

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: P858338

Luminaire Tested: **LD4C10W2N2765D010 4LBSWNL1_3000K**

Issue Date: 11/9/2023



Test Information

Test Method: LM-79-08
Report Number: P858338
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_3000K
Description: 4 INCH 1000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, W2N2765 LEDS
AND 4LBSWNL TRIM WITH FINISH

Light Source: -
Ballast/Driver: -

Summary

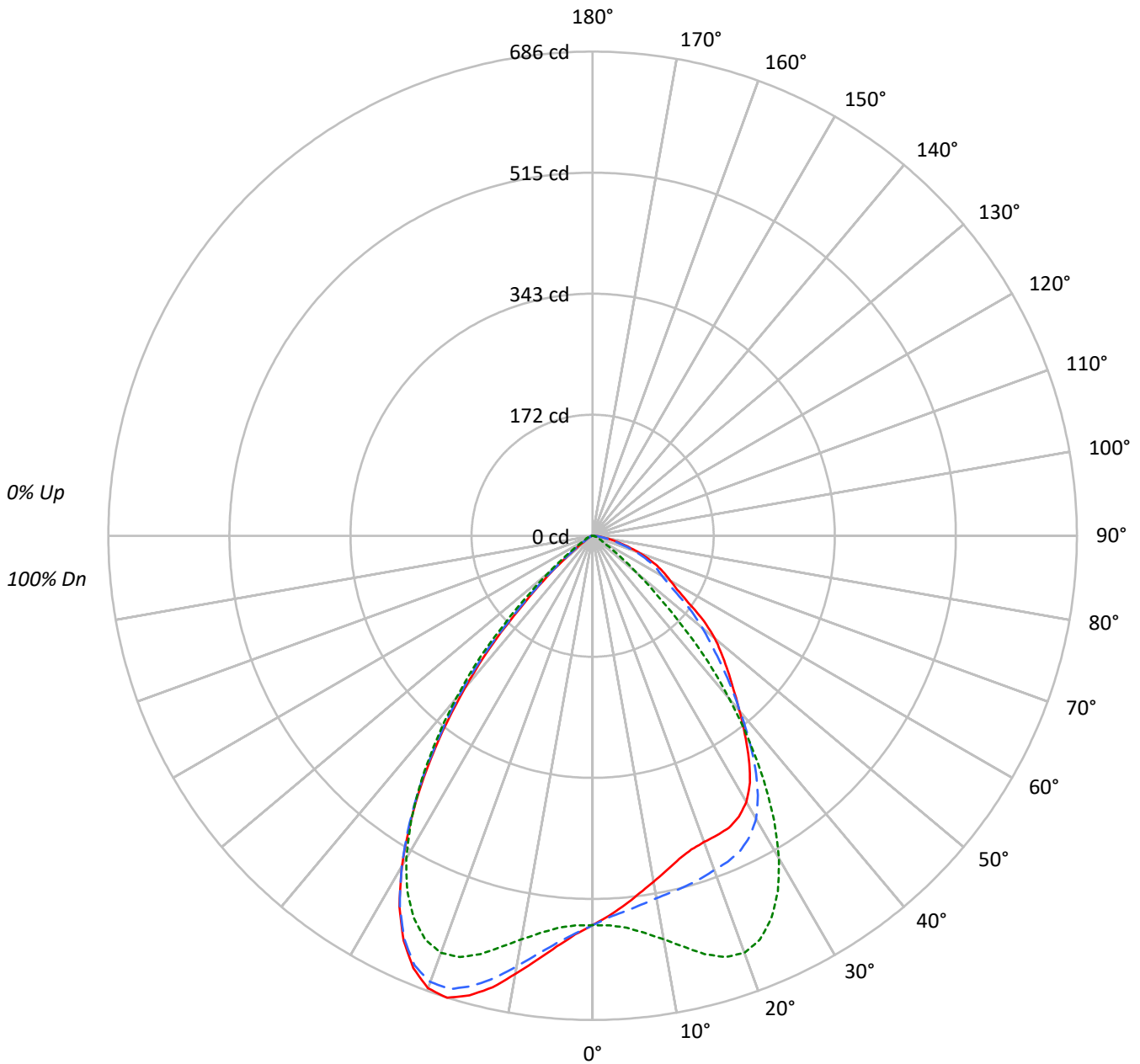
Lumens per Lamp: N/A
Luminaire Lumens: 1018.0 lumens
Efficiency: N/A
Efficacy: 78.3 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 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					20					
RC	80					70					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	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90					90			
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	85	82	80					80			
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	77	74	72					72			
4	91	81	75	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64					64			
5	85	75	67	62	83	74	67	62	72	66	61	70	65	60	68	64	60	58					58			
6	79	69	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53					53			
7	75	63	56	51	73	62	55	51	61	55	50	60	54	50	58	53	50	48					48			
8	70	58	51	46	69	58	51	46	57	50	46	55	50	46	54	49	45	44					44			
9	66	54	47	42	65	54	47	42	53	46	42	52	46	42	51	46	42	40					40			
10	62	51	44	39	61	50	43	39	49	43	39	48	43	39	47	42	39	37					37			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	67778	67778	67778
5°	64744	68740	72033
10°	62075	72417	78617
15°	60274	78042	85737
20°	60349	82195	89163
25°	61894	81129	85806
30°	61808	74887	76618
35°	57891	63290	62435
40°	51849	48273	45049
45°	47049	30648	25140
50°	43214	15558	10741
55°	35491	6940	3556
60°	31131	3907	1941
65°	29302	2936	1483
70°	25108	2335	1293
75°	19129	1709	1044
80°	13725	990	495
85°	10149	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.6	5.3
10°-20°	167.0	16.4
20°-30°	258.4	25.4
30°-40°	254.6	25.0
40°-50°	156.3	15.4
50°-60°	69.5	6.8
60°-70°	38.8	3.8
70°-80°	16.8	1.7
80°-90°	3.0	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°	479.0	47.0
0°-40°	733.5	72.1
0°-60°	959.4	94.2
0°-90°	1018.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1018.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	552	552	552	552	552	
5°	525	534	557	579	584	49
15°	474	514	614	660	674	134
