

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: P857094

Luminaire Tested: **LX4C15D010 EX4C159030 4LBSWNH**

Issue Date: 2/18/2022



Test Information

Test Method: LM-79-08
Report Number: P857094
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P251634)
Test Lab: INNOVATION CENTER
Issue Date: 2/18/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LX4C15D010 EX4C159030 4LBSWNH
Description: 4 INCH 1500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS
AND 4LCSW TRIM WITH H FINISH, DIM TO WARM
Light Source: -
Ballast/Driver: -

Summary

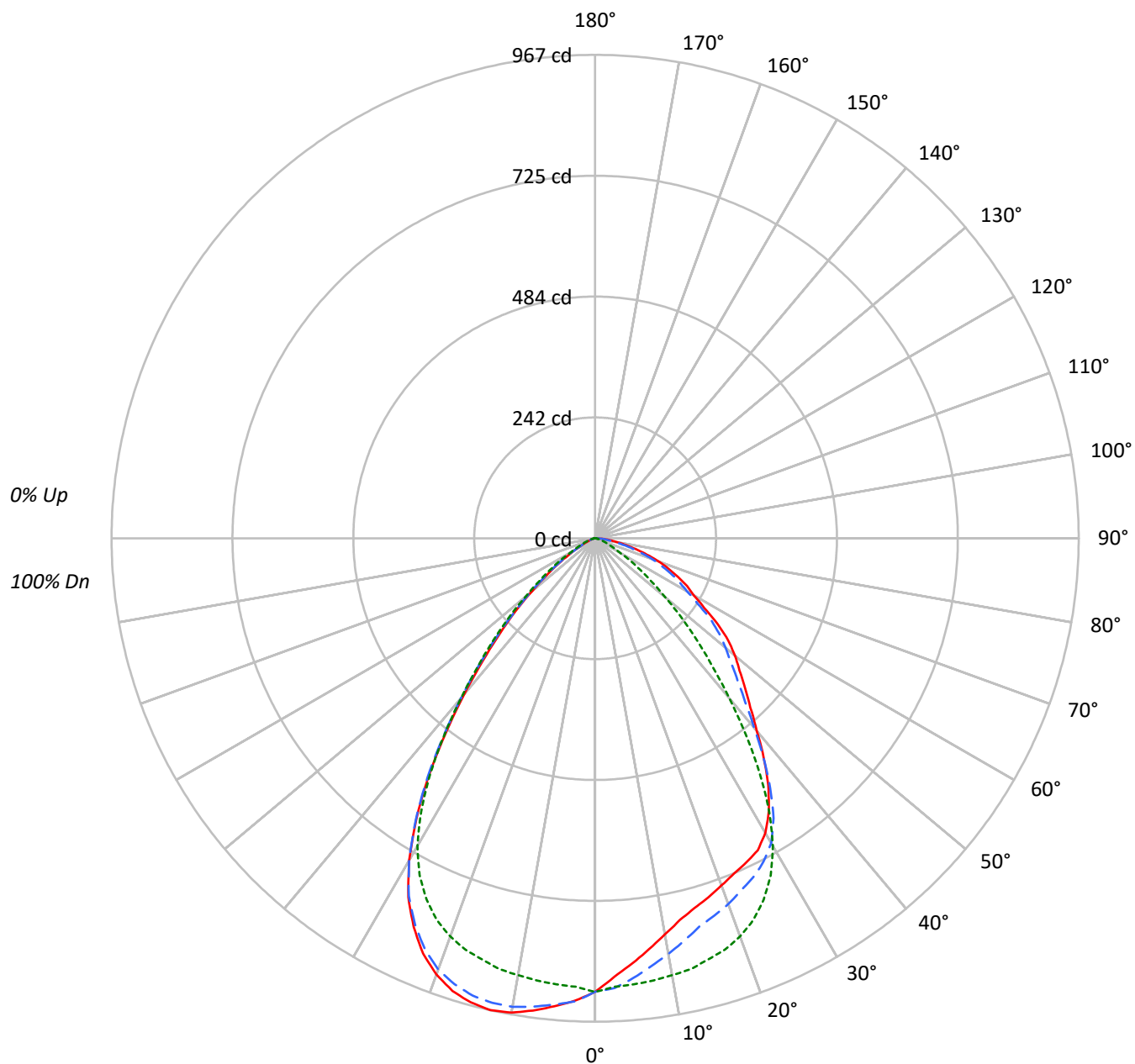
Lumens per Lamp: N/A
Luminaire Lumens: 1590.4 lumens
Efficiency: N/A
Efficacy: 68.0 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.17 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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	111	108	104	101	109	106	103	100	101	99	97	98	96	94	94	93	91	89		
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79		
3	96	88	81	76	94	86	80	75	83	78	74	81	76	73	78	75	72	70		
4	90	80	72	67	88	78	72	66	76	70	66	74	69	65	72	68	64	62		
5	83	73	65	60	82	72	65	59	70	63	59	68	62	58	66	61	58	56		
6	78	67	59	53	76	66	59	53	64	58	53	62	57	52	61	56	52	50		
7	73	61	54	48	71	61	53	48	59	53	48	58	52	48	56	51	47	46		
8	68	57	49	44	67	56	49	44	55	48	44	54	48	43	52	47	43	42		
9	64	52	45	40	63	52	45	40	51	44	40	50	44	40	49	44	40	38		
10	61	49	42	37	59	48	42	37	47	41	37	47	41	37	46	40	37	35		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	111453	111453	111453
5°	105256	110448	115911
10°	100335	110702	120183
15°	97400	110933	122240
20°	96602	110813	121364
25°	96989	108091	116332
30°	96535	100833	105486
35°	90481	86101	86971
40°	80620	66748	65256
45°	73736	49759	46719
50°	69723	34861	31498
55°	64107	23539	19770
60°	55997	13784	10909
65°	53023	8837	6105
70°	48276	6286	3808
75°	39967	4462	2801
80°	31412	2476	1627
85°	27910	1692	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.7	5.4
10°-20°	245.9	15.5
20°-30°	364.6	22.9
30°-40°	365.1	23.0
40°-50°	255.1	16.0
50°-60°	151.8	9.5
60°-70°	79.2	5.0
70°-80°	35.2	2.2
80°-90°	7.7	0.5
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°	696.2	43.8
0°-40°	1061.3	66.7
0°-60°	1468.2	92.3
0°-90°	1590.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1590.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	907	907	907	907	907	
5°	854	883	896	936	940	80
15°	766	804	872	947	961	217
