

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: P858421

Luminaire Tested: **LD4C15W2N2765D010 4LBSWNL1_2700K**

Issue Date: 11/9/2023



Test Information

Test Method: LM-79-08
Report Number: P858421
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 4LBSWNLi_2700K
Description: 4 INCH 1500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, W2N2765 LEDS
AND 4LBSWNLi TRIM WITH FINISH

Light Source: -
Ballast/Driver: -

Summary

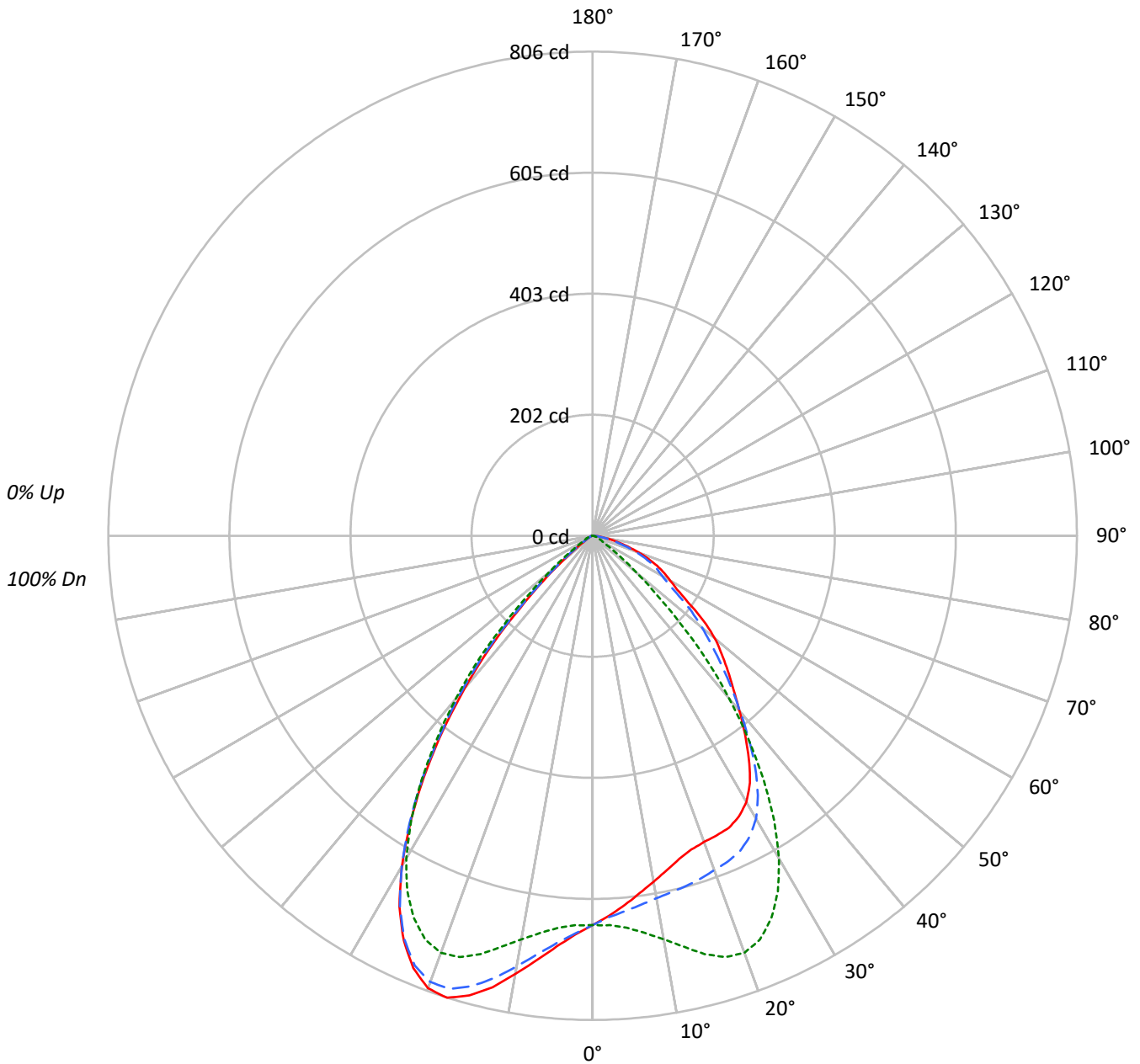
Lumens per Lamp: N/A
Luminaire Lumens: 1196.0 lumens
Efficiency: N/A
Efficacy: 62.3 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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°	79621	79621	79621
5°	76065	80764	84624
10°	72928	85079	92351
15°	70805	91689	100732
20°	70899	96563	104760
25°	72711	95308	100811
30°	72618	87981	90024
35°	68014	74358	73338
40°	60926	56724	52923
45°	55267	36017	29553
50°	50782	18272	12614
55°	41681	8161	4177
60°	36586	4570	2285
65°	34418	3430	1715
70°	29490	2730	1509
75°	22499	1994	1234
80°	16131	1203	637
85°	11981	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.0	5.3
10°-20°	196.2	16.4
20°-30°	303.6	25.4
30°-40°	299.1	25.0
40°-50°	183.7	15.4
50°-60°	81.7	6.8
60°-70°	45.6	3.8
70°-80°	19.8	1.7
80°-90°	3.5	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°	562.7	47.0
0°-40°	861.8	72.1
0°-60°	1127.1	94.2
0°-90°	1196.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1196.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	648	648	648	648	648	
5°	617	627	655	680	686	58
15°	557	603	721	776	792	158
25°	536	580	703	741	744	246
35°	454	472	496	494	489	281
45°	318	302	207	181	170	246
55°	195	176	38	22	20	179
65°	118	107	12	7	6	116
75°	47	41	4	3	3	52
85°	8	7	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°	648.1	648.1	648.1	648.1	648.1	648.1	648.1	648.1	648.1	648.1	648.1
2.5°	632.9	632.9	632.9	632.9	634.6	632.0	634.6	634.6	637.1	637.9	635.4
5°	616.8	616.0	616.8	616.8	618.5	617.7	620.2	621.9	625.3	627.0	627.0
7.5°	599.9	599.9	599.9	601.6	604.1	603.3	605.8	608.3	613.4	616.8	619.3
10°	584.6	583.8	586.3	587.2	589.7	589.7	594.0	596.5	602.4	609.2	612.6
