

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: P858341

Luminaire Tested: **LD4C10W2N2765D010 4LBSWNL1\_5000K**

Issue Date: 11/9/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P858341  
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\_5000K  
Description: 4 INCH 1000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, W2N2765 LEDS AND 4LBSWNL TRIM WITH FINISH  
  
Light Source: -  
Ballast/Driver: -

**Summary**

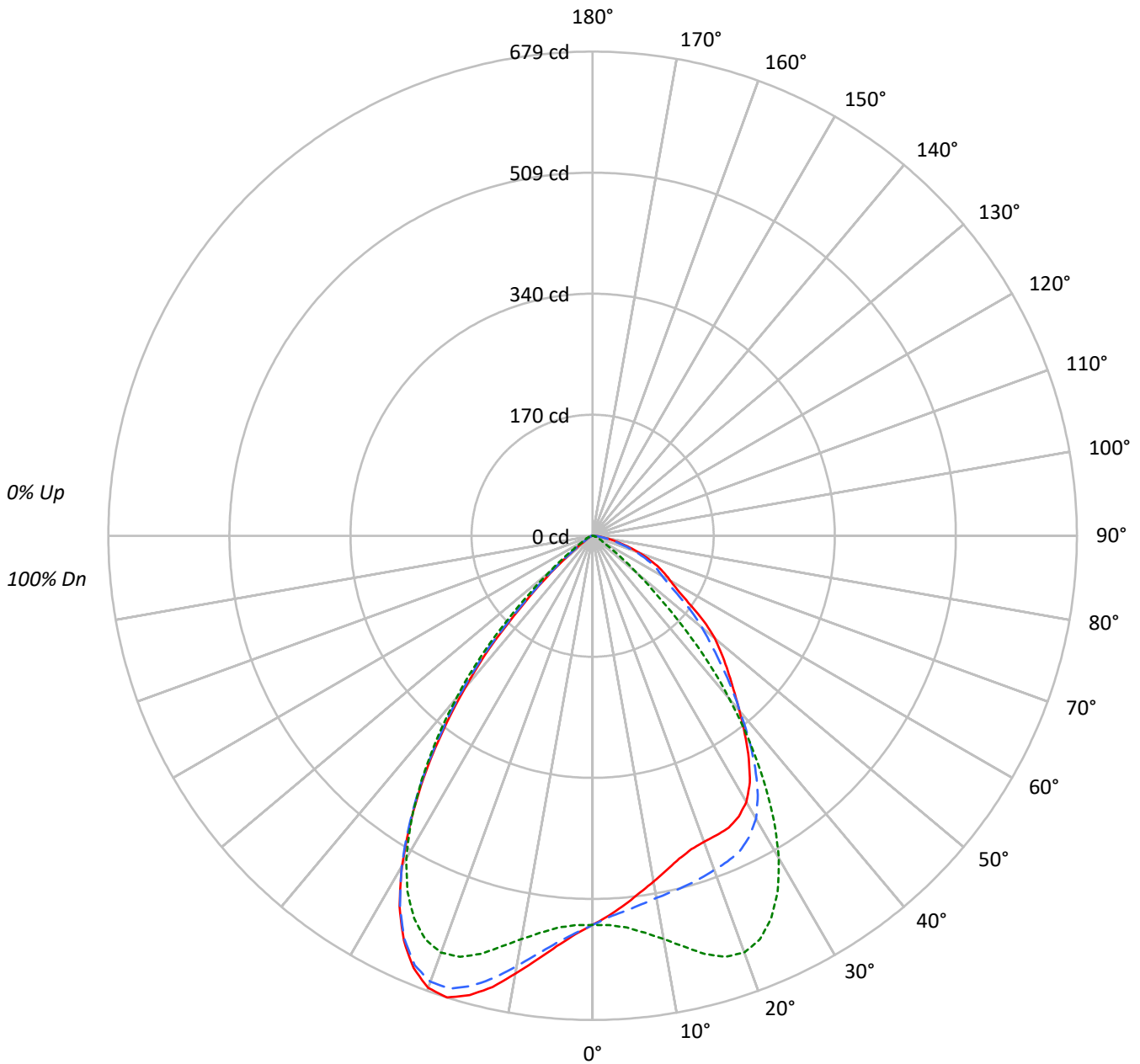
Lumens per Lamp: N/A  
Luminaire Lumens: 1007.0 lumens  
Efficiency: N/A  
Efficacy: 77.5 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.19  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 13  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	67041	67041	67041
5°	64042	68000	71244
10°	61414	71631	77756
15°	59625	77203	84808
20°	59695	81306	88196
25°	61216	80248	84884
30°	61141	74079	75795
35°	57261	62615	61760
40°	51304	47759	44552
45°	46545	30318	24880
50°	42755	15386	10627
55°	35105	6875	3513
60°	30812	3858	1917
65°	28982	2907	1453
70°	24821	2299	1293
75°	18939	1709	997
80°	13584	990	495
85°	10008	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	53.0	5.3
10°-20°	165.2	16.4
20°-30°	255.6	25.4
30°-40°	251.8	25.0
40°-50°	154.6	15.4
50°-60°	68.8	6.8
60°-70°	38.4	3.8
70°-80°	16.6	1.6
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°	473.8	47.1
0°-40°	725.6	72.1
0°-60°	949.0	94.2
0°-90°	1007.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1007.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	546	546	546	546	546	
5°	519	528	551	573	578	49
15°	469	508	607	653	667	133
25°	452	488	592	624	626	207
35°	382	398	418	416	412	237
45°	268	254	174	152	143	207
55°	164	148	32	18	16	151
65°	100	90	10	6	5	98
75°	40	34	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°	545.7	545.7	545.7	545.7	545.7	545.7	545.7	545.7	545.7	545.7	545.7
2.5°	532.9	532.9	532.9	532.9	534.3	532.2	534.3	534.3	536.4	537.1	535.0
5°	519.3	518.6	519.3	519.3	520.7	520.0	522.2	523.6	526.5	527.9	527.9
7.5°	505.1	505.1	505.1	506.5	508.6	507.9	510.1	512.2	516.5	519.3	521.5
