15W2N2050D010 4LBSWNL_2000K
Description: 4 INCH 1500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2000K, W2N2050 LEDS AND 4LBSWNL TRIM WITH FINISH

Light Source: -
Ballast/Driver: -

Summary

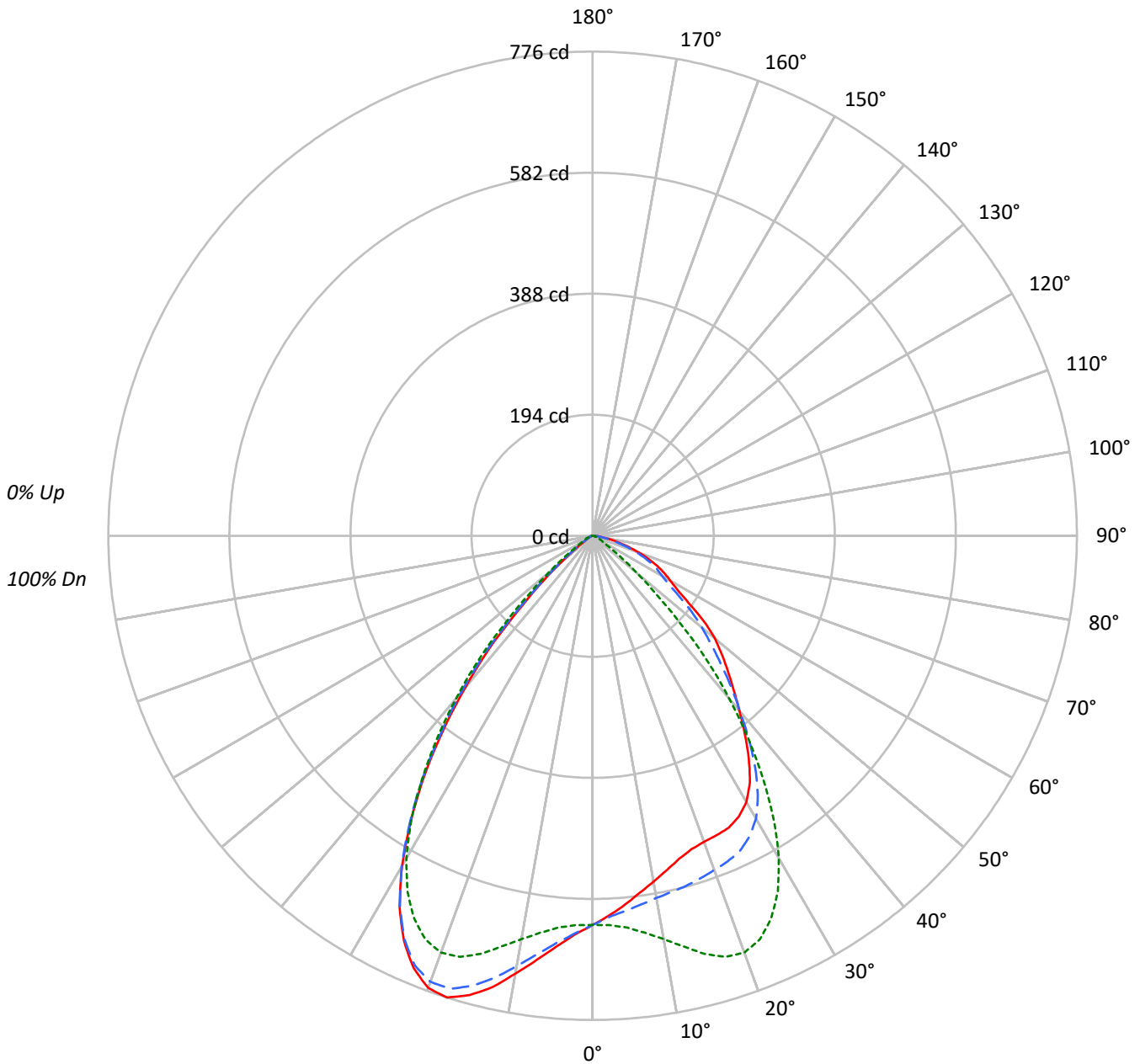
Lumens per Lamp: N/A
Luminaire Lumens: 1151.0 lumens
Efficiency: N/A
Efficacy: 59.9 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 19.2
Input Voltage (V): NR
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	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90																			
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	85	82	80																			
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	77	74	72																			
4	91	81	75	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64																			
5	85	75	67	62	83	74	67	62	72	66	61	70	65	60	68	64	60	58																			
6	79	69	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53																			
7	75	63	56	51	73	62	55	51	61	55	50	60	54	50	58	53	50	48																			
8	70	58	51	46	69	58	51	46	57	50	46	55	50	46	54	49	45	44																			
9	66	54	47	42	65	54	47	42	53	46	42	52	46	42	51	46	42	40																			
10	62	51	44	39	61	50	43	39	49	43	39	48	43	39	47	42	39	37																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	76624	76624	76624
5°	73204	77718	81442
10°	70184	81873	88883
15°	68147	88243	96942
20°	68232	92942	100812
25°	69973	91729	97016
30°	69880	84661	86633
35°	65450	71554	70579
40°	58633	54591	50935
45°	53200	34661	28441
50°	48871	17584	12137
55°	40118	7861	4005
60°	35210	4398	2211
65°	33139	3314	1657
70°	28377	2622	1473
75°	21645	1946	1187
80°	15565	1132	566
85°	11418	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.6	5.3
10°-20°	188.8	16.4
20°-30°	292.1	25.4
30°-40°	287.8	25.0
40°-50°	176.7	15.4
50°-60°	78.6	6.8
60°-70°	43.9	3.8
70°-80°	19.0	1.7
80°-90°	3.4	0.3
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°	541.5	47.0
0°-40°	829.4	72.1
0°-60°	1084.7	94.2
0°-90°	1151.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1151.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	624	624	624	624	624	
5°	594	603	630	655	660	56
15°	536	581	694	747	762	152
25°	516	558	677	713	716	237
35°	436	454	477	476	471	271
45°	306	291	200	174	164	237
55°	187	169	37	21	19	172
65°	114	103	11	6	6	112