12.5°	570.3	569.4	571.1	573.7	577.9	577.9	581.3	585.5	594.0	601.6	607.5
15°	556.7	557.6	560.1	561.8	566.9	566.9	571.1	576.2	585.5	594.8	603.3
17.5°	547.4	548.3	550.0	552.5	557.6	557.6	561.8	567.7	577.9	588.0	598.2
20°	542.3	543.2	544.9	547.4	551.7	552.5	555.9	562.7	571.9	582.9	592.3
22.5°	539.8	541.5	543.2	544.9	549.1	549.1	553.3	558.4	567.7	578.7	587.2
25°	536.4	538.1	539.0	541.5	544.9	544.9	547.4	553.3	561.8	571.1	579.6
27.5°	527.1	528.8	529.6	532.2	535.6	534.7	538.1	542.3	550.0	558.4	565.2
30°	511.9	512.7	514.4	515.3	517.8	517.8	520.3	524.6	529.6	537.3	544.0
32.5°	487.3	489.0	489.9	490.7	493.3	492.4	493.3	495.8	500.9	507.7	511.9
35°	453.5	456.9	456.9	458.6	459.4	458.6	458.6	462.0	464.5	469.6	472.1
37.5°	416.3	418.8	418.0	419.7	420.5	418.0	419.7	420.5	423.9	426.4	427.3
40°	379.9	380.7	380.7	380.7	380.7	379.9	380.7	381.6	384.1	384.1	381.6
42.5°	346.9	347.8	347.8	346.0	347.8	346.9	346.9	346.9	346.9	343.5	341.0
45°	318.1	319.0	319.0	318.1	318.1	316.4	315.6	314.7	312.2	308.0	302.0
47.5°	291.0	292.7	293.6	291.9	291.0	289.4	289.4	284.3	280.9	275.8	267.4
50°	265.7	267.4	267.4	265.7	265.7	263.1	260.6	258.9	253.8	247.9	237.7
52.5°	233.5	236.1	236.1	235.2	235.2	231.8	231.0	227.6	223.4	216.6	208.1
55°	194.6	198.0	197.1	196.3	194.6	194.6	194.6	192.1	189.5	184.4	176.0
57.5°	166.7	167.5	167.5	166.7	166.7	165.0	165.0	162.5	161.6	156.5	149.8
60°	148.9	148.9	149.8	148.9	148.1	147.2	146.4	144.7	142.1	138.8	133.7
62.5°	134.5	135.4	135.4	134.5	133.7	132.8	132.0	130.3	128.6	126.1	121.0
65°	118.4	120.1	119.3	118.4	117.6	116.7	116.7	115.1	113.4	111.7	106.6
67.5°	100.7	101.5	102.4	100.7	100.7	99.8	99.8	98.2	97.3	93.9	90.5
70°	82.1	82.9	82.9	82.1	82.1	81.2	81.2	80.4	79.5	77.0	73.6
72.5°	64.3	65.1	64.3	63.4	63.4	63.4	62.6	61.8	60.9	59.2	56.7
75°	47.4	47.4	48.2	47.4	46.5	46.5	45.7	45.7	44.0	43.2	40.6
77.5°	33.8	34.7	33.8	33.8	33.0	32.2	32.2	31.3	31.3	30.5	28.8
80°	22.8	22.8	23.7	22.8	22.0	22.8	22.0	21.1	21.1	20.3	18.6
82.5°	14.4	15.2	14.4	14.4	14.4	14.4	14.4	13.5	13.5	12.7	11.8
85°	8.5	8.5	8.5	8.5	8.5	8.5	8.5	7.6	7.6	7.6	6.8
87.5°	4.2	4.2	3.4	3.4	4.2	4.2	4.2	3.4	3.4	3.4	3.4
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°	648.1	648.1	648.1	648.1	648.1	648.1	648.1	648.1	648.1	648.1	648.1
