

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: FAIL-SAFE

Report Number: P735602

Luminaire Tested: **4APN6-29-B2750-W2D-5000K**

Issue Date: 1/5/2024



Test Information

Test Method: LM-79-08
Report Number: P735602
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P709119)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 1/5/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 4APN6-29-B2750-W2D-5000K
Description: 4FT 2900 AMBIENT LUMEN OUTPUT APN WITH BIO UP LEDS AT 5000K CCT

Light Source: -
Ballast/Driver: -

Summary

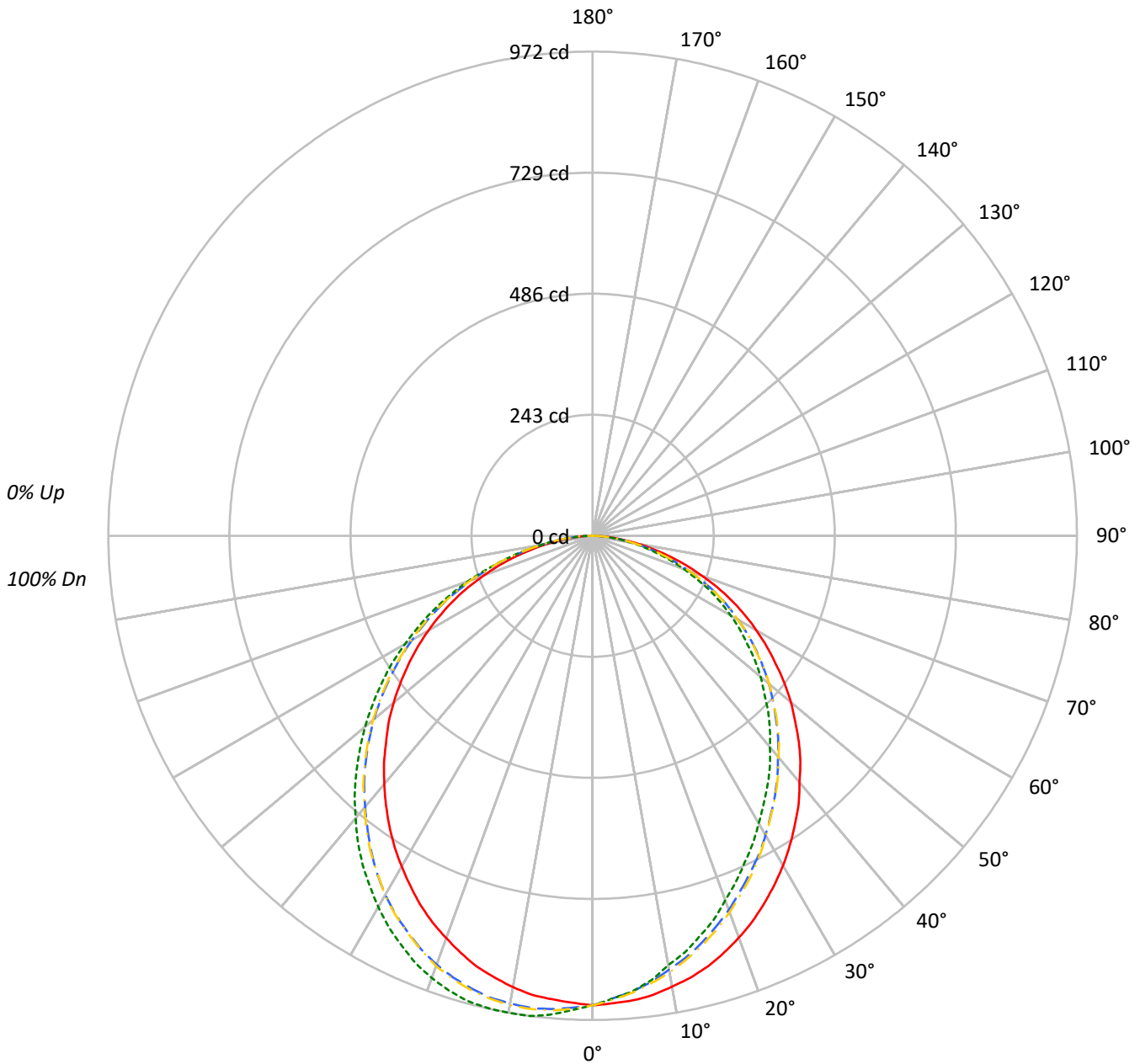
Lumens per Lamp: N/A
Luminaire Lumens: 2528.0 lumens
Efficiency: N/A
Efficacy: 88.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.33
Luminous Opening: Rectangular (W 0.29' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 28.5
Input Voltage (V): NR
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	109	104	100	96	106	102	98	95	98	94	92	94	91	89	90	88	86	84																			
2	99	91	84	78	96	89	83	77	85	80	76	82	78	74	79	76	72	70																			
3	90	80	72	65	88	78	71	65	75	69	64	73	67	62	70	65	61	59																			
4	83	71	62	55	81	70	61	55	67	60	54	65	59	54	63	57	53	51																			
5	76	63	54	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44																			
6	70	57	48	42	68	56	48	42	54	47	41	53	46	41	51	45	41	38																			
7	65	52	43	37	64	51	43	37	49	42	37	48	41	36	47	41	36	34																			
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30																			
9	57	43	35	30	55	43	35	30	42	35	30	41	34	29	40	34	29	27																			
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	8697	8697	8697	8697
5°	8671	8503	8651	8937
10°	8611	8201	8621	9110
15°	8545	7945	8555	9237
20°	8428	7643	8438	9275
25°	8293	7360	8325	9237
30°	8145	7101	8167	9166
35°	7974	6893	8010	9068
40°	7783	6665	7835	8913
45°	7638	6498	7653	8751
50°	7454	6321	7484	8555
55°	7221	6090	7272	8319
60°	7005	5903	7025	8027
65°	6726	5656	6726	7682
70°	6269	5236	6242	7159
75°	5704	4752	5625	6427
80°	4931	4081	4761	5499
85°	3843	3049	3610	4520



