

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: P858342

Luminaire Tested: **LD4C10W2N2765D010 4LBSWNL1_6500K**

Issue Date: 11/9/2023



Test Information

Test Method: LM-79-08
Report Number: P858342
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_6500K
Description: 4 INCH 1000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 6500K, W2N2765 LEDS AND 4LBSWNL TRIM WITH FINISH

Light Source: -
Ballast/Driver: -

Summary

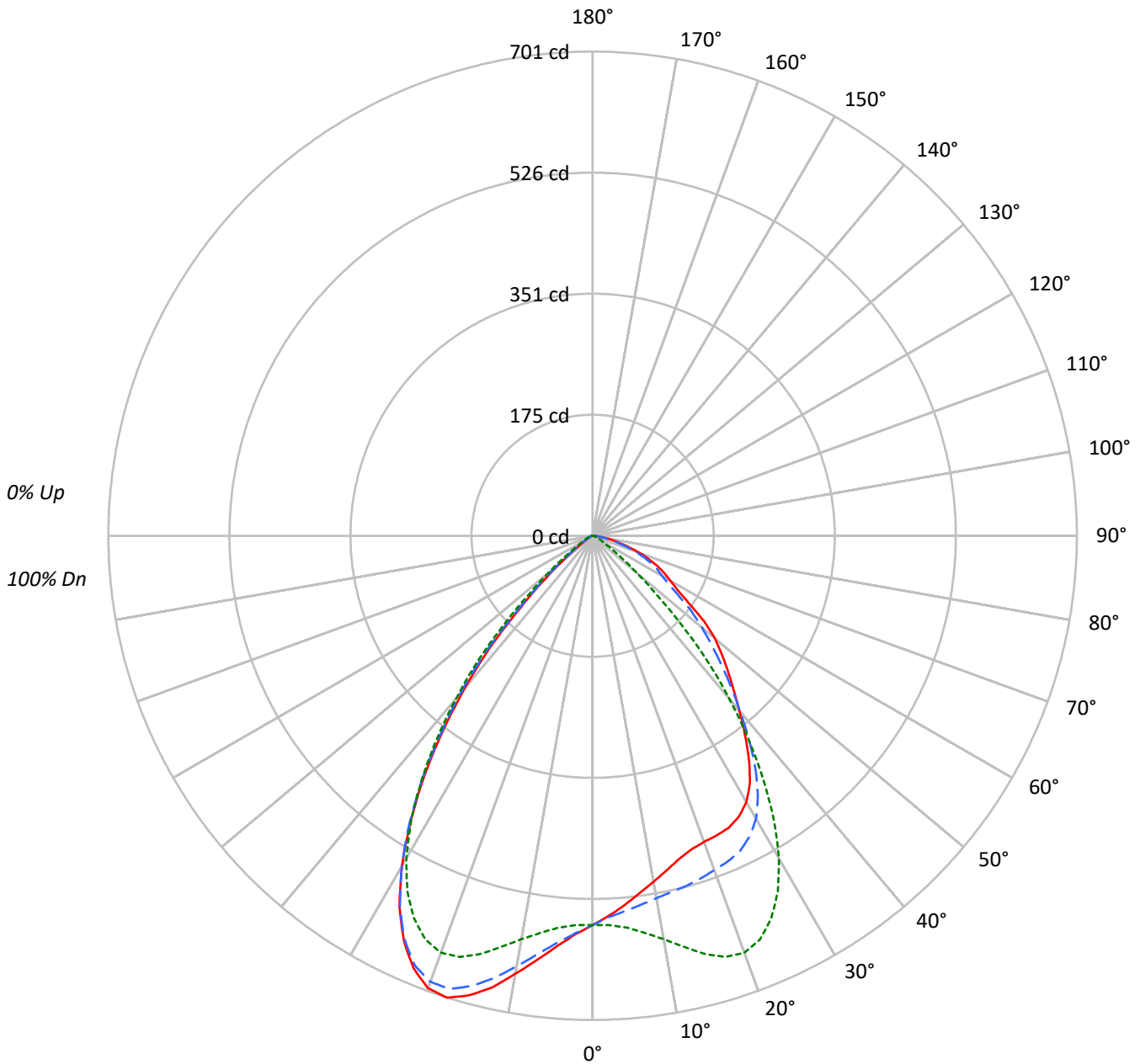
Lumens per Lamp: N/A
Luminaire Lumens: 1040.0 lumens
Efficiency: N/A
Efficacy: 80.0 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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°	69240	69240	69240
5°	66138	70232	73587
10°	63422	73976	80313
15°	61571	79734	87594
20°	61656	83973	91098
25°	63222	82878	87663
30°	63141	76505	78278
35°	59151	64655	63785
40°	52971	49315	46027
45°	48057	31308	25696
50°	44150	15883	10971
55°	36241	7090	3620
60°	31819	3980	1990
65°	29942	2994	1512
70°	25647	2371	1329
75°	19556	1756	1044
80°	14079	1061	495
85°	10431	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.7	5.3
10°-20°	170.6	16.4
20°-30°	264.0	25.4
30°-40°	260.1	25.0
40°-50°	159.7	15.4
50°-60°	71.0	6.8
60°-70°	39.7	3.8
70°-80°	17.2	1.7
80°-90°	3.1	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°	489.3	47.0
0°-40°	749.4	72.1
0°-60°	980.1	94.2
0°-90°	1040.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1040.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	564	564	564	564	564	
5°	536	545	570	592	597	50
15°	484	525	627	675	689	137
25°	466	504	611	644	647	214
35°	394	411	431	430	425	245
45°	277	263	180	157	148	214
55°	169	153	33	19	17	156
65°	103	93	10	6	5	101
75°	41	35	4	2	2	45
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°	563.6	563.6	563.6	563.6	563.6	563.6	563.6	563.6	563.6	563.6	563.6
2.5°	550.3	550.3	550.3	550.3	551.8	549.6	551.8	551.8	554.0	554.7	552.5
5°	536.3	535.6	536.3	536.3	537.8	537.1	539.3	540.8	543.7	545.2	545.2
7.5°	521.6	521.6	521.6	523.1	525.3	524.6	526.8	529.0	533.4	536.3	538.6
10°	508.4	507.7	509.9	510.6	512.8	512.8	516.5	518.7	523.8	529.7	532.7
12.5°	495.9	495.2	496.6	498.8	502.5	502.5	505.4	509.1	516.5	523.1	528.2
