

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: P#

Luminaire Tested: **LD4C10D010 EX4C109040 4LBSQLWWLI**

Issue Date: 2/18/2022

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P#
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P219529)
Test Lab: INNOVATION CENTER
Issue Date: 2/18/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C10D010 EX4C109040 4LBSQLWWLI
Description: 4 INCH 1000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH LI FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

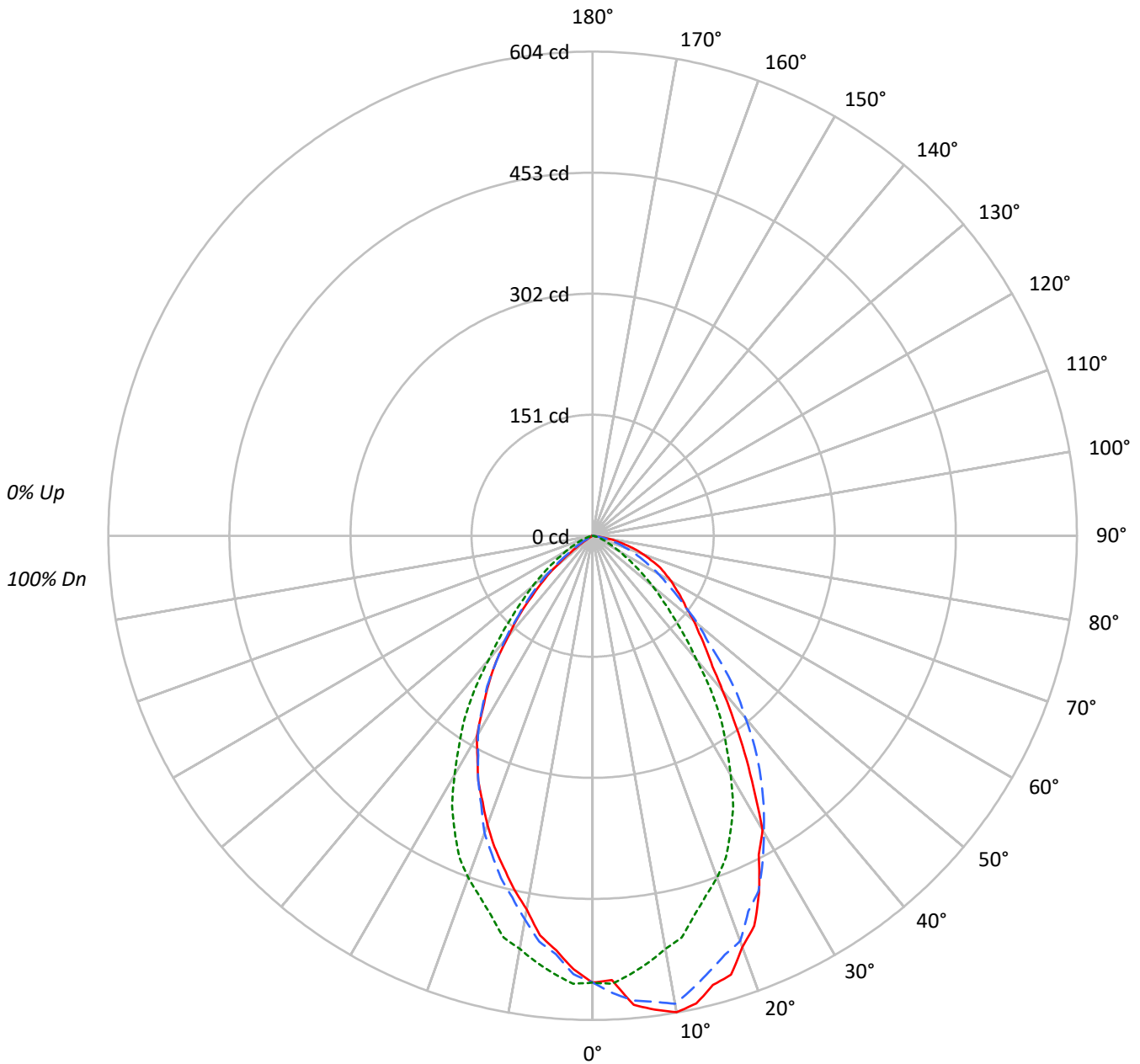
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 799.0 lumens
Efficiency: N/A
Efficacy: 81.5 lumens/watt
Spacing Criteria (0/90/45): 1.01 / 1 / 1.06
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 9.8
Input Voltage (V):
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									
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	84	82	80																			
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	77	74	72																			
4	91	81	74	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	80	69	61	56	78	68	61	56	66	60	55	65	59	55	63	58	54	53																			
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48																			
8	70	59	52	47	69	58	51	46	57	51	46	56	50	46	55	50	46	44																			
9	66	55	48	43	65	54	47	43	53	47	43	52	46	42	51	46	42	41																			
10	62	51	44	40	61	51	44	40	50	44	39	49	43	39	48	43	39	38																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	53783	53783	53783
5°	56904	53146	50298
10°	59129	51272	46363
15°	57948	48937	42794
20°	56074	46597	39389
25°	52306	43331	35932
30°	47218	38349	32166
35°	38895	32828	26691
40°	31741	25343	20544
45°	27264	19240	14778
50°	24678	14651	9337
55°	22710	10564	3381
60°	21806	7217	521
65°	21050	4886	160
70°	18845	3385	197
75°	15471	1752	0
80°	9668	722	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.2	6.5
10°-20°	140.7	17.6
20°-30°	187.9	23.5
30°-40°	178.4	22.3
40°-50°	123.3	15.4
50°-60°	68.1	8.5
60°-70°	33.8	4.2
70°-80°	13.3	1.7
80°-90°	1.3	0.2
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°	380.8	47.7
0°-40°	559.2	70.0
0°-60°	750.6	93.9
0°-90°	799.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	799.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	557	557	557	557	557	