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.1	3.5
10°-20°	252.8	10.0
20°-30°	375.8	14.9
30°-40°	442.9	17.5
40°-50°	451.0	17.8
50°-60°	401.8	15.9
60°-70°	302.7	12.0
70°-80°	168.3	6.7
80°-90°	43.7	1.7
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°	717.6	28.4
0°-40°	1160.5	45.9
0°-60°	2013.3	79.6
0°-90°	2528.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2528.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	943	943	943	943	943	
5°	936	918	934	965	936	89
15°	895	832	896	967	895	252
25°	815	723	818	907	815	375
35°	708	612	711	805	708	443
45°	585	498	586	671	585	451
55°	449	379	452	517	449	402
65°	308	259	308	352	308	304
75°	160	133	158	180	160	170
85°	36	29	34	43	36	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°
0°	942.6	942.6	942.6	942.6	942.6	942.6	942.6	942.6	942.6	942.6	942.6
2.5°	939.4	939.4	940.4	936.2	930.9	928.7	927.7	926.6	928.7	929.8	928.7
5°	936.2	934.1	931.9	926.6	920.2	915.9	913.8	912.7	914.9	918.1	914.9
7.5°	929.8	925.6	921.3	913.8	906.4	899.9	896.8	894.6	896.8	899.9	897.8
10°	919.1	913.8	907.4	898.9	888.2	880.8	877.6	874.4	875.4	875.4	875.4
12.5°	908.4	901.1	893.6	882.9	871.1	862.6	857.3	853.1	855.1	856.3	856.3
15°	894.6	885.1	874.4	862.6	850.9	841.3	834.9	830.6	831.8	831.8	832.8
17.5°	877.6	866.9	856.3	842.4	828.5	817.8	810.4	805.1	807.1	808.3	809.3
20°	858.4	846.6	834.9	819.9	805.1	793.3	785.8	779.5	778.4	778.4	779.5
22.5°	838.1	825.3	811.4	795.4	779.5	766.6	759.1	752.8	751.8	751.8	752.8
25°	814.6	800.8	786.9	770.9	753.8	741.1	731.5	725.1	724.0	723.0	725.1
27.5°	790.1	776.3	762.4	746.4	728.3	715.5	705.8	699.5	697.3	696.3	698.5
30°	764.5	748.5	733.6	716.5	700.5	687.8	678.1	670.7	668.6	666.5	668.6
32.5°	736.8	720.8	704.8	687.8	671.8	659.0	649.3	642.0	639.8	638.7	640.8
35°	708.0	692.0	677.1	660.0	644.0	631.3	621.7	615.3	613.2	612.0	613.2
37.5°	679.2	663.3	648.3	631.3	615.3	602.5	592.8	586.5	585.4	584.3	585.4
40°	646.2	632.3	617.3	601.3	585.4	572.7	565.2	557.7	555.5	553.4	556.7
42.5°	617.3	603.5	588.7	573.7	557.7	544.9	536.3	530.0	527.8	526.7	527.8
45°	585.4	570.5	555.5	541.7	526.7	515.0	506.5	500.0	499.0	498.0	499.0
47.5°	551.3	538.5	525.7	511.8	496.9	485.2	477.7	471.4	469.2	467.0	469.2
50°	519.3	506.5	493.7	480.9	467.0	456.4	448.9	442.5	441.4	440.4	441.4
52.5°	485.2	472.4	460.7	447.9	436.1	425.4	418.0	412.7	411.6	410.5	411.6
55°	448.9	438.2	427.6	416.9	405.2	395.6	389.2	382.7	380.7	378.6	380.7
57.5°	414.7	405.2	394.5	383.9	373.2	364.7	358.2	352.9	351.9	350.8	351.9
60°	379.6	371.1	361.4	351.9	341.2	332.7	327.4	323.1	320.9	319.9	320.9
62.5°	344.4	335.9	328.4	318.8	309.2	302.8	297.4	293.2	291.1	290.1	291.1
65°	308.1	300.7	293.2	284.7	277.3	270.8	265.4	261.3	260.1	259.1	259.1
67.5°	270.8	264.4	258.1	250.6	242.1	235.6	230.3	227.1	226.1	224.9	226.1
70°	232.4	227.1	220.8	214.3	207.9	202.6	199.4	196.3	195.1	194.1	194.1
72.5°	196.3	191.9	186.6	181.3	175.9	170.6	167.4	165.3	164.3	163.1	163.1
75°	160.0	155.6	152.5	148.3	142.9	139.6	136.5	134.3	133.3	133.3	133.3
77.5°	125.8	122.6	119.5	115.1	112.0	108.8	106.6	105.6	104.5	104.5	104.5
80°	92.8	90.6	88.5	86.3	83.1	80.0	79.0	77.8	76.8	76.8	76.8
82.5°	63.0	61.8	59.7	57.6	55.5	54.3	53.3	52.3	52.3	52.3	52.3
85°	36.3	35.2	34.1	33.0	32.0	32.0	31.0	29.8	28.8	28.8	28.8
87.5°	15.0	15.0	15.0	13.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8
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):

