

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: P858340

Luminaire Tested: **LD4C10W2N2765D010 4LBSWNL1_4000K**

Issue Date: 11/9/2023



Test Information

Test Method: LM-79-08
Report Number: P858340
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: LD4C10W2N2765D010 4LBSWNL_4000K
Description: 4 INCH 1000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, W2N2765 LEDS AND 4LBSWNL TRIM WITH FINISH

Light Source: -
Ballast/Driver: -

Summary

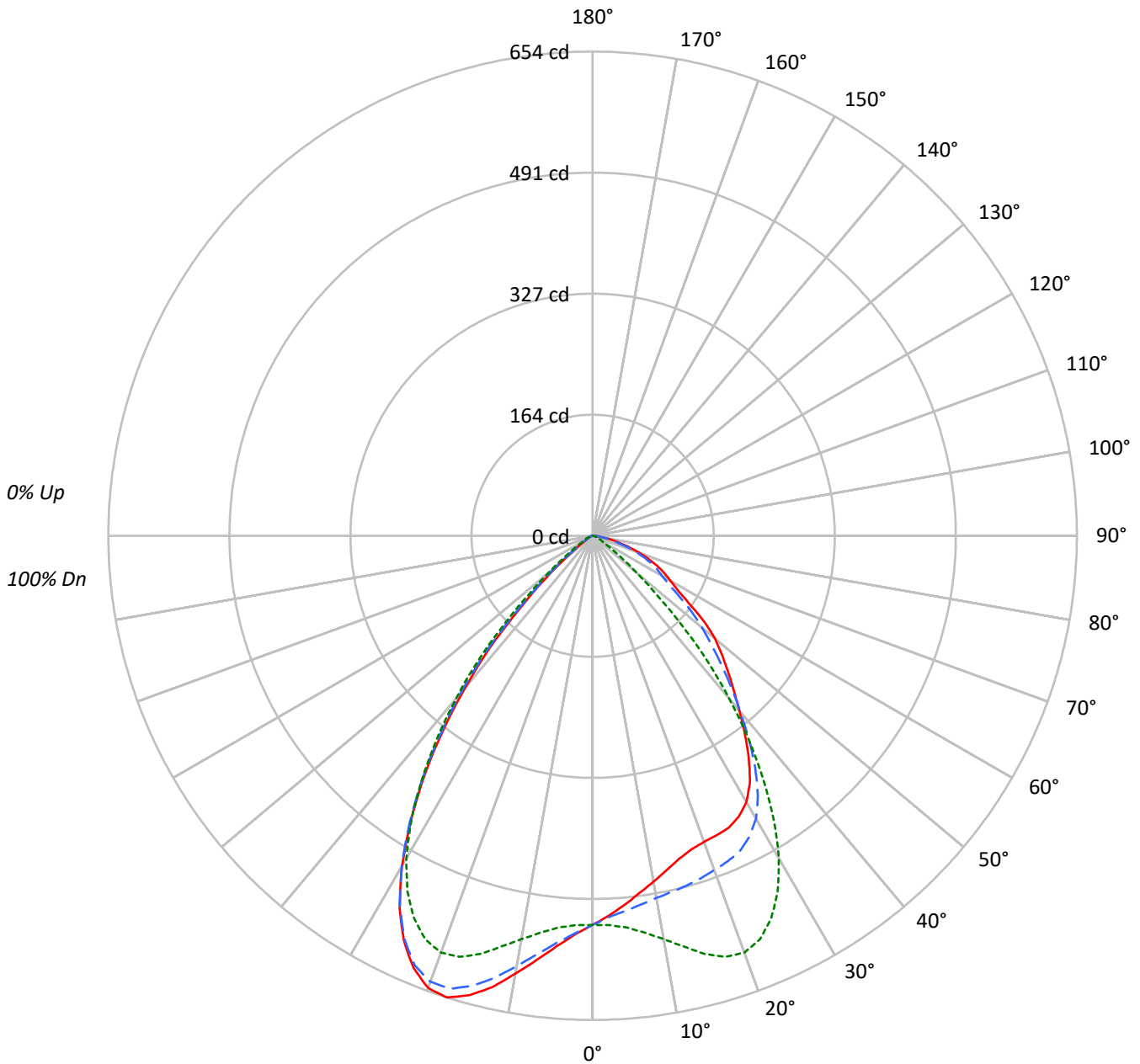
Lumens per Lamp: N/A
Luminaire Lumens: 970.0 lumens
Efficiency: N/A
Efficacy: 74.6 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 13
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°	64572	64572	64572
5°	61686	65497	68629
10°	59156	68998	74899
15°	57425	74366	81692
20°	57512	78325	84967
25°	58966	77306	81766
30°	58900	71355	73015
35°	55161	60306	59481
40°	49411	45995	42916
45°	44825	29206	23959
50°	41188	14812	10225
55°	33799	6618	3384
60°	29681	3710	1867
65°	27936	2791	1395
70°	23923	2227	1221
75°	18227	1614	997
80°	13088	990	495
85°	9726	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.1	5.3
10°-20°	159.1	16.4
20°-30°	246.2	25.4
30°-40°	242.6	25.0
40°-50°	148.9	15.4
50°-60°	66.2	6.8
60°-70°	37.0	3.8
70°-80°	16.0	1.7
80°-90°	2.9	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°	456.4	47.0
0°-40°	699.0	72.1
0°-60°	914.1	94.2
0°-90°	970.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	970.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	526	526	526	526	526	
5°	500	508	531	552	556	47
15°	452	489	585	629	642	128
25°	435	470	570	601	603	200
35°	368	383	402	401	397	228
45°	258	245	168	147	138	200
55°	158	143	31	18	16	145
65°	96	86	10	6	5	94
75°	38	33	3	2	2	42
85°	7	6	0	0	0	9
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°	525.6	525.6	525.6	525.6	525.6	525.6	525.6	525.6	525.6	525.6	525.6
2.5°	513.3	513.3	513.3	513.3	514.7	512.6	514.7	514.7	516.7	517.4	515.4
5°	500.2	499.6	500.2	500.2	501.6	500.9	503.0	504.4	507.1	508.5	508.5
7.5°	486.5	486.5	486.5	487.9	489.9	489.3	491.3	493.4	497.5	500.2	502.3
10°	474.2	473.5	475.5	476.2	478.3	478.3	481.7	483.8	488.6	494.1	496.8
12.5°	462.5	461.8	463.2	465.3	468.7	468.7	471.4	474.9	481.7	487.9	492.7