10°	492.3	491.6	493.7	494.4	496.5	496.5	500.1	502.2	507.2	512.9	515.8
12.5°	480.1	479.4	480.9	483.0	486.6	486.6	489.4	493.0	500.1	506.5	511.5
15°	468.8	469.5	471.6	473.0	477.3	477.3	480.9	485.1	493.0	500.8	507.9
17.5°	460.9	461.6	463.1	465.2	469.5	469.5	473.0	478.0	486.6	495.1	503.7
20°	456.6	457.4	458.8	460.9	464.5	465.2	468.1	473.7	481.6	490.8	498.7
22.5°	454.5	455.9	457.4	458.8	462.3	462.3	465.9	470.2	478.0	487.3	494.4
25°	451.6	453.1	453.8	455.9	458.8	458.8	460.9	465.9	473.0	480.9	488.0
27.5°	443.8	445.3	445.9	448.1	450.9	450.2	453.1	456.6	463.1	470.2	475.9
30°	431.0	431.7	433.1	433.8	436.0	436.0	438.1	441.7	445.9	452.4	458.1
32.5°	410.3	411.8	412.5	413.2	415.3	414.6	415.3	417.5	421.7	427.4	431.0
35°	381.8	384.7	384.7	386.1	386.8	386.1	386.1	389.0	391.1	395.4	397.5
37.5°	350.5	352.6	351.9	353.3	354.1	351.9	353.3	354.1	356.9	359.0	359.8
40°	319.9	320.6	320.6	320.6	320.6	319.9	320.6	321.3	323.4	323.4	321.3
42.5°	292.1	292.8	292.8	291.4	292.8	292.1	292.1	292.1	292.1	289.2	287.1
45°	267.9	268.6	268.6	267.9	267.9	266.4	265.7	265.0	262.9	259.3	254.3
47.5°	245.1	246.5	247.2	245.8	245.1	243.6	243.6	239.4	236.5	232.2	225.1
50°	223.7	225.1	225.1	223.7	223.7	221.6	219.4	218.0	213.7	208.7	200.2
52.5°	196.6	198.7	198.7	198.1	198.1	195.2	194.5	191.6	188.1	182.4	175.2
55°	163.9	166.7	166.0	165.3	163.9	163.9	163.9	161.7	159.6	155.3	148.2
57.5°	140.3	141.1	141.1	140.3	140.3	138.9	138.9	136.8	136.1	131.8	126.1
60°	125.4	125.4	126.1	125.4	124.7	123.9	123.3	121.8	119.7	116.8	112.6
62.5°	113.3	114.0	114.0	113.3	112.6	111.8	111.1	109.7	108.3	106.1	101.9
65°	99.7	101.1	100.4	99.7	99.0	98.3	98.3	96.9	95.5	94.0	89.8
67.5°	84.8	85.5	86.2	84.8	84.8	84.1	84.1	82.6	81.9	79.1	76.2
70°	69.1	69.8	69.8	69.1	69.1	68.4	68.4	67.7	67.0	64.8	62.0
72.5°	54.1	54.8	54.1	53.4	53.4	53.4	52.7	52.0	51.3	49.9	47.7
75°	39.9	39.9	40.6	39.9	39.2	39.2	38.5	38.5	37.0	36.3	34.2
77.5°	28.5	29.2	28.5	28.5	27.8	27.1	27.1	26.3	26.3	25.6	24.2
80°	19.2	19.2	20.0	19.2	18.5	19.2	18.5	17.8	17.8	17.1	15.7
82.5°	12.1	12.8	12.1	12.1	12.1	12.1	12.1	11.4	11.4	10.7	10.0
85°	7.1	7.1	7.1	7.1	7.1	7.1	7.1	6.4	6.4	6.4	5.7
