

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: P858463

Luminaire Tested: **LD4C20W2N2050D010 4LBSWNL1_2000K**

Issue Date: 11/9/2023



Test Information

Test Method: LM-79-08
Report Number: P858463
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: LD4C20W2N2050D010 4LBSWNLI_2000K
Description: 4 INCH 2000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2000K, W2N2050 LEDS
AND 4LBSWNLI TRIM WITH FINISH

Light Source: -
Ballast/Driver: -

Summary

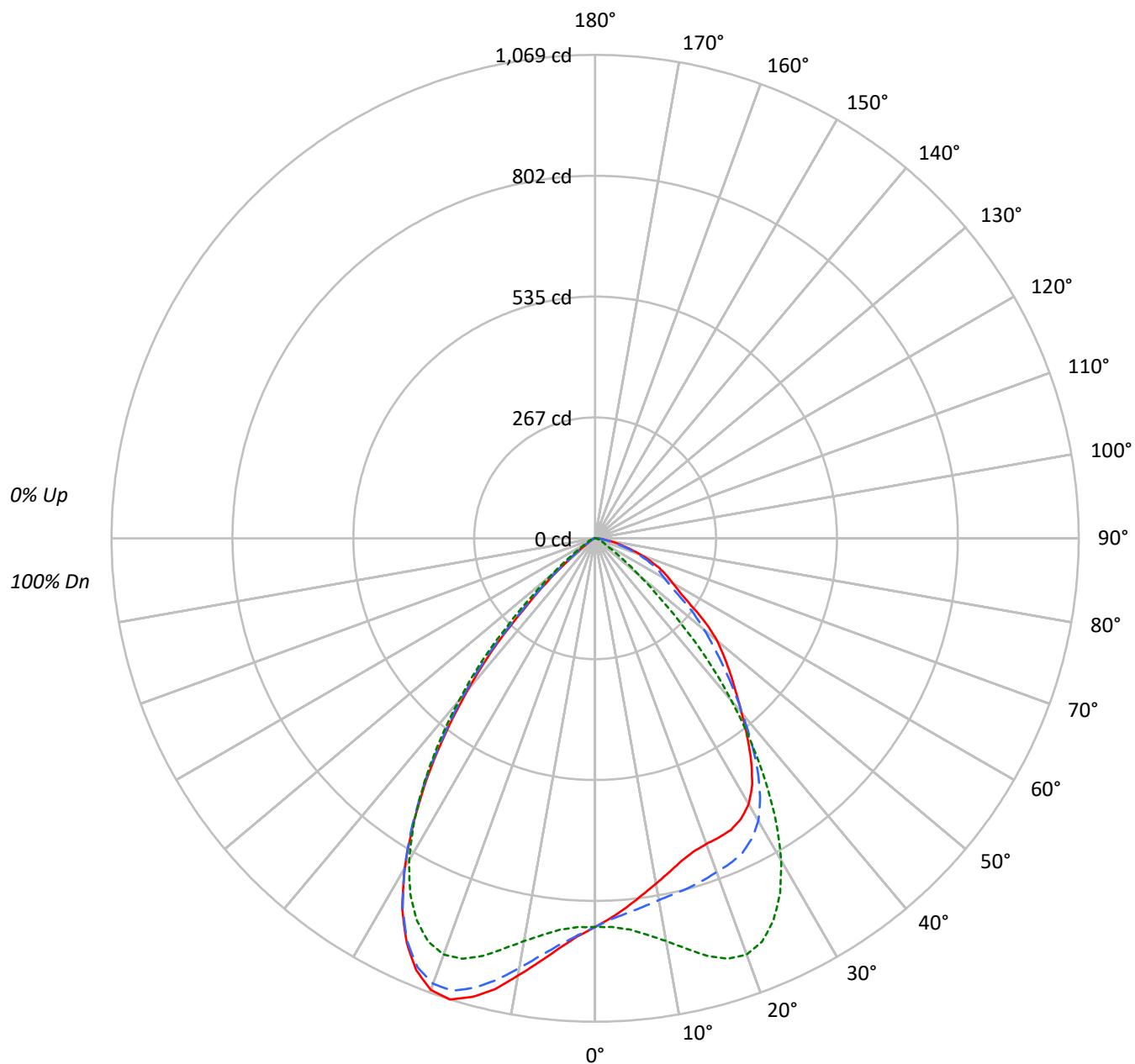
Lumens per Lamp: N/A
Luminaire Lumens: 1586.0 lumens
Efficiency: N/A
Efficacy: 62.4 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 25.4
Input Voltage (V): NR
Input Current (Ain): 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
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	112	108	105	102	109	106	103	101	102	100	98		98	96	95		95
2	104	98	93	89	102	96	92	88	93	89	86		90	87	84		87
3	97	89	83	78	95	88	82	77	85	80	76		82	78	75		80
4	91	81	75	69	89	80	74	69	78	72	68		76	71	67		74
5	85	75	67	62	83	74	67	62	72	66	61		70	65	60		68
6	79	69	61	56	78	68	61	56	66	60	55		64	59	55		63
7	75	63	56	51	73	62	55	51	61	55	50		60	54	50		58
8	70	58	51	46	69	58	51	46	57	50	46		55	50	46		54
9	66	54	47	42	65	54	47	42	53	46	42		52	46	42		51
10	62	51	44	39	61	50	43	39	49	43	39		48	43	39		47