2.5°	638.8	639.6	641.3	643.9	643.9	642.2	646.4	646.4	648.1	648.9	652.3
5°	632.0	633.7	637.1	641.3	642.2	641.3	647.3	649.8	652.3	654.9	660.0
7.5°	626.1	629.5	635.4	641.3	643.9	643.9	653.2	656.6	661.6	666.7	672.6
10°	622.7	627.8	636.3	645.6	648.1	650.6	661.6	668.4	675.2	682.0	690.4
12.5°	618.5	627.8	638.8	650.6	655.7	659.1	674.3	682.8	692.1	700.6	711.6
15°	617.7	628.7	643.0	658.3	665.0	670.1	687.0	698.9	709.9	720.9	731.9
17.5°	614.3	627.8	645.6	662.5	671.0	677.7	697.2	711.6	724.3	735.3	748.0
20°	610.0	625.3	644.7	663.3	672.6	679.4	700.6	714.1	728.5	738.6	750.5
22.5°	604.1	619.3	638.8	657.4	665.9	671.8	692.9	704.8	717.5	727.6	738.6
25°	594.0	608.3	625.3	640.5	648.9	654.0	672.6	683.7	692.9	703.1	713.3
27.5°	579.6	590.6	605.0	616.0	621.0	626.1	641.3	650.6	659.1	667.6	674.3
30°	554.2	562.7	572.8	582.1	587.2	588.0	602.4	607.5	614.3	620.2	625.3
32.5°	520.3	527.1	533.0	538.1	541.5	542.3	553.3	555.0	561.8	561.8	569.4
35°	477.2	480.6	484.8	484.8	487.3	484.8	492.4	494.1	495.0	495.8	501.7
37.5°	428.1	429.8	432.4	427.3	427.3	424.7	427.3	429.0	425.6	425.6	429.8
40°	381.6	378.2	374.8	369.7	367.2	362.1	362.1	357.9	355.4	353.7	354.5
42.5°	336.8	329.1	321.5	310.5	305.4	300.4	295.3	289.4	287.7	283.5	280.9
45°	293.6	282.6	272.4	254.7	244.5	239.4	228.5	216.6	209.0	207.3	200.5
47.5°	257.2	241.1	224.2	203.1	192.9	183.6	167.5	157.4	147.2	142.1	137.9
50°	225.0	210.7	188.7	165.8	153.1	143.8	126.1	114.2	103.2	95.6	90.5
52.5°	197.1	181.1	160.8	134.5	121.9	111.7	92.2	78.7	69.4	61.8	55.9
55°	165.8	153.1	132.8	108.3	95.6	83.8	66.8	52.5	43.2	38.1	33.8
57.5°	143.0	132.0	112.5	88.8	77.0	66.0	49.1	37.2	29.6	24.5	22.0
60°	127.8	117.6	100.7	77.8	66.8	56.7	40.6	29.6	22.8	18.6	16.9
62.5°	115.1	104.9	89.7	68.5	59.2	49.1	34.7	24.5	18.6	15.2	12.7
65°	100.7	91.4	77.8	59.2	50.8	42.3	29.6	20.3	15.2	11.8	10.1
67.5°	85.5	77.0	65.1	49.1	42.3	35.5	23.7	16.9	12.7	10.1	8.5
70°	69.4	62.6	51.6	39.8	33.8	27.9	19.5	13.5	9.3	7.6	6.8
72.5°	53.3	47.4	39.8	30.5	25.4	21.1	14.4	10.1	7.6	5.9	5.1
75°	38.1	33.8	27.9	22.0	18.6	15.2	11.0	7.6	5.1	4.2	3.4
77.5°	26.2	23.7	19.5	15.2	12.7	11.0	7.6	5.1	4.2	3.4	2.6
80°	16.9	15.2	12.7	9.3	7.6	6.8	4.2	3.4	2.6	1.7	1.7