87.5°	3.6	3.6	2.8	2.8	3.6	3.6	3.6	2.8	2.8	2.8	2.8
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°	545.7	545.7	545.7	545.7	545.7	545.7	545.7	545.7	545.7	545.7	545.7
2.5°	537.9	538.6	540.0	542.1	542.1	540.7	544.3	544.3	545.7	546.4	549.2
5°	532.2	533.6	536.4	540.0	540.7	540.0	545.0	547.1	549.2	551.4	555.7
7.5°	527.2	530.0	535.0	540.0	542.1	542.1	550.0	552.8	557.1	561.4	566.4
10°	524.3	528.6	535.7	543.6	545.7	547.8	557.1	562.8	568.5	574.2	581.3
12.5°	520.7	528.6	537.9	547.8	552.1	554.9	567.8	574.9	582.7	589.9	599.1
15°	520.0	529.3	541.4	554.2	559.9	564.2	578.5	588.4	597.7	607.0	616.2
17.5°	517.2	528.6	543.6	557.8	564.9	570.6	587.0	599.1	609.8	619.1	629.8
20°	513.6	526.5	542.9	558.5	566.4	572.0	589.9	601.3	613.4	621.9	631.9
22.5°	508.6	521.5	537.9	553.5	560.7	565.6	583.4	593.4	604.1	612.7	621.9
25°	500.1	512.2	526.5	539.3	546.4	550.7	566.4	575.6	583.4	592.0	600.5
27.5°	488.0	497.2	509.4	518.6	522.9	527.2	540.0	547.8	554.9	562.1	567.8
30°	466.6	473.7	482.3	490.1	494.4	495.1	507.2	511.5	517.2	522.2	526.5
32.5°	438.1	443.8	448.8	453.1	455.9	456.6	465.9	467.3	473.0	473.0	479.4
35°	401.8	404.6	408.2	408.2	410.3	408.2	414.6	416.0	416.8	417.5	422.4
37.5°	360.5	361.9	364.0	359.8	359.8	357.6	359.8	361.2	358.3	358.3	361.9
40°	321.3	318.4	315.6	311.3	309.2	304.9	304.9	301.3	299.2	297.8	298.5
42.5°	283.5	277.1	270.7	261.4	257.2	252.9	248.6	243.6	242.2	238.7	236.5
45°	247.2	237.9	229.4	214.4	205.9	201.6	192.4	182.4	176.0	174.5	168.8
47.5°	216.6	203.0	188.8	171.0	162.4	154.6	141.1	132.5	123.9	119.7	116.1
50°	189.5	177.4	158.9	139.6	128.9	121.1	106.1	96.2	86.9	80.5	76.2
52.5°	166.0	152.4	135.4	113.3	102.6	94.0	77.6	66.3	58.4	52.0	47.0
55°	139.6	128.9	111.8	91.2	80.5	70.5	56.3	44.2	36.3	32.1	28.5
57.5°	120.4	111.1	94.8	74.8	64.8	55.6	41.3	31.3	24.9	20.7	18.5
60°	107.6	99.0	84.8	65.5	56.3	47.7	34.2	24.9	19.2	15.7	14.2
62.5°	96.9	88.3	75.5	57.7	49.9	41.3	29.2	20.7	15.7	12.8	10.7
65°	84.8	76.9	65.5	49.9	42.7	35.6	24.9	17.1	12.8	10.0	8.5
67.5°	72.0	64.8	54.8	41.3	35.6	29.9	20.0	14.2	10.7	8.5	7.1
70°	58.4	52.7	43.5	33.5	28.5	23.5	16.4	11.4	7.8	6.4	5.7