75°	46	39	4	2	2	50
85°	8	6	0	0	0	10
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°	623.7	623.7	623.7	623.7	623.7	623.7	623.7	623.7	623.7	623.7	623.7
2.5°	609.1	609.1	609.1	609.1	610.7	608.3	610.7	610.7	613.1	613.9	611.5
5°	593.6	592.8	593.6	593.6	595.2	594.4	596.8	598.5	601.8	603.4	603.4
7.5°	577.3	577.3	577.3	578.9	581.4	580.6	583.0	585.5	590.3	593.6	596.0
10°	562.6	561.8	564.3	565.1	567.5	567.5	571.6	574.1	579.7	586.3	589.5
12.5°	548.8	548.0	549.6	552.1	556.1	556.1	559.4	563.5	571.6	578.9	584.6
15°	535.8	536.6	539.0	540.7	545.5	545.5	549.6	554.5	563.5	572.4	580.6
17.5°	526.8	527.6	529.3	531.7	536.6	536.6	540.7	546.4	556.1	565.9	575.7
20°	521.9	522.8	524.4	526.8	530.9	531.7	535.0	541.5	550.4	561.0	570.0
22.5°	519.5	521.1	522.8	524.4	528.4	528.4	532.5	537.4	546.4	557.0	565.1
25°	516.2	517.9	518.7	521.1	524.4	524.4	526.8	532.5	540.7	549.6	557.8
27.5°	507.3	508.9	509.7	512.2	515.4	514.6	517.9	521.9	529.3	537.4	543.9
30°	492.6	493.4	495.1	495.9	498.3	498.3	500.8	504.8	509.7	517.1	523.6
32.5°	469.0	470.6	471.5	472.3	474.7	473.9	474.7	477.1	482.0	488.6	492.6
35°	436.4	439.7	439.7	441.3	442.2	441.3	441.3	444.6	447.0	451.9	454.4
37.5°	400.6	403.1	402.2	403.9	404.7	402.2	403.9	404.7	408.0	410.4	411.2
40°	365.6	366.4	366.4	366.4	366.4	365.6	366.4	367.2	369.7	369.7	367.2
42.5°	333.8	334.7	334.7	333.0	334.7	333.8	333.8	333.8	333.8	330.6	328.1
45°	306.2	307.0	307.0	306.2	306.2	304.5	303.7	302.9	300.4	296.4	290.7
47.5°	280.1	281.7	282.5	280.9	280.1	278.5	278.5	273.6	270.3	265.5	257.3
50°	255.7	257.3	257.3	255.7	255.7	253.2	250.8	249.1	244.3	238.6	228.8
52.5°	224.7	227.2	227.2	226.4	226.4	223.1	222.3	219.0	215.0	208.4	200.3
55°	187.3	190.5	189.7	188.9	187.3	187.3	187.3	184.8	182.4	177.5	169.4
57.5°	160.4	161.2	161.2	160.4	160.4	158.8	158.8	156.3	155.5	150.6	144.1
60°	143.3	143.3	144.1	143.3	142.5	141.7	140.9	139.2	136.8	133.5	128.7
62.5°	129.5	130.3	130.3	129.5	128.7	127.8	127.0	125.4	123.8	121.3	116.4
65°	114.0	115.6	114.8	114.0	113.2	112.4	112.4	110.7	109.1	107.5	102.6
67.5°	96.9	97.7	98.5	96.9	96.9	96.1	96.1	94.5	93.6	90.4	87.1
70°	79.0	79.8	79.8	79.0	79.0	78.2	78.2	77.4	76.5	74.1	70.9
72.5°	61.9	62.7	61.9	61.1	61.1	61.1	60.3	59.4	58.6	57.0	54.6
75°	45.6	45.6	46.4	45.6	44.8	44.8	44.0	44.0	42.3	41.5	39.1
77.5°	32.6	33.4	32.6	32.6	31.7	30.9	30.9	30.1	30.1	29.3	27.7