25°	716	748	797	852	858	330
35°	603	610	574	584	580	374
45°	424	403	286	277	269	330
55°	299	281	110	96	92	266
65°	182	167	30	22	21	180
75°	84	74	9	6	6	91
85°	20	15	1	1	0	22
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°	907.2	907.2	907.2	907.2	907.2	907.2	907.2	907.2	907.2	907.2	907.2
2.5°	878.0	888.6	878.0	881.6	895.6	882.8	889.7	889.7	886.2	894.4	900.3
5°	853.5	864.0	853.5	858.2	873.4	860.5	868.7	866.4	867.6	874.5	882.8
7.5°	828.9	837.1	827.8	833.6	847.6	837.1	844.1	844.1	845.3	855.8	862.9
10°	804.3	811.4	804.3	809.1	824.3	814.9	819.7	820.7	824.3	833.6	844.1
12.5°	782.2	788.0	781.0	788.0	800.9	791.5	797.4	798.5	802.0	812.6	824.3
15°	765.8	771.6	764.7	770.5	782.2	775.1	779.9	782.2	784.5	793.8	804.3
17.5°	753.0	757.6	751.8	758.8	768.2	760.0	767.0	767.0	770.5	779.9	791.5
20°	738.9	743.6	738.9	744.7	755.3	748.3	754.1	754.1	757.6	768.2	778.7
22.5°	726.0	728.4	726.0	730.7	741.2	735.4	738.9	740.1	743.6	753.0	762.4
25°	715.5	720.2	717.8	722.6	729.5	723.7	727.2	728.4	731.8	740.1	748.3
27.5°	703.9	706.2	703.9	709.7	715.5	710.8	714.3	713.2	715.5	722.6	729.5
30°	680.5	682.8	682.8	686.3	691.0	688.7	692.2	688.7	691.0	696.8	703.9
32.5°	646.6	647.7	648.9	652.4	655.9	652.4	654.7	654.7	654.7	659.5	664.1
35°	603.3	605.6	604.5	606.8	610.3	609.1	609.1	608.0	605.6	608.0	610.3
37.5°	554.2	550.7	550.7	554.2	556.6	551.8	554.2	551.8	551.8	553.0	553.0
40°	502.7	499.3	502.7	503.9	505.1	502.7	501.6	499.3	495.7	496.9	494.5
42.5°	459.5	457.2	458.3	458.3	459.5	457.2	458.3	453.7	450.1	447.8	444.3
45°	424.4	421.0	424.4	422.0	422.0	421.0	419.7	417.4	412.7	409.2	403.3
47.5°	391.7	391.7	392.8	392.8	392.8	390.5	390.5	385.8	381.2	376.4	368.3
50°	364.8	362.4	367.1	367.1	363.7	362.4	363.7	357.7	354.3	348.5	340.2
52.5°	335.6	335.6	336.7	336.7	335.6	333.2	334.4	329.7	326.2	320.4	312.2
55°	299.3	297.0	300.4	300.4	299.3	298.1	299.3	295.8	292.3	287.7	280.6
57.5°	258.4	257.2	259.5	260.8	258.4	258.4	259.5	256.0	254.9	250.2	243.1
60°	227.9	226.8	229.1	230.4	227.9	227.9	227.9	223.3	221.0	216.2	211.6
62.5°	206.9	205.8	208.1	206.9	205.8	204.6	205.8	201.1	198.8	194.1	189.4
65°	182.4	183.5	184.8	184.8	183.5	182.4	182.4	180.0	177.7	173.1	167.2
67.5°	159.0	159.0	160.2	161.4	160.2	160.2	160.2	156.6	154.3	150.8	143.8
70°	134.4	133.3	136.8	136.8	134.4	135.6	134.4	133.3	131.0	126.2	120.4
72.5°	108.7	108.7	109.9	109.9	108.7	108.7	108.7	107.5	104.1	101.7	95.9
75°	84.2	84.2	85.4	86.5	84.2	84.2	85.4	83.1	80.6	77.1	73.7
