

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: P858426

Luminaire Tested: **LD4C15W2N2765D010 4LBSWNL1_6500K**

Issue Date: 11/9/2023



Test Information

Test Method: LM-79-08
Report Number: P858426
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: LD4C15W2N2765D010 4LBSWNL_6500K
Description: 4 INCH 1500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 6500K, W2N2765 LEDS AND 4LBSWNL TRIM WITH FINISH

Light Source: -
Ballast/Driver: -

Summary

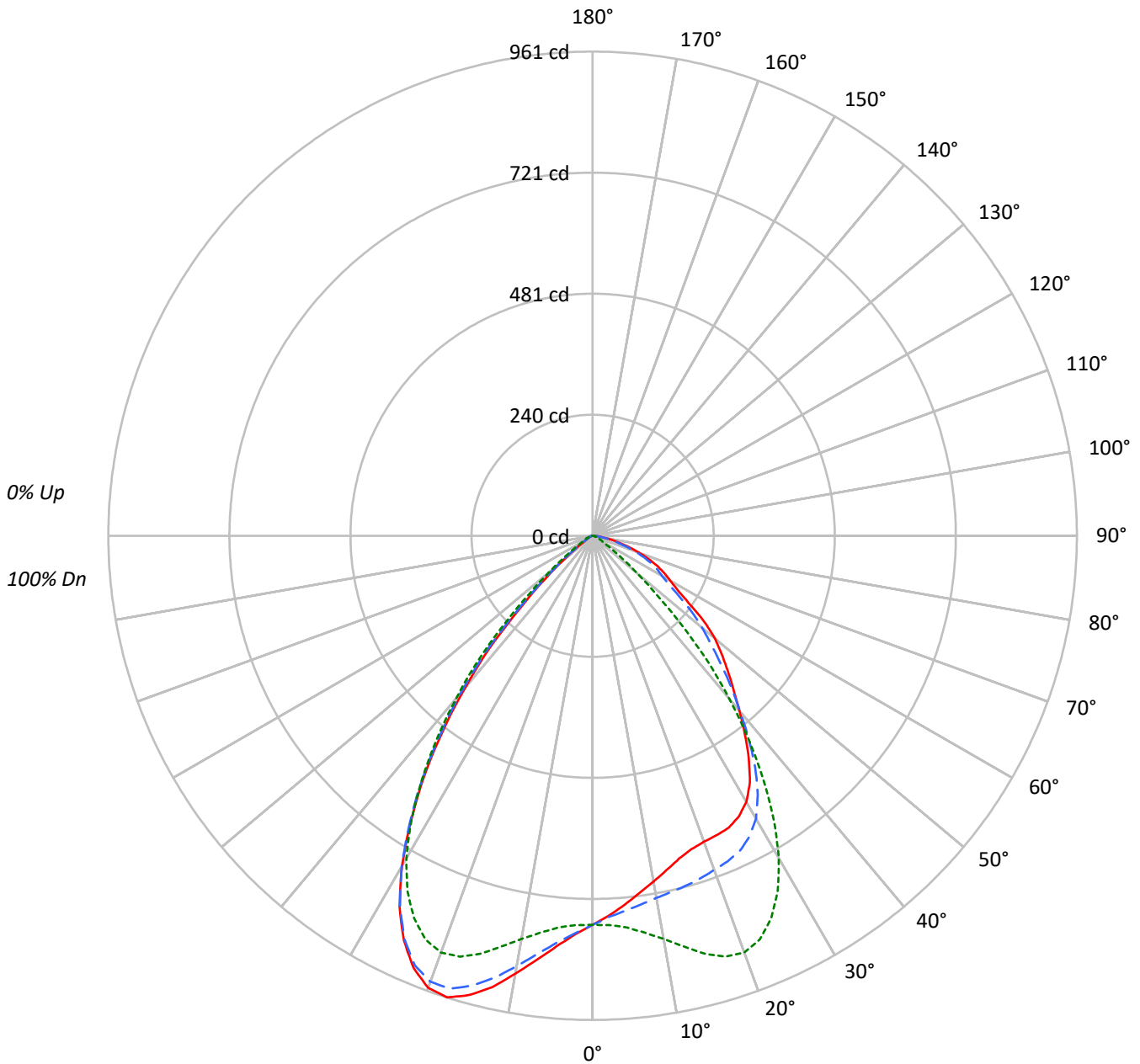
Lumens per Lamp: N/A
Luminaire Lumens: 1425.0 lumens
Efficiency: N/A
Efficacy: 74.2 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 19.2
Input Voltage (V): NR
Input Current (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	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°	94867	94867	94867
5°	90630	96229	100829
10°	86900	101358	110041
15°	84363	109241	120014
20°	84483	115062	124816
25°	86632	113553	120114
30°	86520	104820	107260
35°	81032	88591	87391
40°	72585	67582	63059
45°	65848	42914	35200
50°	60511	21769	15023
55°	49670	9724	4969
60°	43588	5455	2727
65°	41017	4099	2064
70°	35130	3269	1832
75°	26771	2421	1424
80°	19244	1415	707
85°	14237	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.0	5.3
10°-20°	233.8	16.4
20°-30°	361.7	25.4
30°-40°	356.4	25.0
40°-50°	218.8	15.4
50°-60°	97.3	6.8
60°-70°	54.3	3.8
70°-80°	23.5	1.6
80°-90°	4.2	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°	670.5	47.1
0°-40°	1026.8	72.1
0°-60°	1342.9	94.2
0°-90°	1425.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1425.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	772	772	772	772	772	
5°	735	747	780	810	818	69
15°	663	719	859	924	944	188
25°	639	690	838	883	886	293
35°	540	562	591	589	583	335
45°	379	360	247	216	203	294
55°	232	210	45	26	23	213
65°	141	127	14	8	7	138
75°	56	48	5	3	3	62
85°	10	8	0	0	0	12
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°	772.2	772.2	772.2	772.2	772.2	772.2	772.2	772.2	772.2	772.2	772.2
2.5°	754.0	754.0	754.0	754.0	756.1	753.1	756.1	756.1	759.1	760.1	757.1
5°	734.9	733.9	734.9	734.9	736.9	735.9	738.9	740.9	745.0	747.0	747.0
7.5°	714.7	714.7	714.7	716.8	719.8	718.8	721.8	724.8	730.9	734.9	737.9
10°	696.6	695.6	698.6	699.6	702.6	702.6	707.7	710.7	717.8	725.8	729.9