15°	451.5	452.2	454.3	455.6	459.8	459.8	463.2	467.3	474.9	482.4	489.3
17.5°	444.0	444.7	446.0	448.1	452.2	452.2	455.6	460.5	468.7	476.9	485.2
20°	439.9	440.6	441.9	444.0	447.4	448.1	450.9	456.3	463.9	472.8	480.3
22.5°	437.8	439.2	440.6	441.9	445.3	445.3	448.8	452.9	460.5	469.4	476.2
25°	435.0	436.4	437.1	439.2	441.9	441.9	444.0	448.8	455.6	463.2	470.1
27.5°	427.5	428.9	429.6	431.6	434.4	433.7	436.4	439.9	446.0	452.9	458.4
30°	415.2	415.9	417.2	417.9	420.0	420.0	422.0	425.4	429.6	435.7	441.2
32.5°	395.3	396.6	397.3	398.0	400.1	399.4	400.1	402.1	406.2	411.7	415.2
35°	367.8	370.6	370.6	371.9	372.6	371.9	371.9	374.7	376.7	380.8	382.9
37.5°	337.6	339.7	339.0	340.4	341.1	339.0	340.4	341.1	343.8	345.8	346.5
40°	308.1	308.8	308.8	308.8	308.8	308.1	308.8	309.5	311.5	311.5	309.5
42.5°	281.3	282.0	282.0	280.6	282.0	281.3	281.3	281.3	281.3	278.6	276.5
45°	258.0	258.7	258.7	258.0	258.0	256.6	256.0	255.3	253.2	249.8	245.0
47.5°	236.0	237.4	238.1	236.7	236.0	234.7	234.7	230.6	227.8	223.7	216.9
50°	215.5	216.9	216.9	215.5	215.5	213.4	211.4	210.0	205.9	201.1	192.8
52.5°	189.4	191.4	191.4	190.8	190.8	188.0	187.3	184.6	181.1	175.7	168.8
55°	157.8	160.6	159.9	159.2	157.8	157.8	157.8	155.8	153.7	149.6	142.7
57.5°	135.2	135.9	135.9	135.2	135.2	133.8	133.8	131.8	131.1	126.9	121.5
60°	120.8	120.8	121.5	120.8	120.1	119.4	118.7	117.4	115.3	112.5	108.4
62.5°	109.1	109.8	109.8	109.1	108.4	107.7	107.1	105.7	104.3	102.2	98.1
65°	96.1	97.4	96.8	96.1	95.4	94.7	94.7	93.3	91.9	90.6	86.5
67.5°	81.6	82.3	83.0	81.6	81.6	81.0	81.0	79.6	78.9	76.2	73.4
70°	66.6	67.2	67.2	66.6	66.6	65.9	65.9	65.2	64.5	62.5	59.7
72.5°	52.2	52.8	52.2	51.5	51.5	51.5	50.8	50.1	49.4	48.0	46.0
75°	38.4	38.4	39.1	38.4	37.7	37.7	37.0	37.0	35.7	35.0	32.9
77.5°	27.4	28.1	27.4	27.4	26.8	26.1	26.1	25.4	25.4	24.7	23.3
80°	18.5	18.5	19.2	18.5	17.9	18.5	17.9	17.2	17.2	16.5	15.1
82.5°	11.7	12.3	11.7	11.7	11.7	11.7	11.7	11.0	11.0	10.3	9.6
85°	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.2	6.2	6.2	5.5
87.5°	3.4	3.4	2.7	2.7	3.4	3.4	3.4	2.7	2.7	2.7	2.7
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°	525.6	525.6	525.6	525.6	525.6	525.6	525.6	525.6	525.6	525.6	525.6
2.5°	518.1	518.8	520.1	522.2	522.2	520.8	524.3	524.3	525.6	526.3	529.1
5°	512.6	514.0	516.7	520.1	520.8	520.1	524.9	527.0	529.1	531.1	535.2
