

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: P858423

Luminaire Tested: **LD4C15W2N2765D010 4LBSWNL1_3500K**

Issue Date: 11/9/2023

Test Information

Test Method: LM-79-08
Report Number: P858423
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: LD4C15W2N2765D010 4LBSWNL_3500K
Description: 4 INCH 1500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, W2N2765 LEDS AND 4LBSWNL TRIM WITH FINISH

Light Source: -
Ballast/Driver: -

Summary

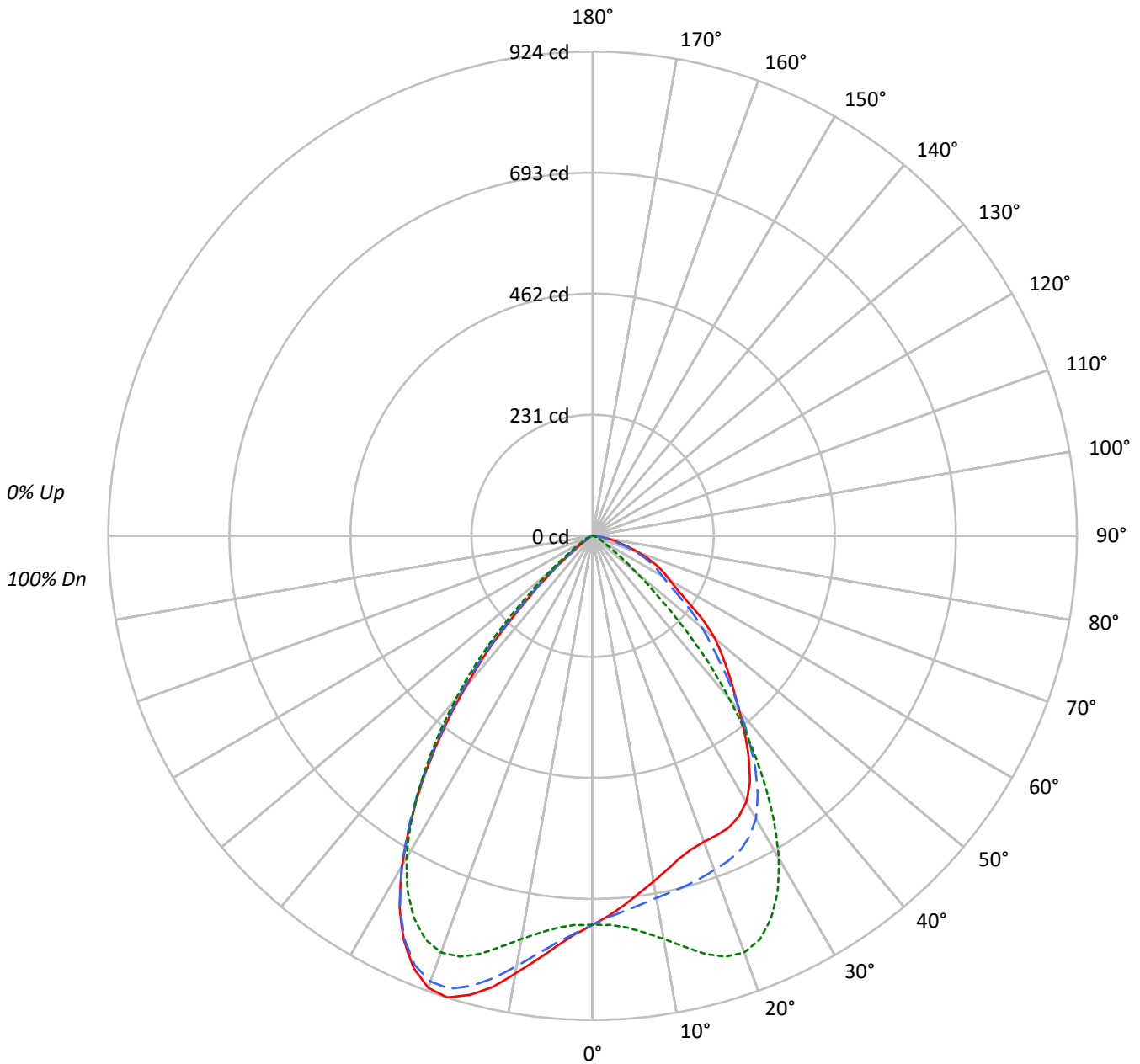
Lumens per Lamp: N/A
Luminaire Lumens: 1370.0 lumens
Efficiency: N/A
Efficacy: 71.4 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 19.2
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°	91206	91206	91206
5°	87128	92517	96932
10°	83544	97454	105787
15°	81107	105031	115384
20°	81214	110617	119991
25°	83284	109175	115478
30°	83172	100777	103117
35°	77913	85172	84017
40°	69779	64967	60621
45°	63311	41246	33845
50°	58160	20928	14449
55°	47743	9339	4776
60°	41918	5234	2629
65°	39447	3953	1977
70°	33765	3125	1760
75°	25775	2326	1377
80°	18536	1344	707
85°	13673	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.1	5.3
10°-20°	224.7	16.4
20°-30°	347.7	25.4
30°-40°	342.6	25.0
40°-50°	210.4	15.4
50°-60°	93.5	6.8
60°-70°	52.2	3.8
70°-80°	22.6	1.7
80°-90°	4.0	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°	644.6	47.0
0°-40°	987.2	72.1
0°-60°	1291.1	94.2
0°-90°	1370.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1370.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	742	742	742	742	742	
5°	706	718	750	779	786	66
15°	638	691	826	889	907	181
25°	614	664	805	849	852	282
35°	520	541	568	566	560	322
45°	364	346	237	207	195	282
55°	223	202	44	25	22	205
65°	136	122	14	8	7	133
75°	54	46	5	3	3	60
85°	10	8	0	0	0	12
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°	742.4	742.4	742.4	742.4	742.4	742.4	742.4	742.4	742.4	742.4	742.4
2.5°	724.9	724.9	724.9	724.9	726.9	724.0	726.9	726.9	729.8	730.8	727.9
5°	706.5	705.6	706.5	706.5	708.5	707.5	710.4	712.3	716.2	718.2	718.2
7.5°	687.2	687.2	687.2	689.1	692.0	691.0	693.9	696.8	702.7	706.5	709.5
10°	669.7	668.7	671.6	672.6	675.5	675.5	680.4	683.3	690.0	697.8	701.7
12.5°	653.2	652.3	654.2	657.1	662.0	662.0	665.8	670.7	680.4	689.1	695.9