72.5°	44.9	39.9	33.5	25.6	21.4	17.8	12.1	8.5	6.4	5.0	4.3
75°	32.1	28.5	23.5	18.5	15.7	12.8	9.3	6.4	4.3	3.6	2.8
77.5°	22.1	20.0	16.4	12.8	10.7	9.3	6.4	4.3	3.6	2.8	2.1
80°	14.2	12.8	10.7	7.8	6.4	5.7	3.6	2.8	2.1	1.4	1.4
82.5°	8.5	7.8	6.4	4.3	3.6	2.8	2.1	1.4	1.4	0.7	0.7
85°	5.0	4.3	2.8	2.1	2.1	1.4	1.4	0.7	0.7	0.0	0.0
87.5°	2.1	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°	545.7	545.7	545.7	545.7	545.7	545.7	545.7	545.7	545.7	545.7	545.7
2.5°	547.8	551.4	550.7	552.8	552.1	552.1	555.7	554.2	557.8	557.8	558.5
5°	555.7	560.7	560.7	564.2	563.5	564.9	568.5	568.5	572.8	574.2	574.2
7.5°	567.1	573.5	574.9	578.5	579.2	582.0	584.9	585.6	591.3	592.7	593.4
10°	582.7	590.6	592.7	596.3	597.7	600.5	604.1	605.5	612.7	613.4	616.2
12.5°	602.0	610.5	612.7	616.9	617.7	621.2	626.2	627.6	634.7	636.9	639.0
15°	620.5	628.3	631.9	636.2	636.9	641.2	645.4	646.8	653.3	656.1	658.3
17.5°	633.3	642.6	644.7	650.4	650.4	654.0	658.3	659.7	666.1	668.2	669.6
20°	636.2	644.7	647.6	651.8	652.5	654.7	658.3	659.7	665.4	666.1	668.2
22.5°	625.5	634.0	635.5	639.7	640.4	642.6	645.4	644.7	651.8	651.1	651.8
25°	602.7	610.5	610.5	615.5	614.8	616.9	618.3	617.7	624.0	624.0	624.0
27.5°	569.9	577.0	577.7	581.3	579.2	579.9	581.3	580.6	584.9	584.9	584.9
30°	529.3	535.0	532.9	535.7	534.3	535.7	534.3	533.6	535.0	536.4	535.7
32.5°	478.7	483.0	483.0	483.7	483.7	479.4	478.0	478.0	477.3	476.6	476.6
35°	420.3	423.9	422.4	422.4	421.7	417.5	415.3	413.9	416.0	411.8	414.6
37.5°	360.5	361.2	359.0	358.3	354.8	354.8	351.2	348.3	349.8	349.1	346.2
40°	294.9	297.8	293.5	292.1	294.2	291.4	287.8	284.2	287.1	283.5	285.0
42.5°	230.8	230.1	228.7	228.7	228.7	224.4	223.7	223.0	223.7	220.9	218.7
45°	166.7	164.6	162.4	162.4	159.6	158.1	158.1	156.0	152.4	152.4	148.2
47.5°	112.6	107.6	106.1	105.4	104.0	104.0	102.6	101.1	100.4	96.9	96.9
50°	73.4	68.4	67.0	66.3	67.0	65.5	64.1	62.7	61.3	60.6	59.1
52.5°	44.2	42.0	40.6	39.9	38.5	37.8	37.0	35.6	34.9	34.9	34.2
55°	26.3	24.2	21.4	21.4	21.4	20.7	20.0	19.2	18.5	18.5	17.8
57.5°	16.4	15.0	13.5	12.8	12.8	12.8	12.1	12.1	12.1	12.1	11.4
60°	12.1	10.7	10.0	10.0	10.0	9.3	9.3	9.3	9.3	8.5	8.5