15°	484.1	484.9	487.1	488.5	492.9	492.9	496.6	501.0	509.1	517.2	524.6
17.5°	476.0	476.8	478.2	480.4	484.9	484.9	488.5	493.7	502.5	511.3	520.2
20°	471.6	472.4	473.8	476.0	479.7	480.4	483.4	489.3	497.3	506.9	515.0
22.5°	469.4	470.9	472.4	473.8	477.5	477.5	481.2	485.6	493.7	503.3	510.6
25°	466.4	467.9	468.7	470.9	473.8	473.8	476.0	481.2	488.5	496.6	504.0
27.5°	458.4	459.8	460.6	462.8	465.7	465.0	467.9	471.6	478.2	485.6	491.5
30°	445.1	445.9	447.3	448.1	450.3	450.3	452.5	456.2	460.6	467.2	473.1
32.5°	423.8	425.3	426.0	426.7	428.9	428.2	428.9	431.1	435.5	441.5	445.1
35°	394.4	397.3	397.3	398.8	399.5	398.8	398.8	401.7	403.9	408.3	410.6
37.5°	362.0	364.2	363.5	364.9	365.7	363.5	364.9	365.7	368.6	370.8	371.6
40°	330.3	331.1	331.1	331.1	331.1	330.3	331.1	331.8	334.0	334.0	331.8
42.5°	301.7	302.4	302.4	300.9	302.4	301.7	301.7	301.7	301.7	298.7	296.5
45°	276.6	277.4	277.4	276.6	276.6	275.2	274.4	273.7	271.5	267.8	262.7
47.5°	253.1	254.6	255.3	253.8	253.1	251.6	251.6	247.2	244.3	239.9	232.5
50°	231.0	232.5	232.5	231.0	231.0	228.8	226.6	225.1	220.7	215.6	206.7
52.5°	203.1	205.3	205.3	204.5	204.5	201.6	200.9	197.9	194.2	188.3	181.0
55°	169.2	172.2	171.4	170.7	169.2	169.2	169.2	167.0	164.8	160.4	153.0
57.5°	144.9	145.7	145.7	144.9	144.9	143.5	143.5	141.3	140.5	136.1	130.2
60°	129.5	129.5	130.2	129.5	128.8	128.0	127.3	125.8	123.6	120.7	116.3
62.5°	117.0	117.7	117.7	117.0	116.3	115.5	114.8	113.3	111.8	109.6	105.2
65°	103.0	104.5	103.7	103.0	102.3	101.5	101.5	100.1	98.6	97.1	92.7
67.5°	87.5	88.3	89.0	87.5	87.5	86.8	86.8	85.4	84.6	81.7	78.7
70°	71.4	72.1	72.1	71.4	71.4	70.6	70.6	69.9	69.2	67.0	64.0
72.5°	55.9	56.6	55.9	55.2	55.2	55.2	54.5	53.7	53.0	51.5	49.3
75°	41.2	41.2	41.9	41.2	40.5	40.5	39.7	39.7	38.3	37.5	35.3
77.5°	29.4	30.2	29.4	29.4	28.7	28.0	28.0	27.2	27.2	26.5	25.0
80°	19.9	19.9	20.6	19.9	19.1	19.9	19.1	18.4	18.4	17.7	16.2
82.5°	12.5	13.2	12.5	12.5	12.5	12.5	12.5	11.8	11.8	11.0	10.3
85°	7.4	7.4	7.4	7.4	7.4	7.4	7.4	6.6	6.6	6.6	5.9
87.5°	3.7	3.7	2.9	2.9	3.7	3.7	3.7	2.9	2.9	2.9	2.9
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°	563.6	563.6	563.6	563.6	563.6	563.6	563.6	563.6	563.6	563.6	563.6
2.5°	555.5	556.2	557.7	559.9	559.9	558.4	562.1	562.1	563.6	564.3	567.2