7.5°	507.8	510.5	515.4	520.1	522.2	522.2	529.8	532.5	536.6	540.7	545.5
10°	505.1	509.2	516.0	523.6	525.6	527.7	536.6	542.1	547.6	553.1	560.0
12.5°	501.6	509.2	518.1	527.7	531.8	534.5	546.9	553.8	561.3	568.2	577.1
15°	500.9	509.9	521.5	533.9	539.4	543.5	557.2	566.8	575.7	584.7	593.6
17.5°	498.2	509.2	523.6	537.3	544.2	549.7	565.4	577.1	587.4	596.3	606.6
20°	494.8	507.1	522.9	538.0	545.5	551.0	568.2	579.2	590.8	599.1	608.7
22.5°	489.9	502.3	518.1	533.2	540.1	544.8	562.0	571.6	581.9	590.1	599.1
25°	481.7	493.4	507.1	519.5	526.3	530.4	545.5	554.5	562.0	570.3	578.5
27.5°	470.1	479.0	490.6	499.6	503.7	507.8	520.1	527.7	534.5	541.4	546.9
30°	449.5	456.3	464.6	472.1	476.2	476.9	488.6	492.7	498.2	503.0	507.1
32.5°	422.0	427.5	432.3	436.4	439.2	439.9	448.8	450.2	455.6	455.6	461.8
35°	387.0	389.8	393.2	393.2	395.3	393.2	399.4	400.7	401.4	402.1	406.9
37.5°	347.2	348.6	350.7	346.5	346.5	344.5	346.5	347.9	345.2	345.2	348.6
40°	309.5	306.7	304.0	299.9	297.8	293.7	293.7	290.3	288.2	286.8	287.5
42.5°	273.1	266.9	260.8	251.8	247.7	243.6	239.5	234.7	233.3	229.9	227.8
45°	238.1	229.2	221.0	206.6	198.3	194.2	185.3	175.7	169.5	168.1	162.6
47.5°	208.6	195.6	181.8	164.7	156.5	148.9	135.9	127.6	119.4	115.3	111.8
50°	182.5	170.9	153.0	134.5	124.2	116.7	102.2	92.6	83.7	77.5	73.4
52.5°	159.9	146.8	130.4	109.1	98.8	90.6	74.8	63.8	56.3	50.1	45.3
55°	134.5	124.2	107.7	87.8	77.5	67.9	54.2	42.6	35.0	30.9	27.4
57.5°	116.0	107.1	91.3	72.1	62.5	53.5	39.8	30.2	24.0	19.9	17.9
60°	103.6	95.4	81.6	63.1	54.2	46.0	32.9	24.0	18.5	15.1	13.7
62.5°	93.3	85.1	72.7	55.6	48.0	39.8	28.1	19.9	15.1	12.3	10.3
65°	81.6	74.1	63.1	48.0	41.2	34.3	24.0	16.5	12.3	9.6	8.2
67.5°	69.3	62.5	52.8	39.8	34.3	28.8	19.2	13.7	10.3	8.2	6.9
70°	56.3	50.8	41.9	32.3	27.4	22.6	15.8	11.0	7.6	6.2	5.5
72.5°	43.2	38.4	32.3	24.7	20.6	17.2	11.7	8.2	6.2	4.8	4.1
75°	30.9	27.4	22.6	17.9	15.1	12.3	8.9	6.2	4.1	3.4	2.7
77.5°	21.3	19.2	15.8	12.3	10.3	8.9	6.2	4.1	3.4	2.7	2.1
80°	13.7	12.3	10.3	7.6	6.2	5.5	3.4	2.7	2.1	1.4	1.4
82.5°	8.2	7.6	6.2	4.1	3.4	2.7	2.1	1.4	1.4	0.7	0.7
85°	4.8	4.1	2.7	2.1	2.1	1.4	1.4	0.7	0.7	0.0	0.0
87.5°	2.1	1.4	1.4	0.7	0.7	0.7	0.7	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°	525.6	525.6	525.6	525.6	525.6	525.6	525.6	525.6	525.6	525.6	525.6