82.5°	10.1	9.3	7.6	5.1	4.2	3.4	2.6	1.7	1.7	0.9	0.9
85°	5.9	5.1	3.4	2.6	2.6	1.7	1.7	0.9	0.9	0.0	0.0
87.5°	2.6	1.7	1.7	0.9	0.9	0.9	0.9	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°	648.1	648.1	648.1	648.1	648.1	648.1	648.1	648.1	648.1	648.1	648.1
2.5°	650.6	654.9	654.0	656.6	655.7	655.7	660.0	658.3	662.5	662.5	663.3
5°	660.0	665.9	665.9	670.1	669.3	671.0	675.2	675.2	680.3	682.0	682.0
7.5°	673.5	681.1	682.8	687.0	687.9	691.2	694.7	695.5	702.3	703.9	704.8
10°	692.1	701.4	703.9	708.2	709.9	713.3	717.5	719.2	727.6	728.5	731.9
12.5°	714.9	725.1	727.6	732.7	733.6	737.8	743.7	745.4	753.9	756.4	758.9
15°	737.0	746.2	750.5	755.6	756.4	761.5	766.6	768.2	775.9	779.3	781.8
17.5°	752.2	763.2	765.7	772.5	772.5	776.7	781.8	783.5	791.1	793.6	795.3
20°	755.6	765.7	769.1	774.2	775.0	777.6	781.8	783.5	790.3	791.1	793.6
22.5°	742.9	753.0	754.7	759.8	760.6	763.2	766.6	765.7	774.2	773.3	774.2
25°	715.8	725.1	725.1	731.0	730.2	732.7	734.4	733.6	741.2	741.2	741.2
27.5°	676.9	685.3	686.2	690.4	687.9	688.7	690.4	689.6	694.7	694.7	694.7
30°	628.7	635.4	632.9	636.3	634.6	636.3	634.6	633.7	635.4	637.1	636.3
32.5°	568.6	573.7	573.7	574.5	574.5	569.4	567.7	567.7	566.9	566.0	566.0
35°	499.2	503.4	501.7	501.7	500.9	495.8	493.3	491.6	494.1	489.0	492.4
37.5°	428.1	429.0	426.4	425.6	421.4	421.4	417.1	413.7	415.4	414.6	411.2
40°	350.3	353.7	348.6	346.9	349.5	346.0	341.8	337.6	341.0	336.8	338.4
42.5°	274.1	273.3	271.6	271.6	271.6	266.5	265.7	264.8	265.7	262.3	259.8
45°	198.0	195.4	192.9	192.9	189.5	187.8	187.8	185.3	181.1	181.1	176.0
47.5°	133.7	127.8	126.1	125.2	123.5	123.5	121.9	120.1	119.3	115.1	115.1
50°	87.1	81.2	79.5	78.7	79.5	77.8	76.1	74.5	72.8	71.9	70.2
52.5°	52.5	49.9	48.2	47.4	45.7	44.8	44.0	42.3	41.5	41.5	40.6
55°	31.3	28.8	25.4	25.4	25.4	24.5	23.7	22.8	22.0	22.0	21.1
57.5°	19.5	17.8	16.1	15.2	15.2	15.2	14.4	14.4	14.4	14.4	13.5
60°	14.4	12.7	11.8	11.8	11.8	11.0	11.0	11.0	11.0	10.1	10.1
62.5°	11.0	10.1	9.3	9.3	8.5	8.5	8.5	8.5	8.5	8.5	7.6
65°	9.3	7.6	7.6	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
67.5°	6.8	5.9	5.9	5.9	5.9	5.1	5.1	5.1	5.1	5.1	5.1
70°	5.1	5.1	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