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	942.6	942.6	942.6	942.6	942.6	942.6	942.6	942.6	942.6	942.6	942.6
2.5°	926.6	928.7	930.9	934.1	937.2	940.4	939.4	938.4	942.6	947.9	949.1
5°	912.7	914.9	918.1	923.4	928.7	933.1	934.1	934.1	942.6	950.1	952.2
7.5°	895.7	898.9	903.1	908.4	915.9	922.4	925.6	929.8	938.4	947.9	952.2
10°	874.4	879.7	886.1	893.6	901.1	908.4	914.9	920.2	930.9	941.6	947.9
12.5°	855.1	860.4	866.9	875.4	885.1	894.6	901.1	908.4	921.3	934.1	941.6
15°	833.8	839.1	846.6	855.1	865.8	876.4	886.1	895.7	908.4	922.4	930.9
17.5°	810.4	815.8	823.1	833.8	845.6	857.3	867.9	878.6	893.6	908.4	918.1
20°	781.6	789.1	798.6	809.3	823.1	837.1	847.7	859.4	875.4	891.4	902.1
22.5°	753.8	761.3	772.0	784.8	799.8	814.6	827.4	840.3	857.3	873.3	885.1
25°	727.1	735.8	746.4	759.1	773.1	788.0	802.9	817.8	834.9	851.9	863.7
27.5°	700.5	708.0	718.6	731.5	747.5	762.4	777.3	792.3	810.4	828.5	841.3
30°	670.7	679.2	688.8	701.6	718.6	735.8	750.6	766.6	784.8	802.9	815.8
32.5°	643.0	650.5	660.0	672.8	689.8	707.0	723.0	740.0	757.1	775.1	788.0
35°	615.3	622.7	632.3	645.1	662.2	679.2	695.2	711.2	728.3	745.3	758.1
37.5°	587.5	595.0	604.6	617.3	633.3	650.5	665.3	681.3	698.5	715.5	727.1
40°	558.7	566.2	573.7	586.5	602.5	619.5	634.5	650.5	667.5	684.5	696.3
42.5°	530.0	537.4	547.0	559.8	574.7	589.7	604.6	619.5	635.5	651.5	663.3
45°	501.2	507.5	517.2	528.9	543.8	557.7	572.7	586.5	602.5	617.3	629.1
47.5°	471.4	477.7	485.2	496.9	511.8	526.7	541.7	555.5	569.4	584.3	595.0
50°	442.5	448.9	457.4	468.1	482.0	495.9	508.7	521.4	535.3	549.2	558.7
52.5°	412.7	419.1	426.5	437.2	448.9	461.7	473.4	486.2	499.0	511.8	521.4
55°	382.7	387.1	393.4	403.1	415.9	428.7	440.4	452.1	463.9	474.5	484.0
57.5°	352.9	358.2	365.7	374.2	384.9	395.6	406.2	416.9	427.6	438.2	446.7
60°	323.1	327.4	332.7	340.1	350.8	360.4	371.1	380.7	390.2	399.9	407.4
62.5°	292.1	296.4	301.8	309.2	317.7	326.3	335.9	344.4	352.9	361.4	368.9
65°	260.1	264.4	269.8	276.1	283.6	291.1	299.6	308.1	314.6	320.9	328.4
67.5°	227.1	231.4	236.8	242.1	248.4	255.9	263.4	270.8	277.3	283.6	288.9
70°	195.1	198.3	203.6	207.9	213.3	218.6	224.9	231.4	235.6	240.9	247.4
72.5°	164.3	167.4	171.6	175.9	179.1	183.4	189.8	195.1	200.4	206.9	210.1
75°	134.3	136.5	139.6	142.9	146.1	149.3	153.6	157.8	162.1	165.3	169.6
77.5°	104.5	106.6	109.8	112.0	114.1	116.3	119.5	122.6	125.8	128.0	132.3
80°	76.8	79.0	81.0	83.1	85.3	87.5	88.5	89.6	93.8	97.0	99.1
82.5°	52.3	53.3	54.3	56.5	57.6	58.6	59.7	59.7	61.8	64.0	67.2
85°	29.8	31.0	32.0	32.0	32.0	32.0	33.0	34.1	35.2	37.3	39.5
87.5°	11.7	11.7	12.8	12.8	12.8	12.8	12.8	12.8	13.8	16.0	17.0
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):

