

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: P563783

Luminaire Tested: **LD4C10D010 EX4C10D2W 4LBSQLWWLI**

Issue Date: 2/18/2022



Test Information

Test Method: LM-79-08
Report Number: P563783
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 EX4C10D2W 4LBSQLWWLI
Description: 4 INCH 1000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH LI FINISH, DIM TO WARM
Light Source: -
Ballast/Driver: -

Summary

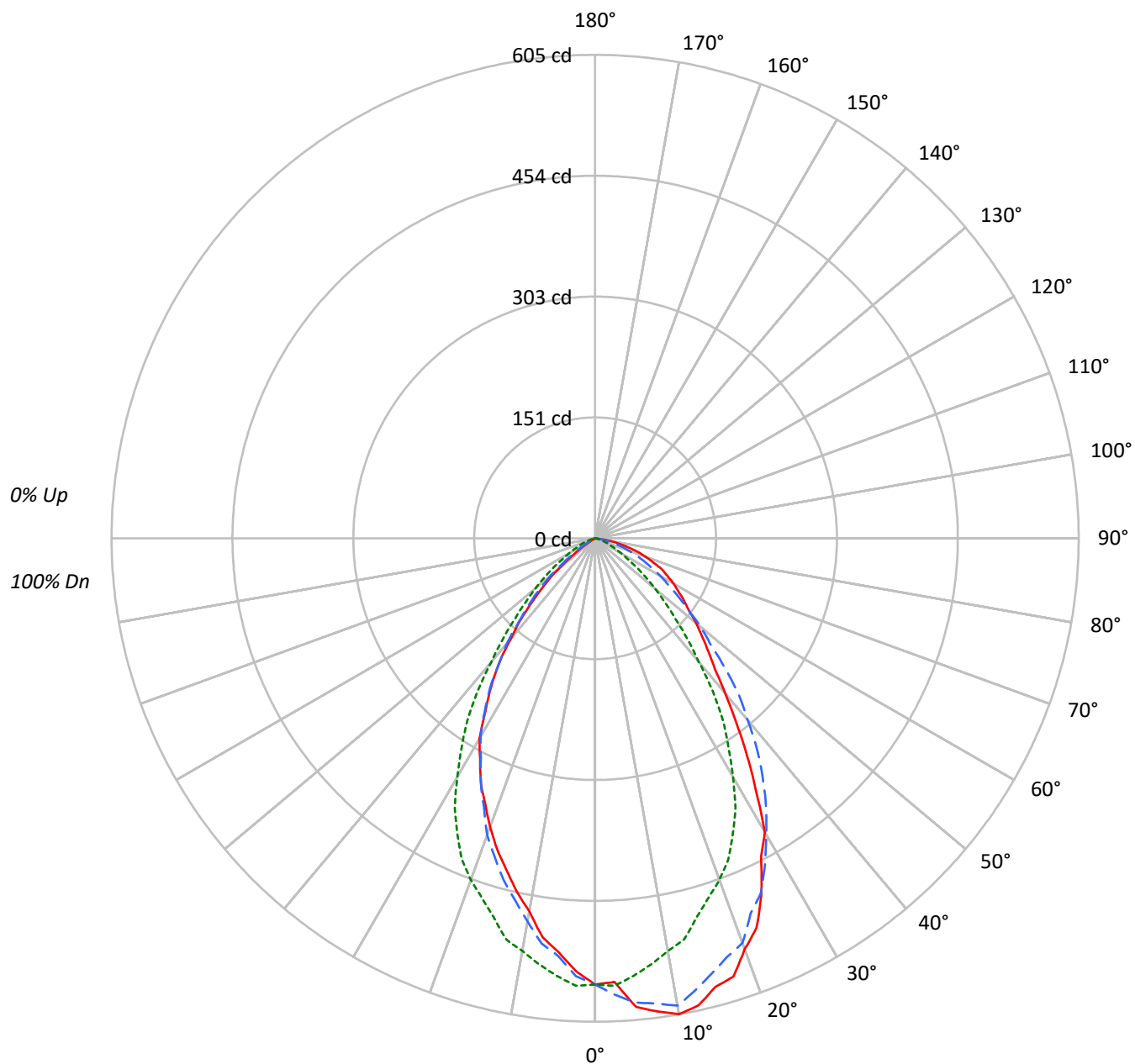
Lumens per Lamp: N/A
Luminaire Lumens: 800.5 lumens
Efficiency: N/A
Efficacy: 81.7 lumens/watt
Spacing Criteria (0/90/45): 1.01 / 1 / 1.06
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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					20
RC	80				70					50					30					10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	53879	53879	53879
5°	57020	53252	50395
10°	59247	51379	46451
15°	58058	49027	42884
20°	56187	46689	39471
25°	52401	43416	36006
30°	47307	38416	32233
35°	38965	32887	26739
40°	31804	25393	20581
45°	27318	19281	14792
50°	24723	14681	9352
55°	22761	10598	3381
60°	21845	7237	502
65°	21096	4909	160
70°	18873	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°	52.3	6.5
10°-20°	141.0	17.6
20°-30°	188.2	23.5
30°-40°	178.7	22.3
40°-50°	123.5	15.4
50°-60°	68.3	8.5
60°-70°	33.9	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°	381.5	47.7
0°-40°	560.2	70.0
0°-60°	752.0	93.9
0°-90°	800.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	800.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	558	558	558	558	558	
5°	589	583	550	525	520	56
15°	581	564	491	443	429	164
25°	492	490	408	338	338	224
35°	331	366	279	230	227	207
45°	200	230	141	116	108	156
55°	135	127	63	32	20	122
65°	92	67	22	1	1	90
75°	42	25	5	0	0	44
85°	0	1	0	0	0	4
90°	0	0	0	0	0	