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	105593	105593	105593
5°	100866	107093	112211
10°	96718	112810	122478
15°	93902	121578	133572
20°	94027	128058	138909
25°	96419	126390	133683
30°	96294	116665	119374
35°	90196	98609	97260
40°	80796	75215	70180
45°	73301	47761	39179
50°	67334	24235	16724
55°	55282	10817	5526
60°	48527	6069	3047
65°	45668	4564	2296
70°	39081	3628	2012
75°	29809	2658	1614
80°	21437	1556	778
85°	15787	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.5	5.3
10°-20°	260.2	16.4
20°-30°	402.5	25.4
30°-40°	396.6	25.0
40°-50°	243.5	15.4
50°-60°	108.3	6.8
60°-70°	60.5	3.8
70°-80°	26.2	1.7
80°-90°	4.7	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°	746.2	47.0
0°-40°	1142.8	72.1
0°-60°	1494.7	94.2
0°-90°	1586.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1586.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	860	860	860	860	860	
5°	818	831	868	902	910	77
15°	738	800	956	1029	1050	209
25°	711	769	932	983	986	326
35°	601	626	658	655	648	373
45°	422	400	275	240	226	327
55°	258	233	50	29	26	237
65°	157	141	16	9	8	154
75°	63	54	6	3	3	69
85°	11	9	0	0	0	14
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°	859.5	859.5	859.5	859.5	859.5	859.5	859.5	859.5	859.5	859.5	859.5
2.5°	839.2	839.2	839.2	839.2	841.5	838.1	841.5	841.5	844.9	846.0	842.6
5°	817.9	816.8	817.9	817.9	820.2	819.1	822.4	824.6	829.2	831.4	831.4
7.5°	795.5	795.5	795.5	797.7	801.1	800.0	803.3	806.7	813.4	817.9	821.3
10°	775.3	774.2	777.5	778.7	782.0	782.0	787.6	791.0	798.8	807.9	812.3
12.5°	756.2	755.1	757.3	760.7	766.3	766.3	770.8	776.4	787.6	797.7	805.6
15°	738.3	739.4	742.8	745.0	751.7	751.7	757.3	764.1	776.4	788.8	800.0
17.5°	725.9	727.1	729.3	732.6	739.4	739.4	745.0	752.9	766.3	779.8	793.3
20°	719.2	720.3	722.6	725.9	731.5	732.6	737.2	746.1	758.4	773.0	785.4
22.5°	715.9	718.1	720.3	722.6	728.2	728.2	733.8	740.5	752.9	767.5	778.7
25°	711.3	713.6	714.7	718.1	722.6	722.6	725.9	733.8	745.0	757.3	768.6
27.5°	699.0	701.3	702.4	705.7	710.2	709.1	713.6	719.2	729.3	740.5	749.5
30°	678.8	679.9	682.2	683.3	686.7	686.7	690.0	695.6	702.4	712.5	721.4
32.5°	646.3	648.5	649.7	650.8	654.1	653.0	654.1	657.5	664.2	673.2	678.8
35°	601.4	605.9	605.9	608.1	609.3	608.1	608.1	612.6	616.0	622.7	626.1
37.5°	552.0	555.4	554.3	556.5	557.6	554.3	556.5	557.6	562.1	565.5	566.6
40°	503.8	504.9	504.9	504.9	504.9	503.8	504.9	506.0	509.4	509.4	506.0
42.5°	460.0	461.2	461.2	458.9	461.2	460.0	460.0	460.0	460.0	455.5	452.1
45°	421.9	423.0	423.0	421.9	421.9	419.6	418.5	417.4	414.0	408.4	400.5
47.5°	385.9	388.2	389.3	387.1	385.9	383.7	383.7	377.0	372.5	365.8	354.6
50°	352.3	354.6	354.6	352.3	352.3	348.9	345.6	343.3	336.6	328.8	315.3
52.5°	309.7	313.0	313.0	311.9	311.9	307.4	306.3	301.8	296.2	287.2	276.0
55°	258.1	262.6	261.4	260.3	258.1	258.1	258.1	254.7	251.3	244.6	233.4