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	942.6	942.6	942.6	942.6	942.6	942.6	942.6	942.6	942.6	942.6	942.6
2.5°	947.9	949.1	951.1	952.2	953.2	953.2	954.4	955.4	953.2	951.1	950.1
5°	953.2	954.4	957.6	960.7	962.9	965.0	963.9	962.9	960.7	957.6	955.4
7.5°	954.4	957.6	960.7	965.0	968.2	972.4	970.4	968.2	963.9	959.7	956.4
10°	951.1	955.4	960.7	966.1	969.2	972.4	970.4	968.2	963.9	958.6	954.4
12.5°	946.9	952.2	958.6	963.9	967.1	971.4	968.2	965.0	959.7	954.4	949.1
15°	937.2	943.7	951.1	957.6	962.9	967.1	963.9	961.7	955.4	947.9	940.4
17.5°	925.6	934.1	941.6	949.1	953.2	957.6	955.4	953.2	945.8	937.2	928.7
20°	911.7	920.2	927.7	935.1	940.4	944.7	941.6	938.4	930.9	923.4	914.9
22.5°	894.6	903.1	911.7	919.1	924.4	928.7	924.4	919.1	911.7	904.2	895.7
25°	873.3	882.9	892.4	899.9	903.1	907.4	903.1	898.9	891.4	883.9	874.4
27.5°	851.9	861.6	871.1	878.6	881.8	886.1	881.8	877.6	870.1	862.6	853.1
30°	827.4	837.1	846.6	854.1	857.3	860.4	856.3	851.9	845.6	838.1	828.5
32.5°	799.8	809.3	816.8	824.3	828.5	832.8	828.5	825.3	817.8	808.3	798.6
35°	769.8	779.5	789.1	796.5	800.8	805.1	799.8	794.4	788.0	780.5	772.0
37.5°	736.8	747.5	758.1	766.6	769.8	774.1	769.8	764.5	758.1	750.6	741.1
40°	705.8	715.5	725.1	733.6	736.8	740.0	735.8	731.5	724.0	716.5	707.0
42.5°	674.0	683.5	692.0	699.5	702.6	707.0	702.6	697.3	692.0	685.6	677.1
45°	639.8	649.3	656.8	664.3	667.5	670.7	666.5	661.1	655.8	650.5	642.0
47.5°	604.6	613.2	620.6	628.0	630.2	633.3	629.1	626.0	620.6	615.3	607.8
50°	568.3	576.8	584.3	590.7	592.8	596.0	591.8	587.5	583.3	579.0	572.7
52.5°	531.0	538.5	546.0	552.3	554.5	556.7	552.3	548.0	543.8	539.5	533.2
55°	492.7	500.0	507.5	512.9	515.0	517.2	512.9	509.7	505.4	502.2	495.9
57.5°	454.2	461.7	468.1	473.4	475.5	477.7	473.4	469.2	466.0	462.7	457.4
60°	414.7	422.2	427.6	431.9	434.0	435.0	430.7	427.6	425.4	423.4	418.0
62.5°	376.4	381.7	387.1	390.2	392.4	393.4	390.2	388.1	386.0	383.9	379.6
65°	335.9	342.2	346.6	349.7	350.8	351.9	348.7	346.6	344.4	342.2	339.1
67.5°	295.4	300.7	303.9	307.1	308.1	308.1	308.1	307.1	304.9	301.8	298.6
70°	254.8	259.1	262.3	264.4	265.4	265.4	263.4	261.3	261.3	260.1	258.1
72.5°	213.3	216.4	218.6	220.8	220.8	220.8	220.8	221.8	220.8	218.6	215.4
75°	173.8	177.0	179.1	180.3	180.3	180.3	180.3	181.3	180.3	179.1	177.0
77.5°	136.5	138.6	139.6	140.8	140.8	140.8	141.8	142.9	141.8	140.8	139.6
80°	101.3	102.3	103.5	104.5	103.5	103.5	104.5	106.6	105.6	104.5	103.5
82.5°	69.3	70.3	71.5	71.5	72.5	73.6	73.6	73.6	73.6	72.5	71.5
85°	41.6	42.7	42.7	42.7	42.7	42.7	43.7	44.8	44.8	43.7	43.7
87.5°	19.2	20.3	19.2	18.2	17.0	17.0	19.2	21.3	21.3	20.3	20.3
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: 4APN6-29-B2750-W2D-5000K