77.5°	63.1	61.9	63.1	63.1	61.9	61.9	61.9	60.8	59.6	56.1	52.7
80°	44.4	43.3	44.4	44.4	44.4	43.3	43.3	42.1	42.1	39.8	36.3
82.5°	30.4	29.2	30.4	30.4	30.4	29.2	29.2	29.2	28.1	26.9	24.6
85°	19.8	18.7	18.7	19.8	18.7	18.7	18.7	18.7	17.5	16.4	15.2
87.5°	9.4	9.4	9.4	9.4	9.4	9.4	9.4	8.2	8.2	8.2	7.0
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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	907.2	907.2	907.2	907.2	907.2	907.2	907.2	907.2	907.2	907.2	907.2
2.5°	895.6	893.2	900.3	898.0	899.1	893.2	902.6	898.0	903.8	898.0	909.7
5°	880.3	878.0	888.6	887.4	888.6	883.9	894.4	893.2	900.3	895.6	908.4
7.5°	864.0	861.6	873.4	874.5	876.8	872.2	886.2	886.2	893.2	892.0	906.1
10°	845.3	846.5	858.2	860.5	865.2	862.9	875.7	879.3	888.6	887.4	904.9
12.5°	827.8	827.8	843.0	847.6	851.1	849.9	865.2	869.9	880.3	882.8	899.1
15°	810.3	811.4	825.5	832.4	837.1	836.0	852.4	858.2	871.0	872.2	892.0
17.5°	796.2	795.1	810.3	816.1	823.1	822.0	839.5	846.5	859.3	862.9	881.6
20°	784.5	783.3	797.4	804.3	809.1	807.9	825.5	833.6	845.3	847.6	866.4
22.5°	770.5	768.2	782.2	788.0	792.7	791.5	806.8	812.6	824.3	826.6	844.1
25°	754.1	751.8	764.7	768.2	771.6	769.3	782.2	785.7	795.1	797.4	814.9
27.5°	735.4	729.5	740.1	740.1	742.4	738.9	748.3	751.8	760.0	760.0	776.4
30°	706.2	698.0	703.9	702.7	703.9	699.1	705.0	706.2	712.0	710.8	722.6
32.5°	665.3	653.5	657.1	653.5	650.1	643.1	650.1	647.7	652.4	647.7	658.2
35°	609.1	597.4	596.2	591.6	588.1	582.2	582.2	576.4	577.6	574.1	581.0
37.5°	548.3	533.1	530.8	521.4	515.6	508.5	508.5	503.9	498.1	495.7	501.6
40°	488.7	472.4	466.6	451.4	445.4	438.5	433.7	427.9	425.6	416.2	421.0
42.5°	437.3	419.7	406.9	390.5	384.7	374.1	367.1	360.1	356.6	346.0	350.8
45°	394.1	372.9	358.9	337.9	329.7	318.1	307.5	299.3	291.2	286.4	284.1
47.5°	357.7	335.6	316.8	293.5	280.6	270.0	256.0	247.9	237.3	231.5	227.9
50°	327.4	302.8	281.8	254.9	242.1	230.4	213.9	201.1	191.7	182.4	180.0
52.5°	300.4	274.8	251.4	221.0	205.8	191.7	174.2	160.2	152.0	141.5	140.2
55°	268.9	246.7	221.0	189.4	174.2	160.2	141.5	127.5	116.9	109.9	107.5
57.5°	235.0	213.9	189.4	157.9	142.7	127.5	109.9	97.0	87.7	81.9	80.6
60°	203.5	183.5	160.2	128.6	113.3	100.6	81.9	69.0	60.8	56.1	53.7
62.5°	180.0	161.4	139.2	109.9	95.9	83.1	65.5	53.7	46.7	42.1	39.8
65°	157.9	139.2	119.2	92.3	80.6	69.0	52.7	42.1	35.0	30.4	28.1
67.5°	134.4	118.1	99.4	77.1	65.5	56.1	42.1	32.7	26.9	23.3	21.0
70°	111.0	95.9	80.6	61.9	53.7	44.4	32.7	25.8	19.8	17.5	15.2