2.5°	527.7	531.1	530.4	532.5	531.8	531.8	535.2	533.9	537.3	537.3	538.0
5°	535.2	540.1	540.1	543.5	542.8	544.2	547.6	547.6	551.7	553.1	553.1
7.5°	546.2	552.4	553.8	557.2	557.9	560.6	563.4	564.1	569.6	570.9	571.6
10°	561.3	568.9	570.9	574.4	575.7	578.5	581.9	583.3	590.1	590.8	593.6
12.5°	579.8	588.1	590.1	594.3	595.0	598.4	603.2	604.6	611.4	613.5	615.5
15°	597.7	605.2	608.7	612.8	613.5	617.6	621.7	623.1	629.3	632.0	634.1
17.5°	610.0	619.0	621.0	626.5	626.5	629.9	634.1	635.4	641.6	643.7	645.0
20°	612.8	621.0	623.8	627.9	628.6	630.6	634.1	635.4	640.9	641.6	643.7
22.5°	602.5	610.7	612.1	616.2	616.9	619.0	621.7	621.0	627.9	627.2	627.9
25°	580.5	588.1	588.1	592.9	592.2	594.3	595.6	595.0	601.1	601.1	601.1
27.5°	549.0	555.8	556.5	560.0	557.9	558.6	560.0	559.3	563.4	563.4	563.4
30°	509.9	515.4	513.3	516.0	514.7	516.0	514.7	514.0	515.4	516.7	516.0
32.5°	461.1	465.3	465.3	465.9	465.9	461.8	460.5	460.5	459.8	459.1	459.1
35°	404.9	408.3	406.9	406.9	406.2	402.1	400.1	398.7	400.7	396.6	399.4
37.5°	347.2	347.9	345.8	345.2	341.7	341.7	338.3	335.5	336.9	336.2	333.5
40°	284.1	286.8	282.7	281.3	283.4	280.6	277.2	273.8	276.5	273.1	274.5
42.5°	222.3	221.6	220.3	220.3	220.3	216.2	215.5	214.8	215.5	212.7	210.7
45°	160.6	158.5	156.5	156.5	153.7	152.3	152.3	150.3	146.8	146.8	142.7
47.5°	108.4	103.6	102.2	101.6	100.2	100.2	98.8	97.4	96.8	93.3	93.3
50°	70.7	65.9	64.5	63.8	64.5	63.1	61.8	60.4	59.0	58.3	57.0
52.5°	42.6	40.5	39.1	38.4	37.0	36.4	35.7	34.3	33.6	33.6	32.9
55°	25.4	23.3	20.6	20.6	20.6	19.9	19.2	18.5	17.9	17.9	17.2
57.5°	15.8	14.4	13.0	12.3	12.3	12.3	11.7	11.7	11.7	11.7	11.0
60°	11.7	10.3	9.6	9.6	9.6	8.9	8.9	8.9	8.9	8.2	8.2
62.5°	8.9	8.2	7.6	7.6	6.9	6.9	6.9	6.9	6.9	6.9	6.2
65°	7.6	6.2	6.2	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
67.5°	5.5	4.8	4.8	4.8	4.8	4.1	4.1	4.1	4.1	4.1	4.1
70°	4.1	4.1	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
72.5°	3.4	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
75°	2.7	2.7	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
77.5°	2.1	2.1	2.1	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
80°	1.4	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
82.5°	0.7	0.7	0.7	0.7	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: P858340