12.5°	679.4	678.5	680.5	683.5	688.5	688.5	692.6	697.6	707.7	716.8	723.8
15°	663.3	664.4	667.4	669.4	675.4	675.4	680.5	686.5	697.6	708.7	718.8
17.5°	652.2	653.3	655.3	658.3	664.4	664.4	669.4	676.4	688.5	700.6	712.7
20°	646.2	647.2	649.2	652.2	657.3	658.3	662.3	670.4	681.5	694.6	705.7
22.5°	643.2	645.2	647.2	649.2	654.2	654.2	659.3	665.3	676.4	689.6	699.6
25°	639.1	641.1	642.2	645.2	649.2	649.2	652.2	659.3	669.4	680.5	690.5
27.5°	628.1	630.1	631.1	634.1	638.1	637.1	641.1	646.2	655.3	665.3	673.4
30°	609.9	610.9	612.9	613.9	617.0	617.0	620.0	625.0	631.1	640.1	648.2
32.5°	580.7	582.7	583.7	584.7	587.7	586.7	587.7	590.7	596.8	604.9	609.9
35°	540.3	544.4	544.4	546.4	547.4	546.4	546.4	550.4	553.5	559.5	562.5
37.5°	496.0	499.0	498.0	500.0	501.0	498.0	500.0	501.0	505.1	508.1	509.1
40°	452.6	453.6	453.6	453.6	453.6	452.6	453.6	454.6	457.7	457.7	454.6
42.5°	413.3	414.3	414.3	412.3	414.3	413.3	413.3	413.3	413.3	409.3	406.3
45°	379.0	380.1	380.1	379.0	379.0	377.0	376.0	375.0	372.0	367.0	359.9
47.5°	346.8	348.8	349.8	347.8	346.8	344.8	344.8	338.7	334.7	328.6	318.6
50°	316.6	318.6	318.6	316.6	316.6	313.5	310.5	308.5	302.4	295.4	283.3
52.5°	278.2	281.2	281.2	280.3	280.3	276.2	275.2	271.2	266.1	258.1	248.0
55°	231.9	235.9	234.9	233.9	231.9	231.9	231.9	228.8	225.8	219.8	209.7
57.5°	198.6	199.6	199.6	198.6	198.6	196.6	196.6	193.6	192.5	186.5	178.4
60°	177.4	177.4	178.4	177.4	176.4	175.4	174.4	172.4	169.4	165.3	159.3
62.5°	160.3	161.3	161.3	160.3	159.3	158.3	157.3	155.3	153.2	150.2	144.2
65°	141.1	143.1	142.1	141.1	140.1	139.1	139.1	137.1	135.1	133.1	127.0
67.5°	119.9	121.0	122.0	119.9	119.9	119.0	119.0	116.9	115.9	111.9	107.9
70°	97.8	98.8	98.8	97.8	97.8	96.8	96.8	95.8	94.7	91.7	87.7
72.5°	76.6	77.6	76.6	75.6	75.6	75.6	74.6	73.6	72.6	70.6	67.5
75°	56.4	56.4	57.5	56.4	55.5	55.5	54.4	54.4	52.4	51.4	48.4
77.5°	40.3	41.3	40.3	40.3	39.3	38.3	38.3	37.3	37.3	36.3	34.3
80°	27.2	27.2	28.2	27.2	26.2	27.2	26.2	25.2	25.2	24.2	22.2
82.5°	17.1	18.1	17.1	17.1	17.1	17.1	17.1	16.1	16.1	15.1	14.1
85°	10.1	10.1	10.1	10.1	10.1	10.1	10.1	9.1	9.1	9.1	8.1
87.5°	5.1	5.1	4.0	4.0	5.1	5.1	5.1	4.0	4.0	4.0	4.0
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°	772.2	772.2	772.2	772.2	772.2	772.2	772.2	772.2	772.2	772.2	772.2
2.5°	761.1	762.1	764.1	767.2	767.2	765.1	770.2	770.2	772.2	773.2	777.2
