

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: P858337

Luminaire Tested: **LD4C10W2N2765D010 4LBSWNL1_2700K**

Issue Date: 11/9/2023



Test Information

Test Method: LM-79-08
Report Number: P858337
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_2700K
Description: 4 INCH 1000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, W2N2765 LEDS AND 4LBSWNL TRIM WITH FINISH

Light Source: -
Ballast/Driver: -

Summary

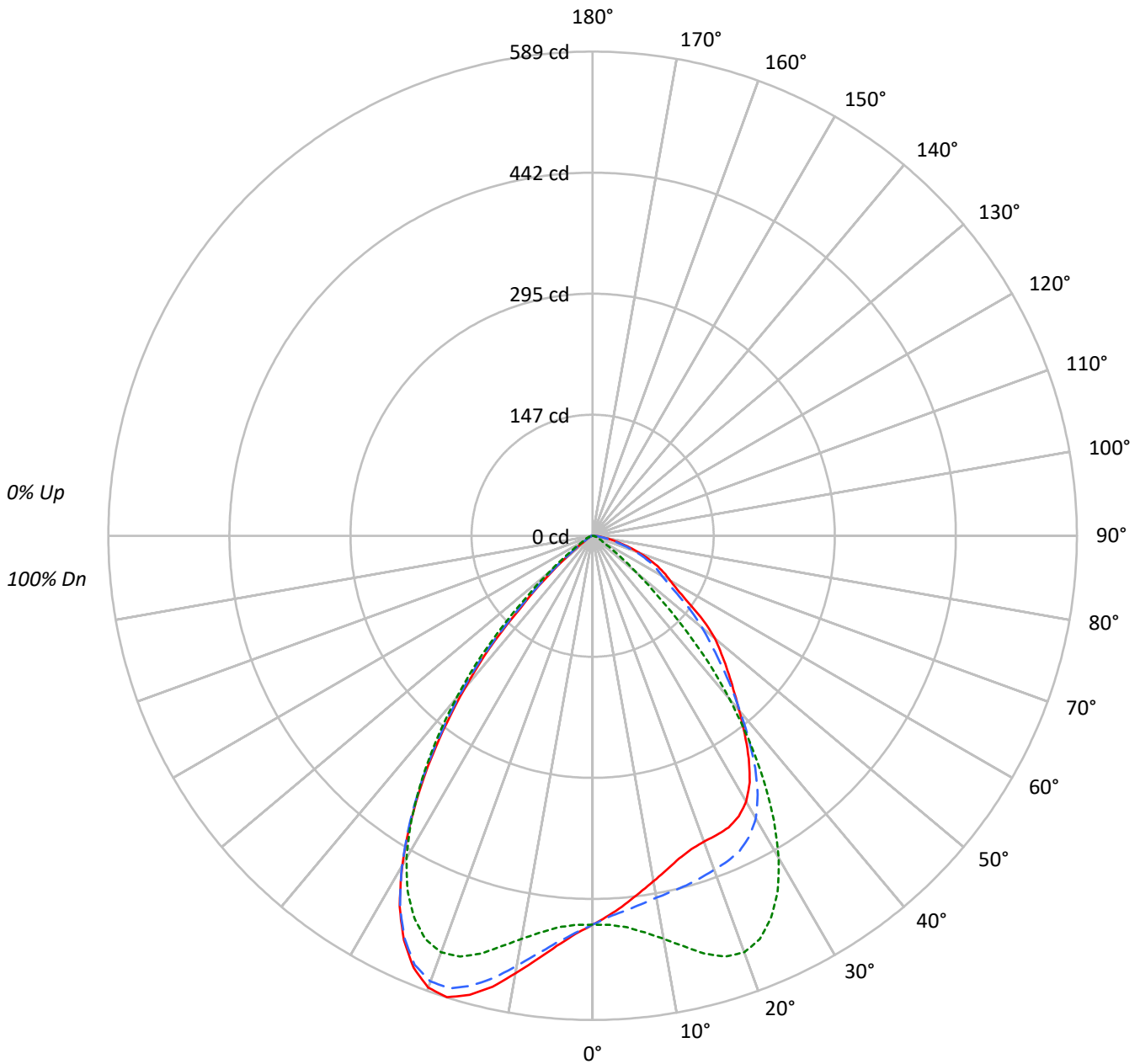
Lumens per Lamp: N/A
Luminaire Lumens: 873.0 lumens
Efficiency: N/A
Efficacy: 67.2 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	58122	58122	58122
5°	55520	58948	61772
10°	53230	62100	67414
15°	51689	66926	73527
20°	51759	70494	76469
25°	53069	69566	73592
30°	52999	64220	65709
35°	49642	54276	53542
40°	44472	41392	38634
45°	40343	26287	21561
50°	37059	13341	9212
55°	30436	5954	3041
60°	26708	3342	1671
65°	25145	2500	1250
70°	21516	2012	1114
75°	16424	1471	902
80°	11815	849	424
85°	8739	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.0	5.3
10°-20°	143.2	16.4
20°-30°	221.6	25.4
30°-40°	218.3	25.0
40°-50°	134.1	15.4
50°-60°	59.6	6.8
60°-70°	33.3	3.8
70°-80°	14.4	1.7
80°-90°	2.6	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°	410.7	47.0
0°-40°	629.1	72.1
0°-60°	822.7	94.2
0°-90°	873.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	873.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	473	473	473	473	473	
5°	450	458	478	497	501	42
15°	406	440	526	566	578	115
25°	392	423	513	541	543	180
35°	331	345	362	361	357	205
45°	232	220	151	132	124	180
55°	142	128	28	16	14	131
65°	86	78	9	5	4	85
75°	35	30	3	2	2	38
85°	6	5	0	0	0	8
90°	0	0	0	0	0	