80°	22.0	22.0	22.8	22.0	21.2	22.0	21.2	20.4	20.4	19.6	17.9
82.5°	13.8	14.6	13.8	13.8	13.8	13.8	13.8	13.0	13.0	12.2	11.4
85°	8.1	8.1	8.1	8.1	8.1	8.1	8.1	7.3	7.3	7.3	6.5
87.5°	4.1	4.1	3.3	3.3	4.1	4.1	4.1	3.3	3.3	3.3	3.3
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°	623.7	623.7	623.7	623.7	623.7	623.7	623.7	623.7	623.7	623.7	623.7
2.5°	614.8	615.6	617.2	619.7	619.7	618.0	622.1	622.1	623.7	624.5	627.8
5°	608.3	609.9	613.1	617.2	618.0	617.2	622.9	625.4	627.8	630.2	635.1
7.5°	602.6	605.8	611.5	617.2	619.7	619.7	628.6	631.9	636.7	641.6	647.3
10°	599.3	604.2	612.3	621.3	623.7	626.2	636.7	643.3	649.8	656.3	664.4
12.5°	595.2	604.2	614.8	626.2	631.0	634.3	649.0	657.1	666.1	674.2	684.8
15°	594.4	605.0	618.9	633.5	640.0	644.9	661.2	672.6	683.2	693.8	704.3
17.5°	591.2	604.2	621.3	637.6	645.7	652.2	670.9	684.8	697.0	707.6	719.8
20°	587.1	601.8	620.5	638.4	647.3	653.8	674.2	687.2	701.1	710.9	722.2
22.5°	581.4	596.0	614.8	632.7	640.8	646.5	666.9	678.3	690.5	700.3	710.9
25°	571.6	585.5	601.8	616.4	624.5	629.4	647.3	657.9	666.9	676.7	686.4
27.5°	557.8	568.4	582.2	592.8	597.7	602.6	617.2	626.2	634.3	642.5	649.0
30°	533.3	541.5	551.3	560.2	565.1	565.9	579.7	584.6	591.2	596.8	601.8
32.5°	500.8	507.3	513.0	517.9	521.1	521.9	532.5	534.2	540.7	540.7	548.0
35°	459.3	462.5	466.6	466.6	469.0	466.6	473.9	475.5	476.3	477.1	482.9
37.5°	412.0	413.6	416.1	411.2	411.2	408.8	411.2	412.8	409.6	409.6	413.6
40°	367.2	364.0	360.7	355.8	353.4	348.5	348.5	344.4	342.0	340.4	341.2
42.5°	324.1	316.7	309.4	298.8	293.9	289.1	284.2	278.5	276.8	272.8	270.3
45°	282.5	272.0	262.2	245.1	235.3	230.4	219.9	208.4	201.1	199.5	193.0
47.5°	247.5	232.0	215.8	195.4	185.7	176.7	161.2	151.5	141.7	136.8	132.7
50°	216.6	202.8	181.6	159.6	147.4	138.4	121.3	109.9	99.3	92.0	87.1
52.5°	189.7	174.2	154.7	129.5	117.3	107.5	88.7	75.7	66.8	59.4	53.8
55°	159.6	147.4	127.8	104.2	92.0	80.6	64.3	50.5	41.5	36.7	32.6
57.5°	137.6	127.0	108.3	85.5	74.1	63.5	47.2	35.8	28.5	23.6	21.2
60°	122.9	113.2	96.9	74.9	64.3	54.6	39.1	28.5	22.0	17.9	16.3
62.5°	110.7	101.0	86.3	65.9	57.0	47.2	33.4	23.6	17.9	14.6	12.2
65°	96.9	88.0	74.9	57.0	48.8	40.7	28.5	19.6	14.6	11.4	9.8
67.5°	82.2	74.1	62.7	47.2	40.7	34.2	22.8	16.3	12.2	9.8	8.1
70°	66.8	60.3	49.7	38.3	32.6	26.9	18.7	13.0	9.0	7.3	6.5
72.5°	51.3	45.6	38.3	29.3	24.4	20.4	13.8	9.8	7.3	5.7	4.9