5°	549.6	551.1	554.0	557.7	558.4	557.7	562.8	565.1	567.2	569.5	573.9
7.5°	544.4	547.4	552.5	557.7	559.9	559.9	568.0	570.9	575.3	579.8	584.9
10°	541.5	545.9	553.3	561.4	563.6	565.8	575.3	581.2	587.1	593.0	600.4
12.5°	537.8	545.9	555.5	565.8	570.2	573.1	586.4	593.7	601.8	609.2	618.8
15°	537.1	546.7	559.2	572.4	578.3	582.7	597.4	607.7	617.3	626.9	636.4
17.5°	534.2	545.9	561.4	576.1	583.4	589.3	606.2	618.8	629.8	639.4	650.4
20°	530.5	543.7	560.6	576.8	584.9	590.8	609.2	621.0	633.5	642.3	652.6
22.5°	525.3	538.6	555.5	571.7	579.0	584.2	602.6	612.9	623.9	632.7	642.3
25°	516.5	529.0	543.7	557.0	564.3	568.7	584.9	594.5	602.6	611.4	620.2
27.5°	504.0	513.5	526.1	535.6	540.0	544.4	557.7	565.8	573.1	580.5	586.4
30°	481.9	489.3	498.1	506.2	510.6	511.3	523.8	528.2	534.2	539.3	543.7
32.5°	452.5	458.4	463.5	467.9	470.9	471.6	481.2	482.6	488.5	488.5	495.2
35°	415.0	417.9	421.6	421.6	423.8	421.6	428.2	429.7	430.4	431.1	436.3
37.5°	372.3	373.7	376.0	371.6	371.6	369.3	371.6	373.0	370.1	370.1	373.7
40°	331.8	328.9	325.9	321.5	319.3	314.9	314.9	311.2	309.0	307.5	308.3
42.5°	292.8	286.2	279.6	270.0	265.6	261.2	256.8	251.6	250.1	246.5	244.3
45°	255.3	245.7	236.9	221.5	212.6	208.2	198.7	188.3	181.7	180.2	174.4
47.5°	223.7	209.7	195.0	176.6	167.8	159.7	145.7	136.9	128.0	123.6	119.9
50°	195.7	183.2	164.1	144.2	133.2	125.1	109.6	99.3	89.8	83.1	78.7
52.5°	171.4	157.4	139.8	117.0	106.0	97.1	80.2	68.4	60.3	53.7	48.6
55°	144.2	133.2	115.5	94.2	83.1	72.8	58.1	45.6	37.5	33.1	29.4
57.5°	124.4	114.8	97.9	77.3	67.0	57.4	42.7	32.4	25.7	21.3	19.1
60°	111.1	102.3	87.5	67.7	58.1	49.3	35.3	25.7	19.9	16.2	14.7
62.5°	100.1	91.2	78.0	59.6	51.5	42.7	30.2	21.3	16.2	13.2	11.0
65°	87.5	79.5	67.7	51.5	44.1	36.8	25.7	17.7	13.2	10.3	8.8
67.5°	74.3	67.0	56.6	42.7	36.8	30.9	20.6	14.7	11.0	8.8	7.4
70°	60.3	54.5	44.9	34.6	29.4	24.3	16.9	11.8	8.1	6.6	5.9
72.5°	46.4	41.2	34.6	26.5	22.1	18.4	12.5	8.8	6.6	5.2	4.4
75°	33.1	29.4	24.3	19.1	16.2	13.2	9.6	6.6	4.4	3.7	2.9
77.5°	22.8	20.6	16.9	13.2	11.0	9.6	6.6	4.4	3.7	2.9	2.2
80°	14.7	13.2	11.0	8.1	6.6	5.9	3.7	2.9	2.2	1.5	1.5
82.5°	8.8	8.1	6.6	4.4	3.7	2.9	2.2	1.5	1.5	0.7	0.7
85°	5.2	4.4	2.9	2.2	2.2	1.5	1.5	0.7	0.7	0.0	0.0
87.5°	2.2	1.5	1.5	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°	563.6	563.6	563.6	563.6	563.6	563.6	563.6	563.6	563.6	563.6	563.6