TEST NUMBER: P858337

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	473.1	473.1	473.1	473.1	473.1	473.1	473.1	473.1	473.1	473.1	473.1
2.5°	462.0	462.0	462.0	462.0	463.2	461.3	463.2	463.2	465.1	465.7	463.8
5°	450.2	449.6	450.2	450.2	451.5	450.8	452.7	453.9	456.4	457.6	457.6
7.5°	437.9	437.9	437.9	439.1	441.0	440.3	442.2	444.0	447.8	450.2	452.1
10°	426.7	426.1	428.0	428.6	430.5	430.5	433.5	435.4	439.7	444.7	447.1
12.5°	416.2	415.6	416.9	418.7	421.8	421.8	424.3	427.4	433.5	439.1	443.4
15°	406.4	407.0	408.8	410.1	413.8	413.8	416.9	420.6	427.4	434.2	440.3
17.5°	399.6	400.2	401.4	403.3	407.0	407.0	410.1	414.4	421.8	429.2	436.6
20°	395.9	396.5	397.7	399.6	402.7	403.3	405.8	410.7	417.5	425.5	432.3
22.5°	394.0	395.3	396.5	397.7	400.8	400.8	403.9	407.6	414.4	422.4	428.6
25°	391.5	392.8	393.4	395.3	397.7	397.7	399.6	403.9	410.1	416.9	423.0
27.5°	384.8	386.0	386.6	388.5	390.9	390.3	392.8	395.9	401.4	407.6	412.5
30°	373.6	374.3	375.5	376.1	378.0	378.0	379.8	382.9	386.6	392.2	397.1
32.5°	355.7	357.0	357.6	358.2	360.1	359.4	360.1	361.9	365.6	370.6	373.6
35°	331.0	333.5	333.5	334.7	335.4	334.7	334.7	337.2	339.1	342.8	344.6
37.5°	303.9	305.7	305.1	306.3	307.0	305.1	306.3	307.0	309.4	311.3	311.9
40°	277.3	277.9	277.9	277.9	277.9	277.3	277.9	278.5	280.4	280.4	278.5
42.5°	253.2	253.8	253.8	252.6	253.8	253.2	253.2	253.2	253.2	250.7	248.9
45°	232.2	232.8	232.8	232.2	232.2	231.0	230.4	229.7	227.9	224.8	220.5
47.5°	212.4	213.7	214.3	213.1	212.4	211.2	211.2	207.5	205.0	201.3	195.2
50°	193.9	195.2	195.2	193.9	193.9	192.1	190.2	189.0	185.3	181.0	173.5
52.5°	170.5	172.3	172.3	171.7	171.7	169.2	168.6	166.1	163.0	158.1	151.9
55°	142.1	144.5	143.9	143.3	142.1	142.1	142.1	140.2	138.3	134.6	128.5
57.5°	121.7	122.3	122.3	121.7	121.7	120.4	120.4	118.6	118.0	114.3	109.3
60°	108.7	108.7	109.3	108.7	108.1	107.5	106.9	105.6	103.8	101.3	97.6
62.5°	98.2	98.8	98.8	98.2	97.6	97.0	96.3	95.1	93.9	92.0	88.3
65°	86.5	87.7	87.1	86.5	85.8	85.2	85.2	84.0	82.8	81.5	77.8
67.5°	73.5	74.1	74.7	73.5	73.5	72.9	72.9	71.6	71.0	68.5	66.1
70°	59.9	60.5	60.5	59.9	59.9	59.3	59.3	58.7	58.0	56.2	53.7
72.5°	46.9	47.5	46.9	46.3	46.3	46.3	45.7	45.1	44.5	43.2	41.4
75°	34.6	34.6	35.2	34.6	34.0	34.0	33.3	33.3	32.1	31.5	29.6
77.5°	24.7	25.3	24.7	24.7	24.1	23.5	23.5	22.8	22.8	22.2	21.0
80°	16.7	16.7	17.3	16.7	16.1	16.7	16.1	15.4	15.4	14.8	13.6
82.5°	10.5	11.1	10.5	10.5	10.5	10.5	10.5	9.9	9.9	9.3	8.6