15°	637.7	638.7	641.6	643.5	649.3	649.3	654.2	660.0	670.7	681.4	691.0
17.5°	627.1	628.0	630.0	632.9	638.7	638.7	643.5	650.3	662.0	673.6	685.2
20°	621.2	622.2	624.2	627.1	631.9	632.9	636.8	644.5	655.2	667.8	678.4
22.5°	618.4	620.3	622.2	624.2	629.0	629.0	633.9	639.7	650.3	662.9	672.6
25°	614.4	616.4	617.4	620.3	624.2	624.2	627.1	633.9	643.5	654.2	663.9
27.5°	603.8	605.8	606.7	609.6	613.5	612.5	616.4	621.2	630.0	639.7	647.4
30°	586.3	587.3	589.3	590.2	593.1	593.1	596.0	600.9	606.7	615.4	623.2
32.5°	558.3	560.2	561.2	562.1	565.0	564.1	565.0	567.9	573.7	581.5	586.3
35°	519.5	523.4	523.4	525.3	526.3	525.3	525.3	529.2	532.1	537.9	540.8
37.5°	476.8	479.8	478.8	480.7	481.7	478.8	480.7	481.7	485.6	488.5	489.4
40°	435.1	436.1	436.1	436.1	436.1	435.1	436.1	437.1	440.0	440.0	437.1
42.5°	397.4	398.4	398.4	396.4	398.4	397.4	397.4	397.4	397.4	393.5	390.6
45°	364.4	365.4	365.4	364.4	364.4	362.5	361.5	360.5	357.6	352.8	346.0
47.5°	333.4	335.3	336.3	334.4	333.4	331.4	331.4	325.6	321.8	316.0	306.3
50°	304.3	306.3	306.3	304.3	304.3	301.4	298.5	296.6	290.7	284.0	272.3
52.5°	267.5	270.4	270.4	269.4	269.4	265.6	264.6	260.7	255.8	248.1	238.4
55°	222.9	226.8	225.8	224.9	222.9	222.9	222.9	220.0	217.1	211.3	201.6
57.5°	190.9	191.9	191.9	190.9	190.9	189.0	189.0	186.1	185.1	179.3	171.6
60°	170.6	170.6	171.6	170.6	169.6	168.6	167.7	165.7	162.8	158.9	153.1
62.5°	154.1	155.1	155.1	154.1	153.1	152.2	151.2	149.3	147.3	144.4	138.6
65°	135.7	137.6	136.7	135.7	134.7	133.7	133.7	131.8	129.9	127.9	122.1
67.5°	115.3	116.3	117.3	115.3	115.3	114.4	114.4	112.4	111.4	107.6	103.7
70°	94.0	95.0	95.0	94.0	94.0	93.0	93.0	92.1	91.1	88.2	84.3
72.5°	73.7	74.6	73.7	72.7	72.7	72.7	71.7	70.7	69.8	67.9	64.9
75°	54.3	54.3	55.2	54.3	53.3	53.3	52.3	52.3	50.4	49.4	46.5
77.5°	38.8	39.7	38.8	38.8	37.8	36.8	36.8	35.8	35.8	34.9	33.0
80°	26.2	26.2	27.1	26.2	25.2	26.2	25.2	24.2	24.2	23.3	21.3
82.5°	16.5	17.4	16.5	16.5	16.5	16.5	16.5	15.5	15.5	14.5	13.6
85°	9.7	9.7	9.7	9.7	9.7	9.7	9.7	8.7	8.7	8.7	7.7
87.5°	4.9	4.9	3.9	3.9	4.9	4.9	4.9	3.9	3.9	3.9	3.9
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°	742.4	742.4	742.4	742.4	742.4	742.4	742.4	742.4	742.4	742.4	742.4
2.5°	731.7	732.7	734.6	737.6	737.6	735.6	740.5	740.5	742.4	743.4	747.2
