

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: P735609

Luminaire Tested: **4APN6-29-B2750-W2D-CP250-3000K**

Issue Date: 1/5/2024



Test Information

Test Method: LM-79-08
Report Number: P735609
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-CP250-3000K
Description: 4FT 2900 AMBIENT LUMEN OUTPUT APN WITH BIO UP LEDS AT 3000K CCT, AND CP250 LENS

Light Source: -
Ballast/Driver: -

Summary

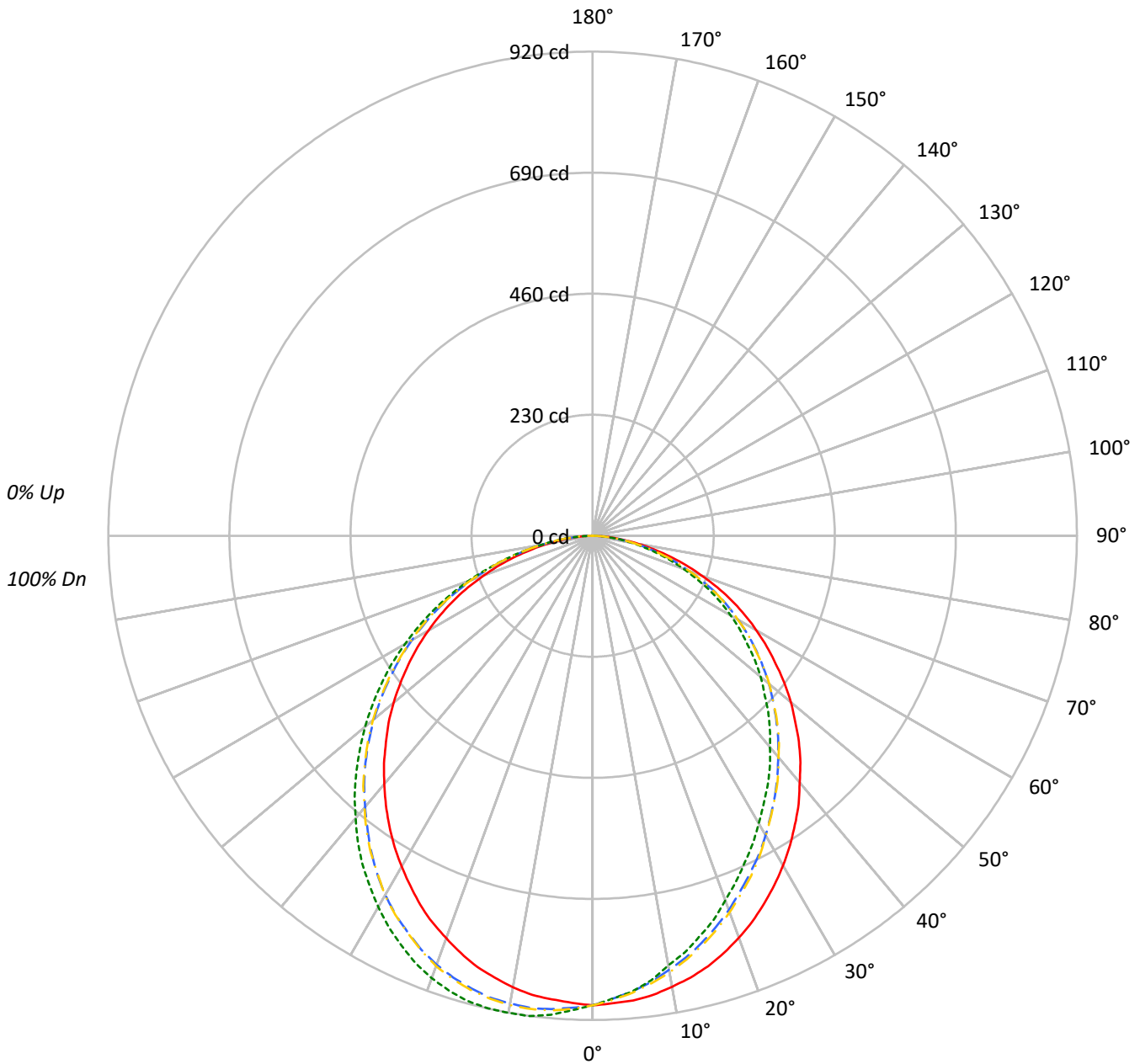
Lumens per Lamp: N/A
Luminaire Lumens: 2393.0 lumens
Efficiency: N/A
Efficacy: 84.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.33
Luminous Opening: Rectangular (W 0.29' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 28.5
Input Voltage (V): NR
Input Current (A_{in}): 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°	8232	8232	8232	8232
5°	8207	8049	8189	8460
10°	8151	7764	8161	8624
15°	8088	7520	8099	8744
20°	7978	7235	7987	8781
25°	7850	6967	7880	8745
30°	7709	6721	7731	8677
35°	7549	6525	7582	8584
40°	7367	6309	7415	8437
45°	7230	6151	7244	8283
50°	7056	5984	7083	8098
55°	6835	5763	6883	7875
60°	6630	5587	6650	7599
65°	6366	5355	6366	7272
70°	5935	4955	5910	6779
75°	5397	4499	5326	6081
80°	4665	3863	4506	5202
85°	3642	2890	3419	4277