85°	6.2	6.2	6.2	6.2	6.2	6.2	6.2	5.6	5.6	5.6	4.9
87.5°	3.1	3.1	2.5	2.5	3.1	3.1	3.1	2.5	2.5	2.5	2.5
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°	473.1	473.1	473.1	473.1	473.1	473.1	473.1	473.1	473.1	473.1	473.1
2.5°	466.3	466.9	468.1	470.0	470.0	468.8	471.8	471.8	473.1	473.7	476.2
5°	461.3	462.6	465.1	468.1	468.8	468.1	472.5	474.3	476.2	478.0	481.7
7.5°	457.0	459.5	463.8	468.1	470.0	470.0	476.8	479.3	483.0	486.7	491.0
10°	454.5	458.3	464.4	471.2	473.1	474.9	483.0	487.9	492.8	497.8	504.0
12.5°	451.5	458.3	466.3	474.9	478.6	481.1	492.2	498.4	505.2	511.4	519.4
15°	450.8	458.9	469.4	480.5	485.4	489.1	501.5	510.1	518.2	526.2	534.2
17.5°	448.4	458.3	471.2	483.6	489.8	494.7	508.9	519.4	528.7	536.7	546.0
20°	445.3	456.4	470.6	484.2	491.0	495.9	511.4	521.3	531.7	539.2	547.8
22.5°	441.0	452.1	466.3	479.9	486.1	490.4	505.8	514.5	523.7	531.1	539.2
25°	433.5	444.0	456.4	467.5	473.7	477.4	491.0	499.0	505.8	513.2	520.6
27.5°	423.0	431.1	441.6	449.6	453.3	457.0	468.1	474.9	481.1	487.3	492.2
30°	404.5	410.7	418.1	424.9	428.6	429.2	439.7	443.4	448.4	452.7	456.4
32.5°	379.8	384.8	389.1	392.8	395.3	395.9	403.9	405.1	410.1	410.1	415.6
35°	348.3	350.8	353.9	353.9	355.7	353.9	359.4	360.7	361.3	361.9	366.2
37.5°	312.5	313.7	315.6	311.9	311.9	310.0	311.9	313.1	310.7	310.7	313.7
40°	278.5	276.1	273.6	269.9	268.0	264.3	264.3	261.2	259.4	258.1	258.8
42.5°	245.8	240.2	234.7	226.6	222.9	219.2	215.5	211.2	210.0	206.9	205.0
45°	214.3	206.3	198.9	185.9	178.5	174.8	166.8	158.1	152.6	151.3	146.4
47.5°	187.7	176.0	163.7	148.2	140.8	134.0	122.3	114.9	107.5	103.8	100.7
50°	164.3	153.8	137.7	121.1	111.8	105.0	92.0	83.4	75.3	69.8	66.1
52.5°	143.9	132.2	117.4	98.2	88.9	81.5	67.3	57.4	50.6	45.1	40.8
55°	121.1	111.8	97.0	79.0	69.8	61.1	48.8	38.3	31.5	27.8	24.7
57.5°	104.4	96.3	82.1	64.8	56.2	48.2	35.8	27.2	21.6	17.9	16.1
60°	93.3	85.8	73.5	56.8	48.8	41.4	29.6	21.6	16.7	13.6	12.3
62.5°	84.0	76.6	65.5	50.0	43.2	35.8	25.3	17.9	13.6	11.1	9.3
65°	73.5	66.7	56.8	43.2	37.0	30.9	21.6	14.8	11.1	8.6	7.4
67.5°	62.4	56.2	47.5	35.8	30.9	25.9	17.3	12.3	9.3	7.4	6.2
70°	50.6	45.7	37.7	29.0	24.7	20.4	14.2	9.9	6.8	5.6	4.9
72.5°	38.9	34.6	29.0	22.2	18.5	15.4	10.5	7.4	5.6	4.3	3.7
75°	27.8	24.7	20.4	16.1	13.6	11.1	8.0	5.6	3.7	3.1	2.5
77.5°	19.1	17.3	14.2	11.1	9.3	8.0	5.6	3.7	3.1	2.5	1.9
80°	12.3	11.1	9.3	6.8	5.6	4.9	3.1	2.5	1.9	1.2	1.2
82.5°	7.4	6.8	5.6	3.7	3.1	2.5	1.9	1.2	1.2	0.6	0.6
85°	4.3	3.7	2.5	1.9	1.9	1.2	1.2	0.6	0.6	0.0	0.0