CATALOG NUMBER: LD4C10W2N2765D010 4LBSWNL1_4000K

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	525.6	525.6	525.6	525.6	525.6	525.6	525.6	525.6
2.5°	538.0	541.4	538.0	538.0	540.1	539.4	540.7	538.7
5°	553.8	558.6	555.1	554.5	557.9	557.2	557.9	556.5
7.5°	573.0	577.8	574.4	574.4	577.8	577.1	579.2	577.8
10°	595.0	600.4	595.6	596.3	601.1	600.4	600.4	600.4
12.5°	617.6	623.1	620.3	620.3	623.8	624.4	625.1	624.4
15°	636.1	641.6	638.2	638.2	643.0	642.3	643.0	642.3
17.5°	647.1	652.6	648.5	648.5	652.6	652.6	653.3	654.0
20°	644.3	650.5	647.1	645.7	650.5	650.5	649.9	649.9
22.5°	628.6	634.1	631.3	629.9	633.4	632.0	631.3	632.0
25°	601.1	606.6	601.1	601.1	603.9	603.2	603.9	603.2
27.5°	564.1	568.2	562.7	562.0	564.8	563.4	562.7	564.8
30°	514.7	518.8	516.0	514.0	517.4	515.4	514.0	514.7
32.5°	458.4	461.1	459.8	456.3	458.4	457.0	456.3	457.0
35°	396.6	400.1	394.6	393.9	397.3	394.6	393.2	396.6
37.5°	332.8	336.9	332.1	332.8	330.8	331.4	330.1	332.1
40°	272.4	271.8	270.4	269.7	270.4	268.3	269.7	267.6
42.5°	207.2	208.6	207.9	207.2	207.9	205.2	203.8	206.6
45°	144.1	143.4	142.1	140.7	140.7	140.0	140.0	137.9
47.5°	92.6	91.9	89.2	89.9	91.3	89.9	87.8	90.6
50°	56.3	55.6	55.6	54.9	56.3	54.9	53.5	53.5
52.5°	31.6	31.6	30.9	30.9	30.9	30.9	30.2	29.5
55°	17.2	16.5	16.5	16.5	15.8	15.8	15.8	15.8
57.5°	11.0	11.0	11.0	11.0	11.0	11.0	10.3	10.3
60°	8.2	8.2	8.2	8.2	7.6	8.2	7.6	7.6
62.5°	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
65°	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
67.5°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
70°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
72.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
75°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
77.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
80°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
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)