5°	753.1	755.1	759.1	764.1	765.1	764.1	771.2	774.2	777.2	780.3	786.3
7.5°	746.0	750.0	757.1	764.1	767.2	767.2	778.3	782.3	788.3	794.4	801.4
10°	742.0	748.0	758.1	769.2	772.2	775.2	788.3	796.4	804.4	812.5	822.6
12.5°	736.9	748.0	761.1	775.2	781.3	785.3	803.5	813.5	824.6	834.7	847.8
15°	735.9	749.0	766.2	784.3	792.4	798.4	818.6	832.7	845.8	858.9	872.0
17.5°	731.9	748.0	769.2	789.4	799.4	807.5	830.7	847.8	862.9	876.0	891.2
20°	726.8	745.0	768.2	790.3	801.4	809.5	834.7	850.9	868.0	880.1	894.2
22.5°	719.8	737.9	761.1	783.3	793.4	800.4	825.6	839.8	854.9	867.0	880.1
25°	707.7	724.8	745.0	763.1	773.2	779.2	801.4	814.6	825.6	837.7	849.8
27.5°	690.5	703.7	720.8	733.9	739.9	746.0	764.1	775.2	785.3	795.4	803.5
30°	660.3	670.4	682.5	693.6	699.6	700.6	717.8	723.8	731.9	738.9	745.0
32.5°	620.0	628.1	635.1	641.1	645.2	646.2	659.3	661.3	669.4	669.4	678.5
35°	568.6	572.6	577.6	577.6	580.7	577.6	586.7	588.7	589.7	590.7	597.8
37.5°	510.1	512.1	515.1	509.1	509.1	506.1	509.1	511.1	507.1	507.1	512.1
40°	454.6	450.6	446.6	440.5	437.5	431.4	431.4	426.4	423.4	421.4	422.4
42.5°	401.2	392.2	383.1	370.0	363.9	357.9	351.8	344.8	342.7	337.7	334.7
45°	349.8	336.7	324.6	303.4	291.4	285.3	272.2	258.1	249.0	247.0	238.9
47.5°	306.4	287.3	267.1	241.9	229.9	218.8	199.6	187.5	175.4	169.4	164.3
50°	268.1	251.0	224.8	197.6	182.5	171.4	150.2	136.1	123.0	113.9	107.9
52.5°	234.9	215.7	191.6	160.3	145.2	133.1	109.9	93.8	82.7	73.6	66.5
55°	197.6	182.5	158.3	129.0	113.9	99.8	79.6	62.5	51.4	45.4	40.3
57.5°	170.4	157.3	134.1	105.8	91.7	78.6	58.5	44.4	35.3	29.2	26.2
60°	152.2	140.1	119.9	92.7	79.6	67.5	48.4	35.3	27.2	22.2	20.1
62.5°	137.1	125.0	106.9	81.6	70.6	58.5	41.3	29.2	22.2	18.1	15.1
65°	119.9	108.9	92.7	70.6	60.5	50.4	35.3	24.2	18.1	14.1	12.1
67.5°	101.8	91.7	77.6	58.5	50.4	42.3	28.2	20.1	15.1	12.1	10.1
70°	82.7	74.6	61.5	47.4	40.3	33.3	23.2	16.1	11.1	9.1	8.1
72.5°	63.5	56.4	47.4	36.3	30.3	25.2	17.1	12.1	9.1	7.1	6.0
75°	45.4	40.3	33.3	26.2	22.2	18.1	13.1	9.1	6.0	5.1	4.0
77.5°	31.2	28.2	23.2	18.1	15.1	13.1	9.1	6.0	5.1	4.0	3.0
80°	20.1	18.1	15.1	11.1	9.1	8.1	5.1	4.0	3.0	2.0	2.0
82.5°	12.1	11.1	9.1	6.0	5.1	4.0	3.0	2.0	2.0	1.0	1.0
85°	7.1	6.0	4.0	3.0	3.0	2.0	2.0	1.0	1.0	0.0	0.0
87.5°	3.0	2.0	2.0	1.0	1.0	1.0	1.0	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°	772.2	772.2	772.2	772.2	772.2	772.2	772.2	772.2	772.2	772.2	772.2