87.5°	1.9	1.2	1.2	0.6	0.6	0.6	0.6	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°	473.1	473.1	473.1	473.1	473.1	473.1	473.1	473.1	473.1	473.1	473.1
2.5°	474.9	478.0	477.4	479.3	478.6	478.6	481.7	480.5	483.6	483.6	484.2
5°	481.7	486.1	486.1	489.1	488.5	489.8	492.8	492.8	496.6	497.8	497.8
7.5°	491.6	497.2	498.4	501.5	502.1	504.6	507.1	507.7	512.6	513.8	514.5
10°	505.2	512.0	513.8	516.9	518.2	520.6	523.7	525.0	531.1	531.7	534.2
12.5°	521.9	529.3	531.1	534.8	535.5	538.5	542.9	544.1	550.3	552.1	554.0
15°	537.9	544.7	547.8	551.5	552.1	555.8	559.5	560.8	566.3	568.8	570.7
17.5°	549.0	557.1	558.9	563.9	563.9	566.9	570.7	571.9	577.4	579.3	580.5
20°	551.5	558.9	561.4	565.1	565.7	567.6	570.7	571.9	576.8	577.4	579.3
22.5°	542.2	549.7	550.9	554.6	555.2	557.1	559.5	558.9	565.1	564.5	565.1
25°	522.5	529.3	529.3	533.6	533.0	534.8	536.1	535.5	541.0	541.0	541.0
27.5°	494.1	500.3	500.9	504.0	502.1	502.7	504.0	503.3	507.1	507.1	507.1
30°	458.9	463.8	462.0	464.4	463.2	464.4	463.2	462.6	463.8	465.1	464.4
32.5°	415.0	418.7	418.7	419.3	419.3	415.6	414.4	414.4	413.8	413.2	413.2
35°	364.4	367.5	366.2	366.2	365.6	361.9	360.1	358.8	360.7	357.0	359.4
37.5°	312.5	313.1	311.3	310.7	307.6	307.6	304.5	302.0	303.2	302.6	300.2
40°	255.7	258.1	254.4	253.2	255.1	252.6	249.5	246.4	248.9	245.8	247.0
42.5°	200.1	199.5	198.2	198.2	198.2	194.5	193.9	193.3	193.9	191.5	189.6
45°	144.5	142.7	140.8	140.8	138.3	137.1	137.1	135.3	132.2	132.2	128.5
47.5°	97.6	93.3	92.0	91.4	90.2	90.2	88.9	87.7	87.1	84.0	84.0
50°	63.6	59.3	58.0	57.4	58.0	56.8	55.6	54.3	53.1	52.5	51.3
52.5°	38.3	36.4	35.2	34.6	33.3	32.7	32.1	30.9	30.3	30.3	29.6
55°	22.8	21.0	18.5	18.5	18.5	17.9	17.3	16.7	16.1	16.1	15.4
57.5°	14.2	13.0	11.7	11.1	11.1	11.1	10.5	10.5	10.5	10.5	9.9
60°	10.5	9.3	8.6	8.6	8.6	8.0	8.0	8.0	8.0	7.4	7.4
62.5°	8.0	7.4	6.8	6.8	6.2	6.2	6.2	6.2	6.2	6.2	5.6
65°	6.8	5.6	5.6	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
67.5°	4.9	4.3	4.3	4.3	4.3	3.7	3.7	3.7	3.7	3.7	3.7
70°	3.7	3.7	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
72.5°	3.1	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
75°	2.5	2.5	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
77.5°	1.9	1.9	1.9	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
80°	1.2	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
82.5°	0.6	0.6	0.6	0.6	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: P858337