57.5°	221.0	222.2	222.2	221.0	221.0	218.8	218.8	215.4	214.3	207.6	198.6
60°	197.5	197.5	198.6	197.5	196.4	195.2	194.1	191.9	188.5	184.0	177.3
62.5°	178.4	179.5	179.5	178.4	177.3	176.1	175.0	172.8	170.6	167.2	160.4
65°	157.1	159.3	158.2	157.1	156.0	154.8	154.8	152.6	150.3	148.1	141.4
67.5°	133.5	134.6	135.7	133.5	133.5	132.4	132.4	130.2	129.0	124.5	120.0
70°	108.8	109.9	109.9	108.8	108.8	107.7	107.7	106.6	105.5	102.1	97.6
72.5°	85.3	86.4	85.3	84.1	84.1	84.1	83.0	81.9	80.8	78.6	75.2
75°	62.8	62.8	64.0	62.8	61.7	61.7	60.6	60.6	58.3	57.2	53.8
77.5°	44.9	46.0	44.9	44.9	43.7	42.6	42.6	41.5	41.5	40.4	38.2
80°	30.3	30.3	31.4	30.3	29.2	30.3	29.2	28.0	28.0	26.9	24.7
82.5°	19.1	20.2	19.1	19.1	19.1	19.1	19.1	17.9	17.9	16.8	15.7
85°	11.2	11.2	11.2	11.2	11.2	11.2	11.2	10.1	10.1	10.1	9.0
87.5°	5.6	5.6	4.5	4.5	5.6	5.6	5.6	4.5	4.5	4.5	4.5
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°	859.5	859.5	859.5	859.5	859.5	859.5	859.5	859.5	859.5	859.5	859.5
2.5°	847.1	848.2	850.5	853.8	853.8	851.6	857.2	857.2	859.5	860.6	865.0
5°	838.1	840.4	844.9	850.5	851.6	850.5	858.3	861.7	865.0	868.4	875.2
7.5°	830.3	834.8	842.6	850.5	853.8	853.8	866.2	870.7	877.4	884.1	892.0
10°	825.8	832.5	843.7	856.1	859.5	862.8	877.4	886.4	895.3	904.3	915.6
12.5°	820.2	832.5	847.1	862.8	869.5	874.0	894.2	905.4	917.8	929.0	943.6
15°	819.1	833.7	852.7	872.9	881.9	888.6	911.1	926.8	941.4	955.9	970.5
17.5°	814.6	832.5	856.1	878.5	889.7	898.7	924.5	943.6	960.4	975.0	991.9
20°	809.0	829.2	855.0	879.6	892.0	901.0	929.0	947.0	966.0	979.5	995.2
22.5°	801.1	821.3	847.1	871.8	883.0	890.8	918.9	934.6	951.5	964.9	979.5
25°	787.6	806.7	829.2	849.4	860.6	867.3	892.0	906.6	918.9	932.4	945.8
27.5°	768.6	783.2	802.2	816.8	823.5	830.3	850.5	862.8	874.0	885.3	894.2
30°	734.9	746.1	759.6	771.9	778.7	779.8	798.8	805.6	814.6	822.4	829.2
32.5°	690.0	699.0	706.8	713.6	718.1	719.2	733.8	736.0	745.0	745.0	755.1
35°	632.8	637.3	642.9	642.9	646.3	642.9	653.0	655.2	656.4	657.5	665.3
37.5°	567.7	570.0	573.3	566.6	566.6	563.2	566.6	568.9	564.4	564.4	570.0
40°	506.0	501.5	497.0	490.3	487.0	480.2	480.2	474.6	471.2	469.0	470.1
42.5°	446.6	436.5	426.3	411.8	405.0	398.3	391.6	383.7	381.5	375.9	372.5
45°	389.3	374.7	361.3	337.7	324.3	317.5	303.0	287.2	277.2	274.9	265.9
47.5°	341.1	319.7	297.3	269.3	255.8	243.5	222.2	208.7	195.2	188.5	182.9
50°	298.4	279.4	250.2	219.9	203.1	190.7	167.2	151.5	136.9	126.8	120.0
52.5°	261.4	240.1	213.2	178.4	161.6	148.1	122.3	104.4	92.0	81.9	74.1
55°	219.9	203.1	176.1	143.6	126.8	111.1	88.6	69.6	57.2	50.5	44.9
57.5°	189.6	175.0	149.2	117.8	102.1	87.5	65.1	49.4	39.3	32.5	29.2
60°	169.4	156.0	133.5	103.2	88.6	75.2	53.8	39.3	30.3	24.7	22.4
62.5°	152.6	139.1	118.9	90.9	78.6	65.1	46.0	32.5	24.7	20.2	16.8
65°	133.5	121.2	103.2	78.6	67.3	56.1	39.3	26.9	20.2	15.7	13.5
67.5°	113.3	102.1	86.4	65.1	56.1	47.1	31.4	22.4	16.8	13.5	11.2