72.5°	87.7	76.0	63.1	47.9	40.9	35.0	25.8	18.7	15.2	12.9	10.6
75°	65.5	57.3	46.7	36.3	30.4	25.8	18.7	14.0	11.7	9.4	8.2
77.5°	46.7	39.8	32.7	24.6	22.3	18.7	12.9	10.6	8.2	5.9	4.6
80°	31.6	28.1	22.3	17.5	14.0	12.9	9.4	7.0	4.6	3.5	3.5
82.5°	21.0	17.5	14.0	10.6	9.4	8.2	5.9	4.6	3.5	2.3	2.3
85°	12.9	10.6	8.2	5.9	5.9	4.6	3.5	2.3	1.2	1.2	1.2
87.5°	5.9	4.6	3.5	2.3	2.3	1.2	1.2	1.2	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°	907.2	907.2	907.2	907.2	907.2	907.2	907.2	907.2	907.2	907.2	907.2
2.5°	919.0	912.0	907.2	913.2	915.5	912.0	915.5	921.3	927.2	928.3	912.0
5°	920.1	913.2	910.7	917.8	919.0	917.8	921.3	929.5	936.5	938.9	922.5
7.5°	920.1	915.5	914.3	922.5	923.6	922.5	928.3	937.6	944.7	949.3	933.0
10°	917.8	915.5	916.6	923.6	926.0	926.0	934.1	944.7	951.7	956.4	939.9
12.5°	914.3	914.3	914.3	922.5	924.9	926.0	933.0	947.0	951.7	958.7	942.4
15°	908.4	908.4	908.4	916.6	920.1	920.1	928.3	941.2	947.0	954.0	937.6
17.5°	898.0	898.0	899.1	906.1	909.7	909.7	917.8	931.8	935.3	943.5	927.2
20°	882.8	882.8	883.9	890.9	894.4	892.0	902.6	914.3	917.8	924.9	908.4
22.5°	860.5	860.5	860.5	867.6	869.9	868.7	879.3	889.7	889.7	899.1	881.6
25°	827.8	830.1	827.8	834.7	837.1	836.0	845.3	854.7	852.4	862.9	845.3
27.5°	788.0	786.8	786.8	792.7	792.7	791.5	798.5	809.1	806.8	813.7	797.4
30°	733.1	736.6	730.7	738.9	735.4	733.1	737.8	747.0	743.6	749.5	736.6
32.5°	669.9	665.3	665.3	665.3	667.6	661.8	666.4	671.1	667.6	673.5	659.5
35°	587.0	588.1	584.5	585.8	587.0	579.9	584.5	589.3	584.5	588.1	575.2
37.5°	503.9	505.1	496.9	501.6	496.9	494.5	499.3	501.6	496.9	500.4	486.4
40°	421.0	418.5	417.4	417.4	418.5	412.7	416.2	419.7	416.2	418.5	405.7
42.5°	348.5	347.3	345.0	346.0	342.5	341.4	342.5	346.0	342.5	345.0	335.6
45°	285.2	282.9	279.4	280.6	280.6	274.8	278.3	280.6	277.1	278.3	270.0
47.5°	226.8	223.3	223.3	222.1	222.1	219.8	223.3	222.1	218.7	221.0	212.7
50°	176.6	174.2	174.2	174.2	174.2	170.6	171.9	174.2	170.6	170.6	166.0
52.5°	137.9	134.4	132.1	132.1	132.1	131.0	131.0	132.1	128.6	128.6	127.5
55°	104.1	102.9	99.4	99.4	99.4	95.9	97.0	97.0	95.9	95.9	92.3
57.5°	77.1	73.7	71.3	71.3	69.0	69.0	67.9	69.0	66.6	66.6	64.3
60°	51.4	49.1	47.9	46.7	46.7	45.6	46.7	45.6	45.6	44.4	43.3
62.5°	37.4	35.0	32.7	32.7	32.7	31.6	31.6	31.6	31.6	31.6	30.4
65°	26.9	24.6	24.6	23.3	23.3	22.3	22.3	22.3	22.3	22.3	21.0
67.5°	18.7	17.5	16.4	16.4	16.4	16.4	16.4	16.4	15.2	15.2	15.2
70°	14.0	12.9	11.7	11.7	11.7	11.7	11.7	10.6	11.7	11.7	10.6