TEST NUMBER: P563783

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	558.4	558.4	558.4	558.4	558.4	558.4	558.4	558.4	558.4	558.4	558.4
2.5°	555.8	571.2	572.6	571.2	573.2	572.6	575.9	572.6	576.5	570.5	571.9
5°	588.7	582.6	595.3	588.7	588.7	587.9	585.9	585.3	587.9	579.3	583.3
7.5°	597.3	606.0	617.4	603.4	604.0	604.0	600.0	598.6	598.6	582.6	587.2
10°	604.7	599.3	605.3	600.0	604.7	604.0	606.7	598.0	604.0	594.7	593.9
12.5°	598.6	596.7	604.7	596.0	593.3	593.9	590.6	588.7	590.6	579.9	579.3
15°	581.2	583.3	595.3	585.9	584.6	583.3	579.3	572.6	577.9	563.1	563.8
17.5°	575.2	571.9	573.9	565.9	567.9	566.5	565.9	559.9	558.4	549.1	549.1
20°	547.2	554.5	554.5	549.1	549.1	548.5	539.7	545.1	539.0	536.4	539.0
22.5°	527.6	528.3	528.3	523.7	524.4	521.6	516.9	513.6	516.9	513.6	508.3
25°	492.2	493.5	501.6	492.8	491.5	494.2	490.2	488.2	487.5	479.5	490.2
27.5°	449.3	462.7	462.0	458.7	462.7	457.3	455.4	456.0	458.0	457.3	460.1
30°	424.6	426.5	428.5	425.9	426.5	424.6	424.6	425.2	430.6	428.5	427.9
32.5°	374.3	381.0	386.4	386.4	387.0	389.1	388.4	402.4	405.8	399.1	397.8
35°	330.8	335.5	340.2	340.9	349.5	350.2	350.9	354.9	364.3	366.3	365.6
37.5°	289.3	294.0	295.3	301.3	306.1	310.8	316.0	321.4	329.5	336.2	332.8
40°	252.5	254.5	257.9	260.5	269.9	269.9	272.5	283.3	291.9	297.3	296.6
42.5°	221.6	222.4	225.0	229.7	238.4	236.4	238.4	245.8	258.5	259.2	266.5
45°	200.2	199.6	201.6	202.2	207.6	210.3	211.6	217.0	227.6	229.0	229.7
47.5°	180.9	180.1	183.5	184.8	186.9	189.5	189.5	190.2	194.2	197.5	194.9
50°	164.7	164.7	164.7	166.1	169.5	168.8	169.5	172.1	174.1	172.7	172.1
52.5°	147.3	150.0	152.0	152.7	153.4	153.4	154.0	152.7	152.0	150.0	146.0
55°	135.3	137.9	137.9	137.9	137.9	140.6	137.3	137.9	137.9	132.6	127.3
57.5°	123.2	125.9	127.9	125.2	127.9	125.2	123.9	123.2	121.9	116.5	108.4
60°	113.2	114.5	113.8	113.2	114.5	112.5	111.2	108.4	107.1	99.8	94.4
62.5°	101.8	102.4	103.1	101.8	100.5	99.8	97.1	93.1	90.4	84.3	79.6
65°	92.4	90.4	89.7	89.1	87.7	85.7	83.7	79.0	77.0	71.6	66.9
67.5°	78.3	77.7	79.0	77.0	73.6	73.6	71.6	67.6	63.0	59.6	54.9
70°	66.9	66.3	65.0	63.0	62.3	59.6	59.6	54.9	53.6	47.5	43.5
72.5°	54.9	54.9	52.9	50.9	48.9	47.5	46.9	43.5	41.5	38.1	34.8
75°	41.5	41.5	40.9	38.9	37.5	36.1	35.5	32.9	30.8	27.5	25.4
77.5°	29.5	29.5	26.8	25.4	26.1	24.7	23.4	22.8	22.1	20.1	17.4
80°	17.4	16.8	14.7	15.4	14.7	14.7	14.0	13.4	12.0	10.7	9.4