70°	92.0	83.0	68.4	52.7	44.9	37.0	25.8	17.9	12.4	10.1	9.0
72.5°	70.7	62.8	52.7	40.4	33.7	28.0	19.1	13.5	10.1	7.9	6.7
75°	50.5	44.9	37.0	29.2	24.7	20.2	14.6	10.1	6.7	5.6	4.5
77.5°	34.8	31.4	25.8	20.2	16.8	14.6	10.1	6.7	5.6	4.5	3.4
80°	22.4	20.2	16.8	12.4	10.1	9.0	5.6	4.5	3.4	2.2	2.2
82.5°	13.5	12.4	10.1	6.7	5.6	4.5	3.4	2.2	2.2	1.1	1.1
85°	7.9	6.7	4.5	3.4	3.4	2.2	2.2	1.1	1.1	0.0	0.0
87.5°	3.4	2.2	2.2	1.1	1.1	1.1	1.1	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°	859.5	859.5	859.5	859.5	859.5	859.5	859.5	859.5	859.5	859.5	859.5
2.5°	862.8	868.4	867.3	870.7	869.5	869.5	875.2	872.9	878.5	878.5	879.6
5°	875.2	883.0	883.0	888.6	887.5	889.7	895.3	895.3	902.1	904.3	904.3
7.5°	893.1	903.2	905.4	911.1	912.2	916.7	921.2	922.3	931.2	933.5	934.6
10°	917.8	930.1	933.5	939.1	941.4	945.8	951.5	953.7	964.9	966.0	970.5
12.5°	948.1	961.5	964.9	971.6	972.8	978.4	986.2	988.5	999.7	1003.1	1006.4
15°	977.3	989.6	995.2	1001.9	1003.1	1009.8	1016.5	1018.8	1028.9	1033.4	1036.7
17.5°	997.4	1012.0	1015.4	1024.4	1024.4	1030.0	1036.7	1039.0	1049.1	1052.4	1054.7
20°	1001.9	1015.4	1019.9	1026.6	1027.7	1031.1	1036.7	1039.0	1048.0	1049.1	1052.4
22.5°	985.1	998.6	1000.8	1007.6	1008.7	1012.0	1016.5	1015.4	1026.6	1025.5	1026.6
25°	949.2	961.5	961.5	969.4	968.3	971.6	973.9	972.8	982.9	982.9	982.9
27.5°	897.6	908.8	909.9	915.6	912.2	913.3	915.6	914.4	921.2	921.2	921.2
30°	833.7	842.6	839.2	843.7	841.5	843.7	841.5	840.4	842.6	844.9	843.7
32.5°	754.0	760.7	760.7	761.8	761.8	755.1	752.9	752.9	751.7	750.6	750.6
35°	662.0	667.6	665.3	665.3	664.2	657.5	654.1	651.9	655.2	648.5	653.0
37.5°	567.7	568.9	565.5	564.4	558.7	558.7	553.2	548.6	550.9	549.8	545.3
40°	464.5	469.0	462.3	460.0	463.4	458.9	453.3	447.7	452.1	446.6	448.8
42.5°	363.5	362.4	360.1	360.1	360.1	353.4	352.3	351.2	352.3	347.8	344.5
45°	262.6	259.2	255.8	255.8	251.3	249.1	249.1	245.7	240.1	240.1	233.4
47.5°	177.3	169.4	167.2	166.1	163.8	163.8	161.6	159.3	158.2	152.6	152.6
50°	115.6	107.7	105.5	104.4	105.5	103.2	101.0	98.7	96.5	95.4	93.1
52.5°	69.6	66.2	64.0	62.8	60.6	59.5	58.3	56.1	55.0	55.0	53.8
55°	41.5	38.2	33.7	33.7	33.7	32.5	31.4	30.3	29.2	29.2	28.0
57.5°	25.8	23.6	21.3	20.2	20.2	20.2	19.1	19.1	19.1	19.1	17.9
60°	19.1	16.8	15.7	15.7	15.7	14.6	14.6	14.6	14.6	13.5	13.5
62.5°	14.6	13.5	12.4	12.4	11.2	11.2	11.2	11.2	11.2	11.2	10.1
65°	12.4	10.1	10.1	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
67.5°	9.0	7.9	7.9	7.9	7.9	6.7	6.7	6.7	6.7	6.7	6.7
70°	6.7	6.7	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
72.5°	5.6	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
75°	4.5	4.5	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
77.5°	3.4	3.4	3.4	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
80°	2.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
82.5°	1.1	1.1	1.1	1.1	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: P858463