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.3	3.5
10°-20°	239.3	10.0
20°-30°	355.7	14.9
30°-40°	419.3	17.5
40°-50°	426.9	17.8
50°-60°	380.3	15.9
60°-70°	286.5	12.0
70°-80°	159.3	6.7
80°-90°	41.4	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°	679.3	28.4
0°-40°	1098.6	45.9
0°-60°	1905.7	79.6
0°-90°	2393.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2393.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	892	892	892	892	892	
5°	886	869	884	914	886	84
15°	847	787	848	915	847	239
25°	771	684	774	859	771	355
35°	670	579	673	762	670	419
45°	554	471	555	635	554	427
55°	425	358	428	490	425	381
65°	292	245	292	333	292	288
75°	151	126	149	171	151	161
85°	34	27	32	40	34	41
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°	892.2	892.2	892.2	892.2	892.2	892.2	892.2	892.2	892.2	892.2	892.2
2.5°	889.2	889.2	890.2	886.2	881.2	879.1	878.2	877.1	879.1	880.1	879.1
5°	886.2	884.2	882.1	877.1	871.1	867.0	865.0	864.0	866.0	869.1	866.0
7.5°	880.1	876.1	872.1	865.0	858.0	851.9	848.9	846.8	848.9	851.9	849.8
10°	870.0	865.0	859.0	850.9	840.8	833.7	830.7	827.7	828.7	828.7	828.7
12.5°	859.9	852.9	845.9	835.8	824.6	816.5	811.5	807.5	809.4	810.5	810.5
15°	846.8	837.8	827.7	816.5	805.5	796.3	790.3	786.3	787.3	787.3	788.3
17.5°	830.7	820.6	810.5	797.4	784.2	774.1	767.1	762.1	764.0	765.1	766.1
20°	812.6	801.4	790.3	776.2	762.1	750.9	743.8	737.8	736.9	736.9	737.8
22.5°	793.3	781.2	768.1	753.0	737.8	725.7	718.6	712.6	711.6	711.6	712.6
25°	771.1	758.0	744.9	729.8	713.6	701.5	692.4	686.4	685.3	684.4	686.4
27.5°	747.9	734.8	721.7	706.6	689.4	677.3	668.1	662.1	660.1	659.1	661.2
30°	723.6	708.5	694.4	678.2	663.1	651.1	641.9	634.8	632.9	630.9	632.9
32.5°	697.5	682.3	667.2	651.1	635.9	623.8	614.7	607.7	605.6	604.6	606.6
35°	670.2	655.0	641.0	624.7	609.6	597.6	588.5	582.5	580.4	579.3	580.4
37.5°	642.9	627.9	613.7	597.6	582.5	570.3	561.2	555.2	554.1	553.1	554.1
40°	611.7	598.6	584.4	569.2	554.1	542.1	535.0	527.9	525.9	523.8	526.9
42.5°	584.4	571.3	557.2	543.0	527.9	515.8	507.7	501.7	499.7	498.6	499.7
45°	554.1	540.0	525.9	512.8	498.6	487.5	479.5	473.3	472.4	471.4	472.4
47.5°	521.9	509.7	497.6	484.5	470.3	459.3	452.2	446.2	444.1	442.1	444.1
50°	491.6	479.5	467.3	455.2	442.1	432.0	424.9	418.9	417.8	416.9	417.8
52.5°	459.3	447.1	436.1	424.0	412.8	402.7	395.7	390.7	389.6	388.6	389.6
55°	424.9	414.8	404.7	394.6	383.6	374.4	368.4	362.3	360.4	358.3	360.4
57.5°	392.6	383.6	373.5	363.4	353.3	345.2	339.1	334.1	333.1	332.0	333.1
60°	359.3	351.2	342.1	333.1	323.0	315.0	309.9	305.8	303.8	302.8	303.8
62.5°	326.0	318.0	310.9	301.7	292.7	286.6	281.6	277.6	275.5	274.6	275.5
65°	291.6	284.7	277.6	269.5	262.4	256.3	251.3	247.3	246.2	245.3	245.3
67.5°	256.3	250.3	244.3	237.2	229.2	223.0	218.0	215.0	214.0	212.9	214.0
70°	220.0	215.0	209.0	202.8	196.8	191.8	188.8	185.8	184.7	183.7	183.7