75°	36.7	32.6	26.9	21.2	17.9	14.6	10.6	7.3	4.9	4.1	3.3
77.5°	25.2	22.8	18.7	14.6	12.2	10.6	7.3	4.9	4.1	3.3	2.5
80°	16.3	14.6	12.2	9.0	7.3	6.5	4.1	3.3	2.5	1.6	1.6
82.5°	9.8	9.0	7.3	4.9	4.1	3.3	2.5	1.6	1.6	0.8	0.8
85°	5.7	4.9	3.3	2.5	2.5	1.6	1.6	0.8	0.8	0.0	0.0
87.5°	2.5	1.6	1.6	0.8	0.8	0.8	0.8	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°	623.7	623.7	623.7	623.7	623.7	623.7	623.7	623.7	623.7	623.7	623.7
2.5°	626.2	630.2	629.4	631.9	631.0	631.0	635.1	633.5	637.6	637.6	638.4
5°	635.1	640.8	640.8	644.9	644.1	645.7	649.8	649.8	654.7	656.3	656.3
7.5°	648.1	655.5	657.1	661.2	662.0	665.2	668.5	669.3	675.8	677.5	678.3
10°	666.1	675.0	677.5	681.5	683.2	686.4	690.5	692.1	700.3	701.1	704.3
12.5°	688.0	697.8	700.3	705.1	706.0	710.0	715.7	717.4	725.5	728.0	730.4
15°	709.2	718.2	722.2	727.1	728.0	732.8	737.7	739.3	746.7	749.9	752.4
17.5°	723.9	734.5	736.9	743.4	743.4	747.5	752.4	754.0	761.3	763.8	765.4
20°	727.1	736.9	740.2	745.1	745.9	748.3	752.4	754.0	760.5	761.3	763.8
22.5°	714.9	724.7	726.3	731.2	732.0	734.5	737.7	736.9	745.1	744.2	745.1
25°	688.9	697.8	697.8	703.5	702.7	705.1	706.8	706.0	713.3	713.3	713.3
27.5°	651.4	659.6	660.4	664.4	662.0	662.8	664.4	663.6	668.5	668.5	668.5
30°	605.0	611.5	609.1	612.3	610.7	612.3	610.7	609.9	611.5	613.1	612.3
32.5°	547.2	552.1	552.1	552.9	552.9	548.0	546.4	546.4	545.5	544.7	544.7
35°	480.4	484.5	482.9	482.9	482.0	477.1	474.7	473.1	475.5	470.6	473.9
37.5°	412.0	412.8	410.4	409.6	405.5	405.5	401.4	398.2	399.8	399.0	395.7
40°	337.1	340.4	335.5	333.8	336.3	333.0	329.0	324.9	328.1	324.1	325.7
42.5°	263.8	263.0	261.4	261.4	261.4	256.5	255.7	254.9	255.7	252.4	250.0
45°	190.5	188.1	185.7	185.7	182.4	180.8	180.8	178.3	174.2	174.2	169.4
47.5°	128.7	122.9	121.3	120.5	118.9	118.9	117.3	115.6	114.8	110.7	110.7
50°	83.9	78.2	76.5	75.7	76.5	74.9	73.3	71.7	70.0	69.2	67.6
52.5°	50.5	48.0	46.4	45.6	44.0	43.2	42.3	40.7	39.9	39.9	39.1
55°	30.1	27.7	24.4	24.4	24.4	23.6	22.8	22.0	21.2	21.2	20.4
57.5°	18.7	17.1	15.5	14.6	14.6	14.6	13.8	13.8	13.8	13.8	13.0
60°	13.8	12.2	11.4	11.4	11.4	10.6	10.6	10.6	10.6	9.8	9.8
62.5°	10.6	9.8	9.0	9.0	8.1	8.1	8.1	8.1	8.1	8.1	7.3
65°	9.0	7.3	7.3	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
67.5°	6.5	5.7	5.7	5.7	5.7	4.9	4.9	4.9	4.9	4.9	4.9
70°	4.9	4.9	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