5°	588	582	549	524	519	56
15°	580	563	490	442	428	164
25°	491	489	407	338	338	224
35°	330	365	279	229	227	207
45°	200	229	141	116	108	156
55°	135	127	63	32	20	122
65°	92	67	21	1	1	90
75°	42	25	5	0	0	44
85°	0	1	0	0	0	4
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°	557.4	557.4	557.4	557.4	557.4	557.4	557.4	557.4	557.4	557.4	557.4
2.5°	554.7	570.1	571.4	570.1	572.1	571.4	574.8	571.4	575.5	569.4	570.8
5°	587.5	581.5	594.2	587.5	587.5	586.8	584.8	584.1	586.8	578.1	582.1
7.5°	596.2	604.9	616.2	602.2	602.9	602.9	598.9	597.5	597.5	581.5	586.2
10°	603.5	598.2	604.2	598.9	603.5	602.9	605.5	596.8	602.9	593.5	592.8
12.5°	597.5	595.5	603.5	594.8	592.2	592.8	589.5	587.5	589.5	578.8	578.1
15°	580.1	582.1	594.2	584.8	583.5	582.1	578.1	571.4	576.8	562.1	562.8
17.5°	574.1	570.8	572.8	564.8	566.8	565.4	564.8	558.8	557.4	548.1	548.1
20°	546.1	553.4	553.4	548.1	548.1	547.4	538.7	544.0	538.0	535.4	538.0
22.5°	526.7	527.3	527.3	522.7	523.3	520.7	516.0	512.6	516.0	512.6	507.3
25°	491.3	492.6	500.6	491.9	490.6	493.2	489.2	487.2	486.6	478.6	489.2
27.5°	448.5	461.8	461.2	457.8	461.8	456.5	454.5	455.1	457.2	456.5	459.2
30°	423.8	425.7	427.8	425.1	425.7	423.8	423.8	424.4	429.7	427.8	427.1
32.5°	373.6	380.3	385.7	385.7	386.3	388.3	387.6	401.7	405.0	398.4	397.0
35°	330.2	334.9	339.5	340.2	348.9	349.5	350.2	354.2	363.6	365.6	364.9
37.5°	288.7	293.4	294.7	300.8	305.4	310.1	315.5	320.8	328.8	335.5	332.2
40°	252.0	254.0	257.3	260.0	269.3	269.3	272.0	282.7	291.4	296.8	296.1
42.5°	221.2	221.9	224.6	229.2	237.9	235.9	237.9	245.3	258.0	258.7	266.0
45°	199.8	199.2	201.2	201.8	207.2	209.9	211.2	216.6	227.2	228.6	229.2
47.5°	180.5	179.8	183.1	184.5	186.5	189.1	189.1	189.8	193.8	197.2	194.5
50°	164.4	164.4	164.4	165.8	169.1	168.4	169.1	171.8	173.8	172.4	171.8
52.5°	147.0	149.7	151.7	152.4	153.1	153.1	153.7	152.4	151.7	149.7	145.7
55°	135.0	137.7	137.7	137.7	137.7	140.4	137.0	137.7	137.7	132.3	127.0
57.5°	123.0	125.7	127.7	125.0	127.7	125.0	123.6	123.0	121.6	116.3	108.3
60°	113.0	114.3	113.6	113.0	114.3	112.3	110.9	108.3	106.9	99.6	94.2
62.5°	101.6	102.3	102.9	101.6	100.3	99.6	96.9	92.9	90.2	84.2	79.5
65°	92.2	90.2	89.6	88.9	87.6	85.5	83.6	78.9	76.9	71.5	66.8
67.5°	78.2	77.5	78.9	76.9	73.5	73.5	71.5	67.5	62.8	59.5	54.8