72.5°	9.4	9.4	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2
75°	7.0	7.0	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
77.5°	4.6	4.6	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
80°	3.5	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
82.5°	2.3	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
85°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	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: P857094

CATALOG NUMBER: LX4C15D010 EX4C159030 4LBSWNH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	907.2	907.2	907.2	907.2	907.2	907.2	907.2	907.2
2.5°	929.5	928.3	926.0	929.5	920.1	916.6	915.5	926.0
5°	942.4	939.9	939.9	943.5	933.0	930.7	928.3	939.9
7.5°	954.0	951.7	951.7	955.3	945.9	943.5	941.2	952.8
10°	961.1	961.1	961.1	963.4	955.3	952.8	951.7	963.4
12.5°	964.5	964.5	963.4	968.0	957.6	957.6	955.3	966.9
15°	959.9	959.9	959.9	963.4	954.0	951.7	951.7	961.1
17.5°	948.2	948.2	947.0	950.5	939.9	939.9	938.9	949.3
20°	930.7	930.7	928.3	933.0	922.5	919.0	917.8	928.3
22.5°	902.6	901.4	900.3	902.6	893.2	890.9	889.7	899.1
25°	866.4	865.2	862.9	865.2	854.7	851.1	851.1	858.2
27.5°	814.9	814.9	811.4	814.9	803.2	802.0	800.9	809.1
30°	751.8	747.0	744.7	749.5	737.8	737.8	735.4	743.6
32.5°	673.5	668.7	667.6	669.9	659.5	655.9	660.6	665.3
35°	583.5	584.5	579.9	579.9	570.6	571.6	572.9	579.9
37.5°	496.9	494.5	493.3	494.5	487.5	485.2	482.9	489.9
40°	416.2	410.4	409.2	409.2	403.3	402.2	403.3	406.9
42.5°	340.2	339.1	334.4	336.7	330.8	333.2	332.0	332.0
45°	274.8	275.8	271.2	274.8	270.0	266.6	266.6	268.9
47.5°	217.5	217.5	216.2	216.2	212.7	213.9	211.6	215.2
50°	168.3	168.3	166.0	167.2	164.8	164.8	163.7	164.8
52.5°	128.6	127.5	127.5	126.2	123.9	125.2	126.2	123.9
55°	93.5	94.7	92.3	93.5	91.2	92.3	91.2	92.3
57.5°	64.3	65.5	63.1	65.5	63.1	64.3	63.1	63.1
60°	44.4	44.4	43.3	44.4	43.3	43.3	42.1	44.4
62.5°	30.4	30.4	30.4	30.4	30.4	29.2	30.4	30.4
65°	22.3	21.0	21.0	21.0	21.0	21.0	21.0	21.0
67.5°	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2
70°	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6
72.5°	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2
75°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
77.5°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
80°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
82.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
85°	1.2	1.2	1.2	0.0	1.2	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)