72.5°	4.1	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
75°	3.3	3.3	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
77.5°	2.5	2.5	2.5	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
80°	1.6	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
82.5°	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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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CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	623.7	623.7	623.7	623.7	623.7	623.7	623.7	623.7
2.5°	638.4	642.5	638.4	638.4	640.8	640.0	641.6	639.2
5°	657.1	662.8	658.7	657.9	662.0	661.2	662.0	660.4
7.5°	679.9	685.6	681.5	681.5	685.6	684.8	687.2	685.6
10°	706.0	712.5	706.8	707.6	713.3	712.5	712.5	712.5
12.5°	732.8	739.3	736.1	736.1	740.2	741.0	741.8	741.0
15°	754.8	761.3	757.3	757.3	763.0	762.2	763.0	762.2
17.5°	767.8	774.4	769.5	769.5	774.4	774.4	775.2	776.0
20°	764.6	771.9	767.8	766.2	771.9	771.9	771.1	771.1
22.5°	745.9	752.4	749.1	747.5	751.6	749.9	749.1	749.9
25°	713.3	719.8	713.3	713.3	716.5	715.7	716.5	715.7
27.5°	669.3	674.2	667.7	666.9	670.1	668.5	667.7	670.1
30°	610.7	615.6	612.3	609.9	613.9	611.5	609.9	610.7
32.5°	543.9	547.2	545.5	541.5	543.9	542.3	541.5	542.3
35°	470.6	474.7	468.2	467.4	471.5	468.2	466.6	470.6
37.5°	394.9	399.8	394.1	394.9	392.5	393.3	391.7	394.1
40°	323.3	322.5	320.8	320.0	320.8	318.4	320.0	317.6
42.5°	245.9	247.5	246.7	245.9	246.7	243.5	241.8	245.1
45°	171.0	170.2	168.6	166.9	166.9	166.1	166.1	163.7
47.5°	109.9	109.1	105.8	106.7	108.3	106.7	104.2	107.5
50°	66.8	65.9	65.9	65.1	66.8	65.1	63.5	63.5
52.5°	37.5	37.5	36.7	36.7	36.7	36.7	35.8	35.0
55°	20.4	19.6	19.6	19.6	18.7	18.7	18.7	18.7
57.5°	13.0	13.0	13.0	13.0	13.0	13.0	12.2	12.2
60°	9.8	9.8	9.8	9.8	9.0	9.8	9.0	9.0
62.5°	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
65°	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
67.5°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
70°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
72.5°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
75°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
77.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
80°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	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)