70°	66.8	66.2	64.8	62.8	62.2	59.5	59.5	54.8	53.5	47.4	43.4
72.5°	54.8	54.8	52.8	50.8	48.8	47.4	46.8	43.4	41.5	38.1	34.7
75°	41.5	41.5	40.8	38.8	37.4	36.1	35.4	32.8	30.7	27.4	25.4
77.5°	29.4	29.4	26.7	25.4	26.1	24.7	23.4	22.7	22.0	20.1	17.4
80°	17.4	16.7	14.7	15.4	14.7	14.7	14.0	13.4	12.0	10.7	9.3
82.5°	4.7	5.3	5.3	5.3	6.0	4.7	4.7	4.7	5.3	5.3	3.4
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7	0.7
87.5°	0.7	1.3	2.7	2.7	2.7	2.7	2.7	2.0	2.0	2.0	1.3
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°	557.4	557.4	557.4	557.4	557.4	557.4	557.4	557.4	557.4	557.4	557.4
2.5°	564.1	563.4	564.1	559.4	570.1	562.1	560.8	559.4	564.1	559.4	552.7
5°	576.1	569.4	567.4	565.4	571.4	562.1	560.1	560.8	557.4	548.7	549.4
7.5°	580.1	574.1	568.1	555.4	560.8	558.8	553.4	549.4	544.0	536.7	535.4
10°	581.5	574.8	566.1	562.1	554.1	551.4	549.4	542.7	536.0	523.3	520.0
12.5°	577.5	569.4	558.8	555.4	549.4	540.7	536.0	529.3	523.3	513.3	505.9
15°	560.1	553.4	550.1	538.7	536.0	530.7	521.3	512.0	503.3	489.9	485.9
17.5°	540.0	537.4	534.0	525.3	524.7	519.3	510.6	502.6	491.3	470.5	463.8
20°	519.3	519.3	508.6	505.3	512.0	501.3	494.6	487.2	463.8	453.8	441.8
22.5°	504.0	496.6	490.6	485.2	485.9	479.2	469.9	455.1	446.5	434.4	420.4
25°	473.9	476.5	463.2	461.2	463.2	447.8	443.1	431.1	418.4	407.0	396.3
27.5°	455.1	447.8	439.1	431.8	431.8	425.7	412.4	409.7	390.3	379.6	366.2
30°	427.1	421.7	414.4	403.7	402.4	397.7	387.0	380.3	360.3	344.2	336.8
32.5°	391.6	389.7	383.6	371.6	367.6	362.2	348.9	337.5	328.2	310.1	301.4
35°	366.2	358.9	346.2	336.2	332.8	323.5	312.8	304.8	294.7	278.7	267.3
37.5°	328.2	320.8	308.8	296.8	296.8	287.4	272.7	264.7	250.6	241.3	231.9
40°	294.7	285.4	273.4	259.3	257.3	243.9	237.9	224.6	215.9	201.2	199.8
42.5°	257.3	248.6	237.9	227.2	219.2	212.5	197.2	187.1	177.8	170.4	168.4
45°	223.2	211.9	202.5	189.1	181.1	173.1	163.1	156.4	149.0	141.0	136.3
47.5°	193.8	184.5	171.1	159.1	151.1	147.0	135.7	128.3	122.3	117.0	113.6
50°	163.8	152.4	145.0	131.7	130.3	121.0	111.6	105.6	102.3	97.6	92.9
52.5°	141.0	130.3	120.3	110.3	104.9	101.6	92.9	86.9	82.2	78.9	76.2
55°	119.0	109.6	101.6	91.6	88.2	83.6	73.5	72.2	67.5	62.8	59.5
57.5°	102.3	93.6	84.2	77.5	71.5	68.2	60.1	54.8	52.1	48.1	44.8
60°	86.9	77.5	70.2	62.2	59.5	54.8	48.8	44.1	40.8	37.4	34.1