62.5°	9.3	8.5	7.8	7.8	7.1	7.1	7.1	7.1	7.1	7.1	6.4
65°	7.8	6.4	6.4	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
67.5°	5.7	5.0	5.0	5.0	5.0	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	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
75°	2.8	2.8	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
77.5°	2.1	2.1	2.1	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





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**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	545.7	545.7	545.7	545.7	545.7	545.7	545.7	545.7
2.5°	558.5	562.1	558.5	558.5	560.7	559.9	561.4	559.2
5°	574.9	579.9	576.3	575.6	579.2	578.5	579.2	577.7
7.5°	594.8	599.8	596.3	596.3	599.8	599.1	601.3	599.8
10°	617.7	623.3	618.3	619.1	624.0	623.3	623.3	623.3
12.5°	641.2	646.8	644.0	644.0	647.6	648.3	649.0	648.3
15°	660.4	666.1	662.5	662.5	667.5	666.8	667.5	666.8
17.5°	671.8	677.5	673.2	673.2	677.5	677.5	678.2	678.9
20°	668.9	675.3	671.8	670.3	675.3	675.3	674.6	674.6
22.5°	652.5	658.3	655.4	654.0	657.5	656.1	655.4	656.1
25°	624.0	629.8	624.0	624.0	626.9	626.2	626.9	626.2
27.5°	585.6	589.9	584.2	583.4	586.3	584.9	584.2	586.3
30°	534.3	538.6	535.7	533.6	537.1	535.0	533.6	534.3
32.5°	475.9	478.7	477.3	473.7	475.9	474.4	473.7	474.4
35°	411.8	415.3	409.6	408.9	412.5	409.6	408.2	411.8
37.5°	345.5	349.8	344.8	345.5	343.4	344.1	342.7	344.8
40°	282.8	282.1	280.7	280.0	280.7	278.5	280.0	277.8
42.5°	215.1	216.6	215.9	215.1	215.9	213.0	211.6	214.4
45°	149.6	148.9	147.5	146.0	146.0	145.3	145.3	143.2
47.5°	96.2	95.5	92.6	93.3	94.8	93.3	91.2	94.0
50°	58.4	57.7	57.7	57.0	58.4	57.0	55.6	55.6
52.5°	32.8	32.8	32.1	32.1	32.1	32.1	31.3	30.6
55°	17.8	17.1	17.1	17.1	16.4	16.4	16.4	16.4
57.5°	11.4	11.4	11.4	11.4	11.4	11.4	10.7	10.7
60°	8.5	8.5	8.5	8.5	7.8	8.5	7.8	7.8
62.5°	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
65°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
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°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
75°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
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)