82.5°	4.7	5.4	5.4	5.4	6.0	4.7	4.7	4.7	5.4	5.4	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	2.6	2.6	2.6	2.6	2.6	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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CATALOG NUMBER: LD4C10D010 EX4C10D2W 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	558.4	558.4	558.4	558.4	558.4	558.4	558.4	558.4	558.4	558.4	558.4
2.5°	565.2	564.5	565.2	560.5	571.2	563.1	561.8	560.5	565.2	560.5	553.8
5°	577.3	570.5	568.5	566.5	572.6	563.1	561.2	561.8	558.4	549.8	550.4
7.5°	581.2	575.2	569.2	556.5	561.8	559.9	554.5	550.4	545.1	537.7	536.4
10°	582.6	575.9	567.2	563.1	555.2	552.4	550.4	543.8	537.1	524.4	521.0
12.5°	578.6	570.5	559.9	556.5	550.4	541.8	537.1	530.4	524.4	514.3	506.9
15°	561.2	554.5	551.1	539.7	537.1	531.7	522.3	513.0	504.2	490.8	486.8
17.5°	541.0	538.4	535.0	526.3	525.7	520.3	511.7	503.5	492.2	471.5	464.8
20°	520.3	520.3	509.6	506.3	513.0	502.2	495.6	488.2	464.8	454.7	442.7
22.5°	504.9	497.5	491.5	486.1	486.8	480.1	470.8	456.0	447.3	435.3	421.2
25°	474.8	477.5	464.0	462.0	464.0	448.7	444.0	431.9	419.2	407.8	397.1
27.5°	456.0	448.7	439.9	432.6	432.6	426.5	413.2	410.5	391.1	380.3	366.9
30°	427.9	422.5	415.2	404.4	403.1	398.4	387.8	381.0	360.9	344.8	337.5
32.5°	392.4	390.4	384.4	372.3	368.3	362.9	349.5	338.2	328.8	310.8	302.0
35°	366.9	359.6	346.9	336.8	333.4	324.1	313.4	305.4	295.3	279.2	267.8
37.5°	328.8	321.4	309.3	297.3	297.3	288.0	273.2	265.2	251.1	241.7	232.3
40°	295.3	285.9	273.9	259.8	257.9	244.4	238.4	225.0	216.3	201.6	200.2
42.5°	257.9	249.1	238.4	227.6	219.6	213.0	197.5	187.5	178.1	170.8	168.8
45°	223.7	212.3	202.9	189.5	181.5	173.4	163.4	156.8	149.3	141.3	136.6
47.5°	194.2	184.8	171.4	159.4	151.4	147.3	135.9	128.6	122.6	117.2	113.8
50°	164.1	152.7	145.4	131.9	130.6	121.3	111.9	105.8	102.4	97.8	93.1
52.5°	141.3	130.6	120.5	110.5	105.1	101.8	93.1	87.1	82.4	79.0	76.4
55°	119.2	109.9	101.8	91.8	88.4	83.7	73.6	72.3	67.6	63.0	59.6
57.5°	102.4	93.8	84.3	77.7	71.6	68.4	60.2	54.9	52.3	48.2	44.9
60°	87.1	77.7	70.3	62.3	59.6	54.9	48.9	44.2	40.9	37.5	34.2
62.5°	73.0	65.0	57.0	50.2	46.2	43.5	38.9	34.8	31.5	28.8	26.1
65°	60.2	52.9	46.2	39.5	37.5	34.2	30.8	27.5	24.7	21.5	18.7
67.5°	49.5	42.8	36.1	31.5	29.5	28.1	24.1	20.8	18.7	16.8	14.0
70°	38.9	34.2	28.8	24.7	22.8	20.8	18.1	16.1	13.4	12.0	10.1