5°	724.0	725.9	729.8	734.6	735.6	734.6	741.4	744.3	747.2	750.2	756.0
7.5°	717.2	721.1	727.9	734.6	737.6	737.6	748.2	752.1	757.9	763.7	770.5
10°	713.3	719.1	728.8	739.5	742.4	745.3	757.9	765.6	773.4	781.2	790.9
12.5°	708.5	719.1	731.7	745.3	751.1	755.0	772.4	782.1	792.8	802.5	815.1
15°	707.5	720.1	736.6	754.0	761.8	767.6	787.0	800.5	813.2	825.8	838.4
17.5°	703.6	719.1	739.5	758.9	768.6	776.3	798.6	815.1	829.6	842.2	856.8
20°	698.8	716.2	738.5	759.8	770.5	778.3	802.5	818.0	834.5	846.1	859.7
22.5°	692.0	709.5	731.7	753.0	762.8	769.5	793.7	807.3	821.9	833.5	846.1
25°	680.4	696.8	716.2	733.7	743.4	749.2	770.5	783.1	793.7	805.4	817.0
27.5°	663.9	676.5	693.0	705.6	711.4	717.2	734.6	745.3	755.0	764.7	772.4
30°	634.8	644.5	656.1	666.8	672.6	673.6	690.0	695.9	703.6	710.4	716.2
32.5°	596.0	603.8	610.6	616.4	620.3	621.2	633.9	635.8	643.5	643.5	652.3
35°	546.6	550.5	555.3	555.3	558.3	555.3	564.1	566.0	567.0	567.9	574.7
37.5°	490.4	492.3	495.3	489.4	489.4	486.5	489.4	491.4	487.5	487.5	492.3
40°	437.1	433.2	429.3	423.5	420.6	414.8	414.8	410.0	407.1	405.1	406.1
42.5°	385.7	377.0	368.3	355.7	349.9	344.1	338.2	331.4	329.5	324.7	321.8
45°	336.3	323.7	312.1	291.7	280.1	274.3	261.7	248.1	239.4	237.4	229.7
47.5°	294.6	276.2	256.8	232.6	221.0	210.3	191.9	180.3	168.6	162.8	158.0
50°	257.8	241.3	216.1	190.0	175.4	164.8	144.4	130.8	118.2	109.5	103.7
52.5°	225.8	207.4	184.2	154.1	139.6	127.9	105.6	90.1	79.5	70.7	64.0
55°	190.0	175.4	152.2	124.1	109.5	96.0	76.5	60.1	49.4	43.6	38.8
57.5°	163.8	151.2	128.9	101.8	88.2	75.6	56.2	42.6	33.9	28.1	25.2
60°	146.3	134.7	115.3	89.2	76.5	64.9	46.5	33.9	26.2	21.3	19.4
62.5°	131.8	120.2	102.7	78.5	67.9	56.2	39.7	28.1	21.3	17.4	14.5
65°	115.3	104.7	89.2	67.9	58.1	48.5	33.9	23.3	17.4	13.6	11.6
67.5°	97.9	88.2	74.6	56.2	48.5	40.7	27.1	19.4	14.5	11.6	9.7
70°	79.5	71.7	59.1	45.6	38.8	32.0	22.3	15.5	10.7	8.7	7.7
72.5°	61.1	54.3	45.6	34.9	29.1	24.2	16.5	11.6	8.7	6.8	5.8
75°	43.6	38.8	32.0	25.2	21.3	17.4	12.6	8.7	5.8	4.9	3.9
77.5°	30.0	27.1	22.3	17.4	14.5	12.6	8.7	5.8	4.9	3.9	2.9
80°	19.4	17.4	14.5	10.7	8.7	7.7	4.9	3.9	2.9	1.9	1.9
82.5°	11.6	10.7	8.7	5.8	4.9	3.9	2.9	1.9	1.9	1.0	1.0
85°	6.8	5.8	3.9	2.9	2.9	1.9	1.9	1.0	1.0	0.0	0.0
87.5°	2.9	1.9	1.9	1.0	1.0	1.0	1.0	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