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	942.6	942.6	942.6	942.6
2.5°	951.1	950.1	944.7	939.4
5°	954.4	951.1	943.7	936.2
7.5°	954.4	950.1	939.4	929.8
10°	949.1	942.6	930.9	919.1
12.5°	942.6	935.1	921.3	908.4
15°	933.1	924.4	909.6	894.6
17.5°	919.1	908.4	893.6	877.6
20°	905.3	893.6	875.4	858.4
22.5°	886.1	875.4	856.3	838.1
25°	864.8	853.1	833.8	814.6
27.5°	842.4	828.5	809.3	790.1
30°	816.8	802.9	783.8	764.5
32.5°	789.1	776.3	757.1	736.8
35°	761.3	747.5	728.3	708.0
37.5°	730.5	717.6	698.5	679.2
40°	697.3	684.5	665.3	646.2
42.5°	666.5	654.7	635.5	617.3
45°	632.3	620.6	602.5	585.4
47.5°	597.2	585.4	568.3	551.3
50°	563.0	551.3	535.3	519.3
52.5°	524.7	515.0	500.0	485.2
55°	487.3	477.7	462.7	448.9
57.5°	450.0	441.4	427.6	414.7
60°	410.5	402.0	391.4	379.6
62.5°	373.2	365.7	355.1	344.4
65°	333.7	327.4	317.7	308.1
67.5°	293.2	287.9	279.4	270.8
70°	252.8	246.3	239.9	232.4
72.5°	212.3	209.0	202.6	196.3
75°	173.8	170.6	165.3	160.0
77.5°	137.6	134.3	130.1	125.8
80°	101.3	99.1	96.0	92.8
82.5°	70.3	68.3	66.1	63.0
85°	42.7	40.5	38.3	36.3
87.5°	19.2	18.2	16.0	15.0
90°	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - - 90°-270° - · - · 135°-315°













(END OF REPORT)