CATALOG NUMBER: LD4C20W2N2050D010 4LBSWNL1_2000K

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	859.5	859.5	859.5	859.5	859.5	859.5	859.5	859.5
2.5°	879.6	885.3	879.6	879.6	883.0	881.9	884.1	880.8
5°	905.4	913.3	907.7	906.6	912.2	911.1	912.2	909.9
7.5°	936.9	944.7	939.1	939.1	944.7	943.6	947.0	944.7
10°	972.8	981.8	973.9	975.0	982.9	981.8	981.8	981.8
12.5°	1009.8	1018.8	1014.3	1014.3	1019.9	1021.0	1022.2	1021.0
15°	1040.1	1049.1	1043.5	1043.5	1051.3	1050.2	1051.3	1050.2
17.5°	1058.0	1067.0	1060.3	1060.3	1067.0	1067.0	1068.1	1069.3
20°	1053.5	1063.6	1058.0	1055.8	1063.6	1063.6	1062.5	1062.5
22.5°	1027.7	1036.7	1032.2	1030.0	1035.6	1033.4	1032.2	1033.4
25°	982.9	991.9	982.9	982.9	987.3	986.2	987.3	986.2
27.5°	922.3	929.0	920.0	918.9	923.4	921.2	920.0	923.4
30°	841.5	848.2	843.7	840.4	846.0	842.6	840.4	841.5
32.5°	749.5	754.0	751.7	746.1	749.5	747.2	746.1	747.2
35°	648.5	654.1	645.2	644.0	649.7	645.2	642.9	648.5
37.5°	544.2	550.9	543.1	544.2	540.8	541.9	539.7	543.1
40°	445.4	444.3	442.1	440.9	442.1	438.7	440.9	437.6
42.5°	338.8	341.1	340.0	338.8	340.0	335.5	333.2	337.7
45°	235.6	234.5	232.3	230.0	230.0	228.9	228.9	225.5
47.5°	151.5	150.3	145.9	147.0	149.2	147.0	143.6	148.1
50°	92.0	90.9	90.9	89.8	92.0	89.8	87.5	87.5
52.5°	51.6	51.6	50.5	50.5	50.5	50.5	49.4	48.3
55°	28.0	26.9	26.9	26.9	25.8	25.8	25.8	25.8
57.5°	17.9	17.9	17.9	17.9	17.9	17.9	16.8	16.8
60°	13.5	13.5	13.5	13.5	12.4	13.5	12.4	12.4
62.5°	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1
65°	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9
67.5°	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
70°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
72.5°	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
75°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
77.5°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
80°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
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)