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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	742.4	742.4	742.4	742.4	742.4	742.4	742.4	742.4	742.4	742.4	742.4
2.5°	745.3	750.2	749.2	752.1	751.1	751.1	756.0	754.0	758.9	758.9	759.8
5°	756.0	762.8	762.8	767.6	766.6	768.6	773.4	773.4	779.2	781.2	781.2
7.5°	771.5	780.2	782.1	787.0	787.9	791.8	795.7	796.7	804.4	806.4	807.3
10°	792.8	803.5	806.4	811.2	813.2	817.0	821.9	823.8	833.5	834.5	838.4
12.5°	819.0	830.6	833.5	839.3	840.3	845.1	851.9	853.9	863.5	866.5	869.3
15°	844.2	854.8	859.7	865.5	866.5	872.3	878.1	880.0	888.8	892.6	895.5
17.5°	861.6	874.2	877.1	884.9	884.9	889.7	895.5	897.5	906.2	909.1	911.0
20°	865.5	877.1	881.0	886.8	887.8	890.7	895.5	897.5	905.2	906.2	909.1
22.5°	850.9	862.6	864.5	870.3	871.3	874.2	878.1	877.1	886.8	885.8	886.8
25°	819.9	830.6	830.6	837.4	836.4	839.3	841.2	840.3	849.0	849.0	849.0
27.5°	775.3	785.1	786.0	790.9	787.9	788.9	790.9	789.9	795.7	795.7	795.7
30°	720.1	727.9	724.9	728.8	726.9	728.8	726.9	725.9	727.9	729.8	728.8
32.5°	651.3	657.1	657.1	658.1	658.1	652.3	650.3	650.3	649.3	648.4	648.4
35°	571.8	576.7	574.7	574.7	573.7	567.9	565.0	563.1	566.0	560.2	564.1
37.5°	490.4	491.4	488.5	487.5	482.7	482.7	477.8	473.9	475.9	474.9	471.0
40°	401.2	405.1	399.3	397.4	400.3	396.4	391.6	386.7	390.6	385.7	387.7
42.5°	314.0	313.0	311.1	311.1	311.1	305.3	304.3	303.4	304.3	300.5	297.5
45°	226.8	223.9	221.0	221.0	217.1	215.1	215.1	212.3	207.4	207.4	201.6
47.5°	153.1	146.3	144.4	143.5	141.5	141.5	139.6	137.6	136.7	131.8	131.8
50°	99.8	93.0	91.1	90.1	91.1	89.2	87.2	85.3	83.3	82.4	80.5
52.5°	60.1	57.2	55.2	54.3	52.3	51.4	50.4	48.5	47.5	47.5	46.5
55°	35.8	33.0	29.1	29.1	29.1	28.1	27.1	26.2	25.2	25.2	24.2
57.5°	22.3	20.4	18.4	17.4	17.4	17.4	16.5	16.5	16.5	16.5	15.5
60°	16.5	14.5	13.6	13.6	13.6	12.6	12.6	12.6	12.6	11.6	11.6
62.5°	12.6	11.6	10.7	10.7	9.7	9.7	9.7	9.7	9.7	9.7	8.7
65°	10.7	8.7	8.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7
67.5°	7.7	6.8	6.8	6.8	6.8	5.8	5.8	5.8	5.8	5.8	5.8
70°	5.8	5.8	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
72.5°	4.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
75°	3.9	3.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
77.5°	2.9	2.9	2.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
80°	1.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
82.5°	1.0	1.0	1.0	1.0	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	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