CATALOG NUMBER: LD4C10W2N2765D010 4LBSWNL1_2700K

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	473.1	473.1	473.1	473.1	473.1	473.1	473.1	473.1
2.5°	484.2	487.3	484.2	484.2	486.1	485.4	486.7	484.8
5°	498.4	502.7	499.6	499.0	502.1	501.5	502.1	500.9
7.5°	515.7	520.0	516.9	516.9	520.0	519.4	521.3	520.0
10°	535.5	540.4	536.1	536.7	541.0	540.4	540.4	540.4
12.5°	555.8	560.8	558.3	558.3	561.4	562.0	562.6	562.0
15°	572.5	577.4	574.4	574.4	578.7	578.1	578.7	578.1
17.5°	582.4	587.3	583.6	583.6	587.3	587.3	587.9	588.6
20°	579.9	585.5	582.4	581.1	585.5	585.5	584.9	584.9
22.5°	565.7	570.7	568.2	566.9	570.0	568.8	568.2	568.8
25°	541.0	546.0	541.0	541.0	543.5	542.9	543.5	542.9
27.5°	507.7	511.4	506.4	505.8	508.3	507.1	506.4	508.3
30°	463.2	466.9	464.4	462.6	465.7	463.8	462.6	463.2
32.5°	412.5	415.0	413.8	410.7	412.5	411.3	410.7	411.3
35°	357.0	360.1	355.1	354.5	357.6	355.1	353.9	357.0
37.5°	299.5	303.2	298.9	299.5	297.7	298.3	297.1	298.9
40°	245.2	244.6	243.3	242.7	243.3	241.5	242.7	240.9
42.5°	186.5	187.7	187.1	186.5	187.1	184.7	183.4	185.9
45°	129.7	129.1	127.9	126.6	126.6	126.0	126.0	124.1
47.5°	83.4	82.8	80.3	80.9	82.1	80.9	79.0	81.5
50°	50.6	50.0	50.0	49.4	50.6	49.4	48.2	48.2
52.5°	28.4	28.4	27.8	27.8	27.8	27.8	27.2	26.6
55°	15.4	14.8	14.8	14.8	14.2	14.2	14.2	14.2
57.5°	9.9	9.9	9.9	9.9	9.9	9.9	9.3	9.3
60°	7.4	7.4	7.4	7.4	6.8	7.4	6.8	6.8
62.5°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
65°	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
67.5°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
70°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
72.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
75°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
77.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
80°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
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)