25°	457	493	598	631	633	210
35°	386	402	422	421	416	240
45°	271	257	176	154	145	210
55°	166	150	32	19	17	152
65°	101	91	10	6	5	99
75°	40	35	4	2	2	44
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°	551.7	551.7	551.7	551.7	551.7	551.7	551.7	551.7	551.7	551.7	551.7
2.5°	538.7	538.7	538.7	538.7	540.1	538.0	540.1	540.1	542.3	543.0	540.9
5°	525.0	524.3	525.0	525.0	526.4	525.7	527.9	529.3	532.2	533.7	533.7
7.5°	510.6	510.6	510.6	512.0	514.2	513.5	515.6	517.8	522.1	525.0	527.2
10°	497.6	496.9	499.1	499.8	501.9	501.9	505.6	507.7	512.8	518.5	521.4
12.5°	485.4	484.7	486.1	488.3	491.9	491.9	494.8	498.4	505.6	512.0	517.1
15°	473.9	474.6	476.7	478.2	482.5	482.5	486.1	490.4	498.4	506.3	513.5
17.5°	465.9	466.7	468.1	470.3	474.6	474.6	478.2	483.2	491.9	500.5	509.2
20°	461.6	462.4	463.8	465.9	469.6	470.3	473.2	478.9	486.8	496.2	504.1
22.5°	459.5	460.9	462.4	463.8	467.4	467.4	471.0	475.3	483.2	492.6	499.8
25°	456.6	458.0	458.7	460.9	463.8	463.8	465.9	471.0	478.2	486.1	493.3
27.5°	448.7	450.1	450.8	453.0	455.9	455.1	458.0	461.6	468.1	475.3	481.1
30°	435.7	436.4	437.9	438.6	440.7	440.7	442.9	446.5	450.8	457.3	463.1
32.5°	414.8	416.3	417.0	417.7	419.9	419.1	419.9	422.0	426.3	432.1	435.7
35°	386.0	388.9	388.9	390.3	391.1	390.3	390.3	393.2	395.4	399.7	401.9
37.5°	354.3	356.5	355.8	357.2	357.9	355.8	357.2	357.9	360.8	363.0	363.7
40°	323.3	324.1	324.1	324.1	324.1	323.3	324.1	324.8	327.0	327.0	324.8
42.5°	295.3	296.0	296.0	294.5	296.0	295.3	295.3	295.3	295.3	292.4	290.2
45°	270.8	271.5	271.5	270.8	270.8	269.3	268.6	267.9	265.7	262.1	257.1
47.5°	247.7	249.2	249.9	248.5	247.7	246.3	246.3	242.0	239.1	234.8	227.6
50°	226.1	227.6	227.6	226.1	226.1	224.0	221.8	220.4	216.0	211.0	202.4
52.5°	198.8	200.9	200.9	200.2	200.2	197.3	196.6	193.7	190.1	184.4	177.2
55°	165.7	168.5	167.8	167.1	165.7	165.7	165.7	163.5	161.3	157.0	149.8
57.5°	141.9	142.6	142.6	141.9	141.9	140.4	140.4	138.3	137.5	133.2	127.5
60°	126.7	126.7	127.5	126.7	126.0	125.3	124.6	123.2	121.0	118.1	113.8
62.5°	114.5	115.2	115.2	114.5	113.8	113.1	112.4	110.9	109.5	107.3	103.0
65°	100.8	102.3	101.5	100.8	100.1	99.4	99.4	97.9	96.5	95.1	90.7
67.5°	85.7	86.4	87.1	85.7	85.7	85.0	85.0	83.5	82.8	79.9	77.1
70°	69.9	70.6	70.6	69.9	69.9	69.1	69.1	68.4	67.7	65.5	62.7
72.5°	54.7	55.4	54.7	54.0	54.0	54.0	53.3	52.6	51.9	50.4	48.2
75°	40.3	40.3	41.1	40.3	39.6	39.6	38.9	38.9	37.4	36.7	34.6