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CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	742.4	742.4	742.4	742.4	742.4	742.4	742.4	742.4
2.5°	759.8	764.7	759.8	759.8	762.8	761.8	763.7	760.8
5°	782.1	788.9	784.1	783.1	787.9	787.0	787.9	786.0
7.5°	809.3	816.1	811.2	811.2	816.1	815.1	818.0	816.1
10°	840.3	848.0	841.2	842.2	849.0	848.0	848.0	848.0
12.5°	872.3	880.0	876.1	876.1	881.0	882.0	882.9	882.0
15°	898.4	906.2	901.4	901.4	908.1	907.2	908.1	907.2
17.5°	913.9	921.7	915.9	915.9	921.7	921.7	922.7	923.6
20°	910.1	918.8	913.9	912.0	918.8	918.8	917.8	917.8
22.5°	887.8	895.5	891.6	889.7	894.6	892.6	891.6	892.6
25°	849.0	856.8	849.0	849.0	852.9	851.9	852.9	851.9
27.5°	796.7	802.5	794.7	793.7	797.7	795.7	794.7	797.7
30°	726.9	732.7	728.8	725.9	730.8	727.9	725.9	726.9
32.5°	647.4	651.3	649.3	644.5	647.4	645.5	644.5	645.5
35°	560.2	565.0	557.3	556.3	561.2	557.3	555.3	560.2
37.5°	470.0	475.9	469.1	470.0	467.2	468.1	466.2	469.1
40°	384.8	383.8	381.9	380.9	381.9	379.0	380.9	378.0
42.5°	292.7	294.6	293.7	292.7	293.7	289.8	287.9	291.7
45°	203.5	202.6	200.6	198.7	198.7	197.7	197.7	194.8
47.5°	130.8	129.9	126.0	127.0	128.9	127.0	124.1	127.9
50°	79.5	78.5	78.5	77.5	79.5	77.5	75.6	75.6
52.5°	44.6	44.6	43.6	43.6	43.6	43.6	42.6	41.7
55°	24.2	23.3	23.3	23.3	22.3	22.3	22.3	22.3
57.5°	15.5	15.5	15.5	15.5	15.5	15.5	14.5	14.5
60°	11.6	11.6	11.6	11.6	10.7	11.6	10.7	10.7
62.5°	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
65°	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
67.5°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
70°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
72.5°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
75°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
77.5°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
80°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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)