62.5°	72.8	64.8	56.8	50.1	46.1	43.4	38.8	34.7	31.4	28.8	26.1
65°	60.1	52.8	46.1	39.4	37.4	34.1	30.7	27.4	24.7	21.4	18.7
67.5°	49.5	42.8	36.1	31.4	29.4	28.1	24.1	20.7	18.7	16.7	14.0
70°	38.8	34.1	28.8	24.7	22.7	20.7	18.0	16.1	13.4	12.0	10.0
72.5°	30.1	26.1	21.4	18.0	16.7	15.4	12.7	10.7	9.3	8.0	6.7
75°	21.4	18.0	15.4	12.0	11.4	10.7	8.7	7.4	6.0	4.7	4.0
77.5°	14.7	12.0	9.3	8.0	7.4	6.0	5.3	4.0	3.4	2.7	2.0
80°	8.0	6.0	4.7	4.0	3.4	2.7	2.7	2.0	1.3	1.3	0.7
82.5°	2.7	2.0	1.3	0.7	0.7	0.7	0.7	0.7	0.7	0.0	0.7
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°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	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°	557.4	557.4	557.4	557.4	557.4	557.4	557.4	557.4	557.4	557.4	557.4
2.5°	556.7	549.4	551.4	551.4	550.1	550.1	548.7	546.7	547.4	543.4	534.7
5°	550.7	541.4	540.0	541.4	536.0	534.7	532.0	536.0	524.0	528.7	523.3
7.5°	533.4	524.7	522.7	527.3	520.7	516.6	516.0	521.3	510.6	505.3	499.3
10°	514.0	510.6	504.6	501.3	499.3	499.9	494.6	487.9	485.9	484.6	479.2
12.5°	496.6	489.2	483.9	479.9	478.6	478.6	469.9	468.5	462.5	461.2	453.2
15°	475.9	467.2	463.8	458.5	453.8	456.5	446.5	443.8	441.8	433.1	434.4
17.5°	457.8	448.5	440.5	437.1	433.1	429.1	419.7	421.7	417.0	417.0	405.0
20°	434.4	424.4	418.4	411.7	411.7	406.4	399.7	400.3	394.3	388.3	377.6
22.5°	409.7	399.0	391.6	389.0	382.3	381.0	373.0	370.9	362.9	363.6	354.2
25°	383.6	373.0	362.9	363.6	357.6	354.9	350.2	340.9	337.5	333.5	330.8
27.5°	352.9	345.5	336.8	336.2	324.8	325.5	319.5	316.8	308.8	310.8	304.8
30°	324.8	314.1	306.1	304.1	299.4	298.1	288.7	284.7	286.1	280.7	277.4
32.5°	296.1	280.0	276.7	272.7	270.0	266.7	260.0	262.7	256.6	258.0	252.6
35°	258.0	251.3	242.6	242.6	239.9	237.3	232.6	235.3	229.2	226.6	221.2
37.5°	225.9	219.9	211.2	213.9	209.2	205.2	201.2	201.8	196.5	195.8	190.5
40°	191.2	187.8	181.8	181.8	178.5	178.5	176.4	174.4	171.1	167.1	161.1
42.5°	158.4	155.7	153.1	153.7	149.0	153.1	147.7	151.1	140.4	139.7	135.7
45°	134.3	128.3	129.0	126.3	123.6	125.0	120.3	121.6	115.6	114.3	110.3
47.5°	109.0	106.9	102.9	101.6	101.6	99.6	97.6	96.9	94.2	90.9	85.5
50°	89.6	82.2	80.9	78.9	77.5	77.5	74.9	70.9	71.5	68.2	62.8
52.5°	70.2	64.2	61.5	60.8	58.2	56.8	53.5	50.8	48.8	47.4	44.1
55°	54.1	48.8	45.5	45.5	41.5	41.5	36.8	34.7	32.1	29.4	27.4
57.5°	40.8	38.1	34.7	32.1	30.7	27.4	24.7	21.4	19.4	15.4	12.7