77.5°	28.8	29.5	28.8	28.8	28.1	27.4	27.4	26.6	26.6	25.9	24.5
80°	19.4	19.4	20.2	19.4	18.7	19.4	18.7	18.0	18.0	17.3	15.9
82.5°	12.2	13.0	12.2	12.2	12.2	12.2	12.2	11.5	11.5	10.8	10.1
85°	7.2	7.2	7.2	7.2	7.2	7.2	7.2	6.5	6.5	6.5	5.8
87.5°	3.6	3.6	2.9	2.9	3.6	3.6	3.6	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°	551.7	551.7	551.7	551.7	551.7	551.7	551.7	551.7	551.7	551.7	551.7
2.5°	543.7	544.4	545.9	548.0	548.0	546.6	550.2	550.2	551.7	552.4	555.2
5°	538.0	539.4	542.3	545.9	546.6	545.9	550.9	553.1	555.2	557.4	561.7
7.5°	532.9	535.8	540.9	545.9	548.0	548.0	556.0	558.9	563.2	567.5	572.5
10°	530.0	534.4	541.6	549.5	551.7	553.8	563.2	568.9	574.7	580.5	587.7
12.5°	526.4	534.4	543.7	553.8	558.1	561.0	574.0	581.2	589.1	596.3	605.7
15°	525.7	535.1	547.3	560.3	566.0	570.4	584.8	594.9	604.2	613.6	623.0
17.5°	522.9	534.4	549.5	563.9	571.1	576.9	593.4	605.7	616.5	625.8	636.6
20°	519.2	532.2	548.8	564.6	572.5	578.3	596.3	607.8	620.1	628.7	638.8
22.5°	514.2	527.2	543.7	559.6	566.8	571.8	589.8	599.9	610.7	619.3	628.7
25°	505.6	517.8	532.2	545.2	552.4	556.7	572.5	581.9	589.8	598.5	607.1
27.5°	493.3	502.7	514.9	524.3	528.6	532.9	545.9	553.8	561.0	568.2	574.0
30°	471.7	478.9	487.6	495.5	499.8	500.5	512.8	517.1	522.9	527.9	532.2
32.5°	442.9	448.7	453.7	458.0	460.9	461.6	471.0	472.4	478.2	478.2	484.7
35°	406.2	409.1	412.6	412.6	414.8	412.6	419.1	420.6	421.3	422.0	427.1
37.5°	364.4	365.8	368.0	363.7	363.7	361.5	363.7	365.1	362.3	362.3	365.8
40°	324.8	321.9	319.0	314.7	312.6	308.2	308.2	304.6	302.5	301.0	301.8
42.5°	286.6	280.1	273.7	264.3	260.0	255.7	251.3	246.3	244.8	241.3	239.1
45°	249.9	240.5	231.9	216.8	208.1	203.8	194.5	184.4	177.9	176.4	170.7
47.5°	218.9	205.2	190.8	172.8	164.2	156.3	142.6	134.0	125.3	121.0	117.4
50°	191.6	179.3	160.6	141.2	130.4	122.4	107.3	97.2	87.9	81.4	77.1
52.5°	167.8	154.1	136.8	114.5	103.7	95.1	78.5	67.0	59.1	52.6	47.5
55°	141.2	130.4	113.1	92.2	81.4	71.3	56.9	44.7	36.7	32.4	28.8
57.5°	121.7	112.4	95.8	75.6	65.5	56.2	41.8	31.7	25.2	20.9	18.7
60°	108.7	100.1	85.7	66.2	56.9	48.2	34.6	25.2	19.4	15.9	14.4
62.5°	97.9	89.3	76.3	58.3	50.4	41.8	29.5	20.9	15.9	13.0	10.8
65°	85.7	77.8	66.2	50.4	43.2	36.0	25.2	17.3	13.0	10.1	8.6
67.5°	72.7	65.5	55.4	41.8	36.0	30.2	20.2	14.4	10.8	8.6	7.2
70°	59.1	53.3	43.9	33.9	28.8	23.8	16.6	11.5	7.9	6.5	5.8
72.5°	45.4	40.3	33.9	25.9	21.6	18.0	12.2	8.6	6.5	5.1	4.3
75°	32.4	28.8	23.8	18.7	15.9	13.0	9.4	6.5	4.3	3.6	2.9