72.5°	185.8	181.7	176.6	171.6	166.6	161.5	158.5	156.5	155.5	154.4	154.4
75°	151.4	147.3	144.3	140.4	135.3	132.2	129.2	127.1	126.2	126.2	126.2
77.5°	119.1	116.1	113.1	109.0	106.0	103.0	100.9	100.0	98.9	98.9	98.9
80°	87.8	85.8	83.8	81.7	78.7	75.7	74.7	73.7	72.7	72.7	72.7
82.5°	59.6	58.5	56.5	54.6	52.5	51.4	50.5	49.5	49.5	49.5	49.5
85°	34.4	33.3	32.3	31.2	30.3	30.3	29.3	28.2	27.3	27.3	27.3
87.5°	14.2	14.2	14.2	13.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1
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°	892.2	892.2	892.2	892.2	892.2	892.2	892.2	892.2	892.2	892.2	892.2
2.5°	877.1	879.1	881.2	884.2	887.2	890.2	889.2	888.3	892.2	897.3	898.4
5°	864.0	866.0	869.1	874.1	879.1	883.2	884.2	884.2	892.2	899.3	901.4
7.5°	847.9	850.9	854.9	859.9	867.0	873.1	876.1	880.1	888.3	897.3	901.4
10°	827.7	832.8	838.8	845.9	852.9	859.9	866.0	871.1	881.2	891.3	897.3
12.5°	809.4	814.5	820.6	828.7	837.8	846.8	852.9	859.9	872.1	884.2	891.3
15°	789.3	794.3	801.4	809.4	819.5	829.6	838.8	847.9	859.9	873.1	881.2
17.5°	767.1	772.2	779.2	789.3	800.4	811.5	821.6	831.7	845.9	859.9	869.1
20°	739.9	747.0	756.0	766.1	779.2	792.4	802.5	813.5	828.7	843.8	853.9
22.5°	713.6	720.6	730.7	742.9	757.1	771.1	783.3	795.4	811.5	826.6	837.8
25°	688.3	696.5	706.6	718.6	731.8	745.9	760.1	774.1	790.3	806.4	817.6
27.5°	663.1	670.2	680.3	692.4	707.5	721.7	735.8	750.0	767.1	784.2	796.3
30°	634.8	642.9	652.0	664.2	680.3	696.5	710.5	725.7	742.9	760.1	772.2
32.5°	608.6	615.7	624.7	636.9	653.0	669.2	684.4	700.5	716.7	733.7	745.9
35°	582.5	589.4	598.6	610.7	626.8	642.9	658.0	673.2	689.4	705.5	717.6
37.5°	556.1	563.2	572.4	584.4	599.5	615.7	629.8	644.9	661.2	677.3	688.3
40°	528.9	535.9	543.0	555.2	570.3	586.4	600.6	615.7	631.8	647.9	659.1
42.5°	501.7	508.7	517.8	529.9	544.0	558.2	572.4	586.4	601.6	616.7	627.9
45°	474.4	480.4	489.6	500.6	514.8	527.9	542.1	555.2	570.3	584.4	595.5
47.5°	446.2	452.2	459.3	470.3	484.5	498.6	512.8	525.9	539.0	553.1	563.2
50°	418.9	424.9	433.0	443.1	456.3	469.4	481.5	493.5	506.7	519.8	528.9
52.5°	390.7	396.7	403.8	413.9	424.9	437.0	448.1	460.2	472.4	484.5	493.5
55°	362.3	366.4	372.4	381.5	393.7	405.8	416.9	427.9	439.1	449.2	458.2
57.5°	334.1	339.1	346.2	354.3	364.3	374.4	384.5	394.6	404.7	414.8	422.9
60°	305.8	309.9	315.0	321.9	332.0	341.2	351.2	360.4	369.4	378.5	385.6
62.5°	276.5	280.6	285.6	292.7	300.8	308.8	318.0	326.0	334.1	342.1	349.2
65°	246.2	250.3	255.4	261.4	268.5	275.5	283.6	291.6	297.8	303.8	310.9
67.5°	215.0	219.1	224.1	229.2	235.2	242.3	249.3	256.3	262.4	268.5	273.5
70°	184.7	187.7	192.7	196.8	201.9	206.9	212.9	219.1	223.0	228.1	234.2
72.5°	155.5	158.5	162.5	166.6	169.6	173.6	179.7	184.7	189.7	195.9	198.9
75°	127.1	129.2	132.2	135.3	138.3	141.3	145.4	149.4	153.5	156.5	160.5
77.5°	98.9	100.9	103.9	106.0	108.0	110.1	113.1	116.1	119.1	121.1	125.2
80°	72.7	74.7	76.7	78.7	80.8	82.8	83.8	84.8	88.8	91.8	93.9