60°	30.7	28.1	24.7	22.7	21.4	18.0	14.7	12.0	7.4	6.0	5.3
62.5°	22.7	20.1	16.7	15.4	14.0	11.4	8.0	4.0	2.0	2.0	2.0
65°	16.7	13.4	10.7	9.3	8.0	6.0	2.7	1.3	0.7	0.7	0.7
67.5°	11.4	8.7	6.0	5.3	4.0	2.0	0.7	0.7	0.7	0.7	0.7
70°	7.4	5.3	2.7	2.0	1.3	0.7	0.7	0.7	0.7	0.7	0.7
72.5°	4.7	2.7	1.3	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	2.7	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	1.3	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	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	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7	0.7
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: P#

CATALOG NUMBER: LD4C10D010 EX4C109040 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	557.4	557.4	557.4	557.4	557.4	557.4	557.4	557.4
2.5°	544.0	539.4	542.0	536.0	538.7	543.4	540.0	541.4
5°	525.3	522.7	519.3	510.6	517.3	522.7	520.0	519.3
7.5°	505.3	495.9	500.6	497.9	496.6	501.9	495.9	502.6
10°	484.6	477.9	477.2	472.5	472.5	476.5	477.2	473.2
12.5°	453.8	450.5	450.5	449.8	449.1	453.2	453.8	451.8
15°	431.8	430.4	427.1	426.4	422.4	428.4	429.1	428.4
17.5°	405.0	405.7	402.4	402.4	405.0	407.0	401.7	407.0
20°	387.0	383.6	382.3	376.3	379.6	383.0	383.0	383.6
22.5°	360.9	355.6	357.6	354.2	352.2	356.9	356.9	358.9
25°	331.5	331.5	332.8	330.8	332.2	334.9	332.8	337.5
27.5°	303.4	306.1	306.1	303.4	304.8	312.8	316.1	310.8
30°	277.4	278.0	280.0	278.7	282.7	285.4	284.7	288.7
32.5°	248.0	251.3	252.6	250.6	252.0	258.0	254.6	254.0
35°	225.2	219.2	218.6	219.2	221.9	223.2	221.9	226.6
37.5°	192.5	190.5	187.8	188.5	190.5	193.2	194.5	197.8
40°	161.1	158.4	158.4	157.7	155.7	163.1	163.1	163.1
42.5°	133.7	133.0	129.7	129.7	132.3	134.3	133.0	137.7
45°	109.6	106.9	104.9	104.9	106.9	106.9	109.0	108.3
47.5°	86.2	83.6	84.2	82.2	84.2	86.9	83.6	84.2
50°	64.8	64.8	63.5	64.8	64.2	64.8	63.5	62.2
52.5°	44.1	50.1	50.8	48.1	42.1	36.8	33.4	36.1
55°	25.4	22.7	22.7	22.0	20.7	20.1	18.0	20.1
57.5°	12.7	11.4	11.4	11.4	10.7	10.0	8.7	8.7
60°	5.3	4.7	4.7	4.0	3.4	2.7	2.0	2.7
62.5°	2.0	1.3	1.3	1.3	1.3	1.3	1.3	1.3
65°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
67.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
70°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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)