77.5°	22.3	20.2	16.6	13.0	10.8	9.4	6.5	4.3	3.6	2.9	2.2
80°	14.4	13.0	10.8	7.9	6.5	5.8	3.6	2.9	2.2	1.4	1.4
82.5°	8.6	7.9	6.5	4.3	3.6	2.9	2.2	1.4	1.4	0.7	0.7
85°	5.1	4.3	2.9	2.2	2.2	1.4	1.4	0.7	0.7	0.0	0.0
87.5°	2.2	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°	551.7	551.7	551.7	551.7	551.7	551.7	551.7	551.7	551.7	551.7	551.7
2.5°	553.8	557.4	556.7	558.9	558.1	558.1	561.7	560.3	563.9	563.9	564.6
5°	561.7	566.8	566.8	570.4	569.7	571.1	574.7	574.7	579.0	580.5	580.5
7.5°	573.2	579.7	581.2	584.8	585.5	588.4	591.3	592.0	597.7	599.2	599.9
10°	589.1	597.0	599.2	602.8	604.2	607.1	610.7	612.2	619.3	620.1	623.0
12.5°	608.5	617.2	619.3	623.7	624.4	628.0	633.0	634.5	641.7	643.8	646.0
15°	627.3	635.2	638.8	643.1	643.8	648.2	652.5	653.9	660.4	663.3	665.5
17.5°	640.2	649.6	651.8	657.5	657.5	661.1	665.5	666.9	673.4	675.5	677.0
20°	643.1	651.8	654.6	659.0	659.7	661.8	665.5	666.9	672.6	673.4	675.5
22.5°	632.3	641.0	642.4	646.7	647.4	649.6	652.5	651.8	659.0	658.2	659.0
25°	609.3	617.2	617.2	622.2	621.5	623.7	625.1	624.4	630.9	630.9	630.9
27.5°	576.1	583.3	584.1	587.7	585.5	586.2	587.7	586.9	591.3	591.3	591.3
30°	535.1	540.9	538.7	541.6	540.1	541.6	540.1	539.4	540.9	542.3	541.6
32.5°	483.9	488.3	488.3	489.0	489.0	484.7	483.2	483.2	482.5	481.8	481.8
35°	424.9	428.5	427.1	427.1	426.3	422.0	419.9	418.4	420.6	416.3	419.1
37.5°	364.4	365.1	363.0	362.3	358.6	358.6	355.1	352.2	353.6	352.9	350.0
40°	298.1	301.0	296.7	295.3	297.4	294.5	291.0	287.3	290.2	286.6	288.1
42.5°	233.3	232.6	231.2	231.2	231.2	226.8	226.1	225.4	226.1	223.3	221.1
45°	168.5	166.4	164.2	164.2	161.3	159.9	159.9	157.7	154.1	154.1	149.8
47.5°	113.8	108.7	107.3	106.6	105.2	105.2	103.7	102.3	101.5	97.9	97.9
50°	74.2	69.1	67.7	67.0	67.7	66.2	64.8	63.4	61.9	61.2	59.8
52.5°	44.7	42.5	41.1	40.3	38.9	38.2	37.4	36.0	35.3	35.3	34.6
55°	26.6	24.5	21.6	21.6	21.6	20.9	20.2	19.4	18.7	18.7	18.0
57.5°	16.6	15.1	13.7	13.0	13.0	13.0	12.2	12.2	12.2	12.2	11.5
60°	12.2	10.8	10.1	10.1	10.1	9.4	9.4	9.4	9.4	8.6	8.6
62.5°	9.4	8.6	7.9	7.9	7.2	7.2	7.2	7.2	7.2	7.2	6.5
65°	7.9	6.5	6.5	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
67.5°	5.8	5.1	5.1	5.1	5.1	4.3	4.3	4.3	4.3	4.3	4.3
70°	4.3	4.3	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
72.5°	3.6	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	1.4	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: P858338