72.5°	30.1	26.1	21.5	18.1	16.8	15.4	12.7	10.7	9.4	8.0	6.7
75°	21.5	18.1	15.4	12.0	11.4	10.7	8.7	7.3	6.0	4.7	4.0
77.5°	14.7	12.0	9.4	8.0	7.3	6.0	5.4	4.0	3.4	2.6	2.0
80°	8.0	6.0	4.7	4.0	3.4	2.6	2.6	2.0	1.3	1.3	0.7
82.5°	2.6	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°	558.4	558.4	558.4	558.4	558.4	558.4	558.4	558.4	558.4	558.4	558.4
2.5°	557.8	550.4	552.4	552.4	551.1	551.1	549.8	547.8	548.5	544.4	535.8
5°	551.8	542.4	541.0	542.4	537.1	535.8	533.0	537.1	525.0	529.7	524.4
7.5°	534.4	525.7	523.7	528.3	521.6	517.7	516.9	522.3	511.7	506.3	500.3
10°	514.9	511.7	505.5	502.2	500.3	500.9	495.6	488.9	486.8	485.5	480.1
12.5°	497.5	490.2	484.8	480.8	479.5	479.5	470.8	469.4	463.4	462.0	454.1
15°	476.8	468.1	464.8	459.4	454.7	457.3	447.3	444.6	442.7	433.9	435.3
17.5°	458.7	449.3	441.3	437.9	433.9	429.9	420.5	422.5	417.9	417.9	405.8
20°	435.3	425.2	419.2	412.5	412.5	407.2	400.5	401.1	395.1	389.1	378.3
22.5°	410.5	399.8	392.4	389.7	383.1	381.7	373.7	371.7	363.6	364.3	354.9
25°	384.4	373.7	363.6	364.3	358.3	355.6	350.9	341.6	338.2	334.2	331.5
27.5°	353.6	346.2	337.5	336.8	325.4	326.1	320.1	317.5	309.3	311.4	305.4
30°	325.4	314.7	306.7	304.7	300.0	298.6	289.3	285.2	286.6	281.3	277.9
32.5°	296.6	280.5	277.2	273.2	270.6	267.2	260.5	263.1	257.1	258.5	253.1
35°	258.5	251.8	243.1	243.1	240.4	237.7	233.0	235.7	229.7	227.0	221.6
37.5°	226.3	220.3	211.6	214.3	209.6	205.6	201.6	202.2	196.8	196.2	190.8
40°	191.5	188.2	182.2	182.2	178.8	178.8	176.8	174.8	171.4	167.4	161.3
42.5°	158.7	156.0	153.4	154.0	149.3	153.4	148.0	151.4	140.6	140.0	135.9
45°	134.6	128.6	129.3	126.5	123.9	125.2	120.5	121.9	115.9	114.5	110.5
47.5°	109.1	107.1	103.1	101.8	101.8	99.8	97.8	97.1	94.4	91.0	85.7
50°	89.7	82.4	81.0	79.0	77.7	77.7	75.0	71.0	71.6	68.4	63.0
52.5°	70.3	64.3	61.6	60.9	58.3	57.0	53.6	50.9	48.9	47.5	44.2
55°	54.2	48.9	45.6	45.6	41.5	41.5	36.8	34.8	32.1	29.5	27.5
57.5°	40.9	38.1	34.8	32.1	30.8	27.5	24.7	21.5	19.4	15.4	12.7
60°	30.8	28.1	24.7	22.8	21.5	18.1	14.7	12.0	7.3	6.0	5.4
62.5°	22.8	20.1	16.8	15.4	14.0	11.4	8.0	4.0	2.0	2.0	2.0
65°	16.8	13.4	10.7	9.4	8.0	6.0	2.6	1.3	0.7	0.7	0.7
67.5°	11.4	8.7	6.0	5.4	4.0	2.0	0.7	0.7	0.7	0.7	0.7
70°	7.3	5.4	2.6	2.0	1.3	0.7	0.7	0.7	0.7	0.7	0.7
72.5°	4.7	2.6	1.3	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	2.6	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: P563783