72.5°	4.2	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
75°	3.4	3.4	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
77.5°	2.6	2.6	2.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
80°	1.7	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
82.5°	0.9	0.9	0.9	0.9	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°	648.1	648.1	648.1	648.1	648.1	648.1	648.1	648.1
2.5°	663.3	667.6	663.3	663.3	665.9	665.0	666.7	664.2
5°	682.8	688.7	684.5	683.7	687.9	687.0	687.9	686.2
7.5°	706.5	712.4	708.2	708.2	712.4	711.6	714.1	712.4
10°	733.6	740.3	734.4	735.3	741.2	740.3	740.3	740.3
12.5°	761.5	768.2	764.9	764.9	769.1	769.9	770.8	769.9
15°	784.3	791.1	786.9	786.9	792.8	792.0	792.8	792.0
17.5°	797.9	804.6	799.6	799.6	804.6	804.6	805.5	806.3
20°	794.5	802.1	797.9	796.2	802.1	802.1	801.3	801.3
22.5°	775.0	781.8	778.4	776.7	780.9	779.3	778.4	779.3
25°	741.2	748.0	741.2	741.2	744.5	743.7	744.5	743.7
27.5°	695.5	700.6	693.8	692.9	696.4	694.7	693.8	696.4
30°	634.6	639.6	636.3	633.7	637.9	635.4	633.7	634.6
32.5°	565.2	568.6	566.9	562.7	565.2	563.5	562.7	563.5
35°	489.0	493.3	486.5	485.7	489.9	486.5	484.8	489.0
37.5°	410.3	415.4	409.5	410.3	407.8	408.7	407.0	409.5
40°	335.9	335.1	333.4	332.5	333.4	330.8	332.5	330.0
42.5°	255.5	257.2	256.4	255.5	256.4	253.0	251.3	254.7
45°	177.7	176.8	175.2	173.4	173.4	172.6	172.6	170.1
47.5°	114.2	113.4	110.0	110.8	112.5	110.8	108.3	111.7
50°	69.4	68.5	68.5	67.7	69.4	67.7	66.0	66.0
52.5°	38.9	38.9	38.1	38.1	38.1	38.1	37.2	36.4
55°	21.1	20.3	20.3	20.3	19.5	19.5	19.5	19.5
57.5°	13.5	13.5	13.5	13.5	13.5	13.5	12.7	12.7
60°	10.1	10.1	10.1	10.1	9.3	10.1	9.3	9.3
62.5°	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6
65°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
67.5°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
70°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
72.5°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
75°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
77.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
80°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
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)