2.5°	565.8	569.5	568.7	570.9	570.2	570.2	573.9	572.4	576.1	576.1	576.8
5°	573.9	579.0	579.0	582.7	582.0	583.4	587.1	587.1	591.5	593.0	593.0
7.5°	585.6	592.3	593.7	597.4	598.1	601.1	604.1	604.8	610.7	612.1	612.9
10°	601.8	609.9	612.1	615.8	617.3	620.2	623.9	625.4	632.7	633.5	636.4
12.5°	621.7	630.5	632.7	637.1	637.9	641.6	646.7	648.2	655.5	657.8	659.9
15°	640.8	648.9	652.6	657.0	657.8	662.2	666.6	668.0	674.7	677.6	679.8
17.5°	654.1	663.6	665.9	671.7	671.7	675.4	679.8	681.3	687.9	690.1	691.6
20°	657.0	665.9	668.8	673.2	673.9	676.1	679.8	681.3	687.2	687.9	690.1
22.5°	646.0	654.8	656.3	660.7	661.4	663.6	666.6	665.9	673.2	672.5	673.2
25°	622.4	630.5	630.5	635.7	635.0	637.1	638.6	637.9	644.5	644.5	644.5
27.5°	588.6	596.0	596.7	600.4	598.1	598.9	600.4	599.6	604.1	604.1	604.1
30°	546.7	552.5	550.3	553.3	551.8	553.3	551.8	551.1	552.5	554.0	553.3
32.5°	494.4	498.8	498.8	499.6	499.6	495.2	493.7	493.7	492.9	492.2	492.2
35°	434.1	437.8	436.3	436.3	435.5	431.1	428.9	427.5	429.7	425.3	428.2
37.5°	372.3	373.0	370.8	370.1	366.4	366.4	362.7	359.8	361.2	360.5	357.6
40°	304.6	307.5	303.1	301.7	303.9	300.9	297.2	293.6	296.5	292.8	294.3
42.5°	238.4	237.6	236.2	236.2	236.2	231.8	231.0	230.3	231.0	228.1	225.9
45°	172.2	170.0	167.8	167.8	164.8	163.3	163.3	161.1	157.4	157.4	153.0
47.5°	116.3	111.1	109.6	108.9	107.4	107.4	106.0	104.5	103.7	100.1	100.1
50°	75.8	70.6	69.2	68.4	69.2	67.7	66.2	64.7	63.3	62.5	61.1
52.5°	45.6	43.4	41.9	41.2	39.7	39.0	38.3	36.8	36.1	36.1	35.3
55°	27.2	25.0	22.1	22.1	22.1	21.3	20.6	19.9	19.1	19.1	18.4
57.5°	16.9	15.5	14.0	13.2	13.2	13.2	12.5	12.5	12.5	12.5	11.8
60°	12.5	11.0	10.3	10.3	10.3	9.6	9.6	9.6	9.6	8.8	8.8
62.5°	9.6	8.8	8.1	8.1	7.4	7.4	7.4	7.4	7.4	7.4	6.6
65°	8.1	6.6	6.6	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
67.5°	5.9	5.2	5.2	5.2	5.2	4.4	4.4	4.4	4.4	4.4	4.4
70°	4.4	4.4	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
72.5°	3.7	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
75°	2.9	2.9	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
77.5°	2.2	2.2	2.2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
80°	1.5	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: P858342