CATALOG NUMBER: LD4C10W2N2765D010 4LBSWNL1_3000K

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	551.7	551.7	551.7	551.7	551.7	551.7	551.7	551.7
2.5°	564.6	568.2	564.6	564.6	566.8	566.0	567.5	565.3
5°	581.2	586.2	582.6	581.9	585.5	584.8	585.5	584.1
7.5°	601.3	606.4	602.8	602.8	606.4	605.7	607.8	606.4
10°	624.4	630.2	625.1	625.8	630.9	630.2	630.2	630.2
12.5°	648.2	653.9	651.0	651.0	654.6	655.4	656.1	655.4
15°	667.6	673.4	669.8	669.8	674.8	674.1	674.8	674.1
17.5°	679.1	684.9	680.6	680.6	684.9	684.9	685.6	686.3
20°	676.2	682.7	679.1	677.7	682.7	682.7	682.0	682.0
22.5°	659.7	665.5	662.5	661.1	664.7	663.3	662.5	663.3
25°	630.9	636.6	630.9	630.9	633.7	633.0	633.7	633.0
27.5°	592.0	596.3	590.5	589.8	592.7	591.3	590.5	592.7
30°	540.1	544.4	541.6	539.4	543.0	540.9	539.4	540.1
32.5°	481.1	483.9	482.5	478.9	481.1	479.6	478.9	479.6
35°	416.3	419.9	414.1	413.4	417.0	414.1	412.6	416.3
37.5°	349.3	353.6	348.6	349.3	347.1	347.8	346.4	348.6
40°	285.9	285.2	283.8	283.0	283.8	281.6	283.0	280.9
42.5°	217.5	218.9	218.2	217.5	218.2	215.3	213.9	216.8
45°	151.2	150.5	149.1	147.6	147.6	146.9	146.9	144.7
47.5°	97.2	96.5	93.6	94.4	95.8	94.4	92.2	95.1
50°	59.1	58.3	58.3	57.6	59.1	57.6	56.2	56.2
52.5°	33.1	33.1	32.4	32.4	32.4	32.4	31.7	31.0
55°	18.0	17.3	17.3	17.3	16.6	16.6	16.6	16.6
57.5°	11.5	11.5	11.5	11.5	11.5	11.5	10.8	10.8
60°	8.6	8.6	8.6	8.6	7.9	8.6	7.9	7.9
62.5°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
65°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
67.5°	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
70°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
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°	1.4	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)