82.5°	49.5	50.5	51.4	53.5	54.6	55.5	56.5	56.5	58.5	60.6	63.6
85°	28.2	29.3	30.3	30.3	30.3	30.3	31.2	32.3	33.3	35.3	37.4
87.5°	11.1	11.1	12.1	12.1	12.1	12.1	12.1	12.1	13.1	15.1	16.1
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°	892.2	892.2	892.2	892.2	892.2	892.2	892.2	892.2	892.2	892.2	892.2
2.5°	897.3	898.4	900.3	901.4	902.3	902.3	903.4	904.4	902.3	900.3	899.3
5°	902.3	903.4	906.4	909.4	911.5	913.5	912.4	911.5	909.4	906.4	904.4
7.5°	903.4	906.4	909.4	913.5	916.5	920.5	918.6	916.5	912.4	908.5	905.3
10°	900.3	904.4	909.4	914.5	917.5	920.5	918.6	916.5	912.4	907.4	903.4
12.5°	896.3	901.4	907.4	912.4	915.4	919.5	916.5	913.5	908.5	903.4	898.4
15°	887.2	893.3	900.3	906.4	911.5	915.4	912.4	910.4	904.4	897.3	890.2
17.5°	876.1	884.2	891.3	898.4	902.3	906.4	904.4	902.3	895.2	887.2	879.1
20°	863.0	871.1	878.2	885.2	890.2	894.3	891.3	888.3	881.2	874.1	866.0
22.5°	846.8	854.9	863.0	870.0	875.1	879.1	875.1	870.0	863.0	856.0	847.9
25°	826.6	835.8	844.8	851.9	854.9	859.0	854.9	850.9	843.8	836.7	827.7
27.5°	806.4	815.6	824.6	831.7	834.7	838.8	834.7	830.7	823.6	816.5	807.5
30°	783.3	792.4	801.4	808.5	811.5	814.5	810.5	806.4	800.4	793.3	784.2
32.5°	757.1	766.1	773.2	780.2	784.2	788.3	784.2	781.2	774.1	765.1	756.0
35°	728.7	737.8	747.0	753.9	758.0	762.1	757.1	752.0	745.9	738.8	730.7
37.5°	697.5	707.5	717.6	725.7	728.7	732.8	728.7	723.6	717.6	710.5	701.5
40°	668.1	677.3	686.4	694.4	697.5	700.5	696.5	692.4	685.3	678.2	669.2
42.5°	638.0	647.0	655.0	662.1	665.1	669.2	665.1	660.1	655.0	649.0	641.0
45°	605.6	614.7	621.7	628.8	631.8	634.8	630.9	625.8	620.8	615.7	607.7
47.5°	572.4	580.4	587.5	594.5	596.5	599.5	595.5	592.5	587.5	582.5	575.4
50°	538.0	546.0	553.1	559.1	561.2	564.2	560.2	556.1	552.2	548.1	542.1
52.5°	502.7	509.7	516.8	522.8	524.9	526.9	522.8	518.8	514.8	510.7	504.7
55°	466.4	473.3	480.4	485.5	487.5	489.6	485.5	482.5	478.4	475.4	469.4
57.5°	430.0	437.0	443.1	448.1	450.1	452.2	448.1	444.1	441.1	438.0	433.0
60°	392.6	399.7	404.7	408.8	410.9	411.8	407.7	404.7	402.7	400.8	395.7
62.5°	356.3	361.3	366.4	369.4	371.4	372.4	369.4	367.4	365.4	363.4	359.3
65°	318.0	324.0	328.1	331.1	332.0	333.1	330.1	328.1	326.0	324.0	321.0
67.5°	279.6	284.7	287.7	290.7	291.6	291.6	291.6	290.7	288.6	285.6	282.6
70°	241.2	245.3	248.3	250.3	251.3	251.3	249.3	247.3	247.3	246.2	244.3
72.5°	201.9	204.9	206.9	209.0	209.0	209.0	209.0	209.9	209.0	206.9	203.9
75°	164.5	167.5	169.6	170.6	170.6	170.6	170.6	171.6	170.6	169.6	167.5
77.5°	129.2	131.2	132.2	133.3	133.3	133.3	134.2	135.3	134.2	133.3	132.2
80°	95.9	96.9	97.9	98.9	97.9	97.9	98.9	100.9	100.0	98.9	97.9
82.5°	65.6	66.6	67.7	67.7	68.6	69.7	69.7	69.7	69.7	68.6	67.7
85°	39.4	40.4	40.4	40.4	40.4	40.4	41.3	42.4	42.4	41.3	41.3
87.5°	18.1	19.2	18.1	17.2	16.1	16.1	18.1	20.2	20.2	19.2	19.2
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):