2.5°	775.2	780.3	779.2	782.3	781.3	781.3	786.3	784.3	789.4	789.4	790.3
5°	786.3	793.4	793.4	798.4	797.4	799.4	804.4	804.4	810.5	812.5	812.5
7.5°	802.4	811.5	813.5	818.6	819.6	823.6	827.7	828.7	836.7	838.7	839.8
10°	824.6	835.7	838.7	843.8	845.8	849.8	854.9	856.9	867.0	868.0	872.0
12.5°	851.8	863.9	867.0	873.0	874.0	879.1	886.1	888.1	898.2	901.2	904.2
15°	878.1	889.1	894.2	900.2	901.2	907.3	913.3	915.3	924.4	928.5	931.5
17.5°	896.2	909.3	912.3	920.4	920.4	925.4	931.5	933.5	942.6	945.6	947.6
20°	900.2	912.3	916.4	922.4	923.4	926.4	931.5	933.5	941.6	942.6	945.6
22.5°	885.1	897.2	899.2	905.3	906.3	909.3	913.3	912.3	922.4	921.4	922.4
25°	852.9	863.9	863.9	871.0	870.0	873.0	875.0	874.0	883.1	883.1	883.1
27.5°	806.5	816.6	817.6	822.6	819.6	820.6	822.6	821.6	827.7	827.7	827.7
30°	749.0	757.1	754.0	758.1	756.1	758.1	756.1	755.1	757.1	759.1	758.1
32.5°	677.4	683.5	683.5	684.5	684.5	678.5	676.4	676.4	675.4	674.4	674.4
35°	594.8	599.8	597.8	597.8	596.8	590.7	587.7	585.7	588.7	582.7	586.7
37.5°	510.1	511.1	508.1	507.1	502.0	502.0	497.0	492.9	495.0	494.0	489.9
40°	417.3	421.4	415.3	413.3	416.4	412.3	407.3	402.2	406.3	401.2	403.2
42.5°	326.6	325.6	323.6	323.6	323.6	317.5	316.6	315.5	316.6	312.5	309.5
45°	235.9	232.9	229.9	229.9	225.8	223.8	223.8	220.8	215.7	215.7	209.7
47.5°	159.3	152.2	150.2	149.2	147.2	147.2	145.2	143.1	142.1	137.1	137.1
50°	103.8	96.8	94.7	93.8	94.7	92.7	90.7	88.7	86.7	85.7	83.7
52.5°	62.5	59.5	57.5	56.4	54.4	53.4	52.4	50.4	49.4	49.4	48.4
55°	37.3	34.3	30.3	30.3	30.3	29.2	28.2	27.2	26.2	26.2	25.2
57.5°	23.2	21.2	19.2	18.1	18.1	18.1	17.1	17.1	17.1	17.1	16.1
60°	17.1	15.1	14.1	14.1	14.1	13.1	13.1	13.1	13.1	12.1	12.1
62.5°	13.1	12.1	11.1	11.1	10.1	10.1	10.1	10.1	10.1	10.1	9.1
65°	11.1	9.1	9.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1
67.5°	8.1	7.1	7.1	7.1	7.1	6.0	6.0	6.0	6.0	6.0	6.0
70°	6.0	6.0	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
72.5°	5.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
75°	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
77.5°	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
80°	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
82.5°	1.0	1.0	1.0	1.0	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	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