CATALOG NUMBER: LD4C10D010 EX4C10D2W 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	558.4	558.4	558.4	558.4	558.4	558.4	558.4	558.4
2.5°	545.1	540.4	543.1	537.1	539.7	544.4	541.0	542.4
5°	526.3	523.7	520.3	511.7	518.3	523.7	521.0	520.3
7.5°	506.3	496.9	501.6	498.9	497.5	502.9	496.9	503.5
10°	485.5	478.8	478.2	473.4	473.4	477.5	478.2	474.1
12.5°	454.7	451.3	451.3	450.7	450.0	454.1	454.7	452.7
15°	432.6	431.3	427.9	427.2	423.3	429.3	429.9	429.3
17.5°	405.8	406.5	403.1	403.1	405.8	407.8	402.4	407.8
20°	387.8	384.4	383.1	377.0	380.3	383.7	383.7	384.4
22.5°	361.6	356.2	358.3	354.9	352.9	357.5	357.5	359.6
25°	332.1	332.1	333.4	331.5	332.8	335.5	333.4	338.2
27.5°	304.0	306.7	306.7	304.0	305.4	313.4	316.8	311.4
30°	277.9	278.6	280.5	279.2	283.3	285.9	285.2	289.3
32.5°	248.4	251.8	253.1	251.1	252.5	258.5	255.1	254.5
35°	225.7	219.6	219.0	219.6	222.4	223.7	222.4	227.0
37.5°	192.9	190.8	188.2	188.8	190.8	193.6	194.9	198.3
40°	161.3	158.7	158.7	158.1	156.0	163.4	163.4	163.4
42.5°	134.0	133.3	129.9	129.9	132.6	134.6	133.3	137.9
45°	109.9	107.1	105.1	105.1	107.1	107.1	109.1	108.4
47.5°	86.4	83.7	84.3	82.4	84.3	87.1	83.7	84.3
50°	65.0	65.0	63.6	65.0	64.3	65.0	63.6	62.3
52.5°	44.2	50.2	50.9	48.2	42.2	36.8	33.5	36.1
55°	25.4	22.8	22.8	22.1	20.8	20.1	18.1	20.1
57.5°	12.7	11.4	11.4	11.4	10.7	10.1	8.7	8.7
60°	5.4	4.7	4.7	4.0	3.4	2.6	2.0	2.6
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)