	330°	340°	350°	360°
0°	892.2	892.2	892.2	892.2
2.5°	900.3	899.3	894.3	889.2
5°	903.4	900.3	893.3	886.2
7.5°	903.4	899.3	889.2	880.1
10°	898.4	892.2	881.2	870.0
12.5°	892.2	885.2	872.1	859.9
15°	883.2	875.1	861.0	846.8
17.5°	870.0	859.9	845.9	830.7
20°	856.9	845.9	828.7	812.6
22.5°	838.8	828.7	810.5	793.3
25°	818.6	807.5	789.3	771.1
27.5°	797.4	784.2	766.1	747.9
30°	773.2	760.1	741.9	723.6
32.5°	747.0	734.8	716.7	697.5
35°	720.6	707.5	689.4	670.2
37.5°	691.4	679.3	661.2	642.9
40°	660.1	647.9	629.8	611.7
42.5°	630.9	619.7	601.6	584.4
45°	598.6	587.5	570.3	554.1
47.5°	565.3	554.1	538.0	521.9
50°	532.9	521.9	506.7	491.6
52.5°	496.7	487.5	473.3	459.3
55°	461.3	452.2	438.0	424.9
57.5°	426.0	417.8	404.7	392.6
60°	388.6	380.6	370.5	359.3
62.5°	353.3	346.2	336.1	326.0
65°	315.9	309.9	300.8	291.6
67.5°	277.6	272.5	264.5	256.3
70°	239.3	233.1	227.1	220.0
72.5°	200.9	197.8	191.8	185.8
75°	164.5	161.5	156.5	151.4
77.5°	130.3	127.1	123.2	119.1
80°	95.9	93.9	90.8	87.8
82.5°	66.6	64.7	62.6	59.6
85°	40.4	38.3	36.3	34.4
87.5°	18.1	17.2	15.1	14.2
90°	0.0	0.0	0.0	0.0



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













(END OF REPORT)