CATALOG NUMBER: LD4C10W2N2765D010 4LBSWNL1_6500K

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	563.6	563.6	563.6	563.6	563.6	563.6	563.6	563.6
2.5°	576.8	580.5	576.8	576.8	579.0	578.3	579.8	577.6
5°	593.7	598.9	595.2	594.5	598.1	597.4	598.1	596.7
7.5°	614.3	619.5	615.8	615.8	619.5	618.8	621.0	619.5
10°	637.9	643.8	638.6	639.4	644.5	643.8	643.8	643.8
12.5°	662.2	668.0	665.1	665.1	668.8	669.5	670.3	669.5
15°	682.0	687.9	684.2	684.2	689.4	688.7	689.4	688.7
17.5°	693.8	699.7	695.3	695.3	699.7	699.7	700.4	701.2
20°	690.8	697.5	693.8	692.3	697.5	697.5	696.8	696.8
22.5°	673.9	679.8	676.9	675.4	679.1	677.6	676.9	677.6
25°	644.5	650.4	644.5	644.5	647.4	646.7	647.4	646.7
27.5°	604.8	609.2	603.3	602.6	605.5	604.1	603.3	605.5
30°	551.8	556.2	553.3	551.1	554.7	552.5	551.1	551.8
32.5°	491.5	494.4	492.9	489.3	491.5	490.0	489.3	490.0
35°	425.3	428.9	423.1	422.3	426.0	423.1	421.6	425.3
37.5°	356.8	361.2	356.1	356.8	354.6	355.4	353.9	356.1
40°	292.1	291.4	289.9	289.1	289.9	287.7	289.1	287.0
42.5°	222.2	223.7	222.9	222.2	222.9	220.0	218.5	221.5
45°	154.5	153.8	152.3	150.8	150.8	150.1	150.1	147.9
47.5°	99.3	98.6	95.6	96.4	97.9	96.4	94.2	97.1
50°	60.3	59.6	59.6	58.9	60.3	58.9	57.4	57.4
52.5°	33.8	33.8	33.1	33.1	33.1	33.1	32.4	31.6
55°	18.4	17.7	17.7	17.7	16.9	16.9	16.9	16.9
57.5°	11.8	11.8	11.8	11.8	11.8	11.8	11.0	11.0
60°	8.8	8.8	8.8	8.8	8.1	8.8	8.1	8.1
62.5°	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
65°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
67.5°	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
70°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
72.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
75°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
77.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
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)