TEST NUMBER: P858426

CATALOG NUMBER: LD4C15W2N2765D010 4LBSWNL1_6500K

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	772.2	772.2	772.2	772.2	772.2	772.2	772.2	772.2
2.5°	790.3	795.4	790.3	790.3	793.4	792.4	794.4	791.4
5°	813.5	820.6	815.5	814.6	819.6	818.6	819.6	817.6
7.5°	841.8	848.8	843.8	843.8	848.8	847.8	850.9	848.8
10°	874.0	882.1	875.0	876.0	883.1	882.1	882.1	882.1
12.5°	907.3	915.3	911.3	911.3	916.4	917.4	918.4	917.4
15°	934.5	942.6	937.5	937.5	944.6	943.6	944.6	943.6
17.5°	950.6	958.7	952.7	952.7	958.7	958.7	959.7	960.7
20°	946.6	955.7	950.6	948.6	955.7	955.7	954.7	954.7
22.5°	923.4	931.5	927.4	925.4	930.5	928.5	927.4	928.5
25°	883.1	891.2	883.1	883.1	887.1	886.1	887.1	886.1
27.5°	828.7	834.7	826.6	825.6	829.7	827.7	826.6	829.7
30°	756.1	762.1	758.1	755.1	760.1	757.1	755.1	756.1
32.5°	673.4	677.4	675.4	670.4	673.4	671.4	670.4	671.4
35°	582.7	587.7	579.7	578.6	583.7	579.7	577.6	582.7
37.5°	488.9	495.0	487.9	488.9	485.9	486.9	484.9	487.9
40°	400.2	399.2	397.2	396.2	397.2	394.2	396.2	393.2
42.5°	304.4	306.4	305.5	304.4	305.5	301.4	299.4	303.4
45°	211.7	210.7	208.7	206.6	206.6	205.7	205.7	202.6
47.5°	136.1	135.1	131.0	132.1	134.1	132.1	129.0	133.1
50°	82.7	81.6	81.6	80.6	82.7	80.6	78.6	78.6
52.5°	46.4	46.4	45.4	45.4	45.4	45.4	44.4	43.4
55°	25.2	24.2	24.2	24.2	23.2	23.2	23.2	23.2
57.5°	16.1	16.1	16.1	16.1	16.1	16.1	15.1	15.1
60°	12.1	12.1	12.1	12.1	11.1	12.1	11.1	11.1
62.5°	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1
65°	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
67.5°	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
70°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
72.5°	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
75°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
77.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
80°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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)