

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: P735601

Luminaire Tested: **4APN6-29-B2750-W2D-4000K**

Issue Date: 1/5/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P735601  
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-4000K  
Description: 4FT 2900 AMBIENT LUMEN OUTPUT APN WITH BIO UP LEDS AT 4000K CCT

Light Source: -  
Ballast/Driver: -

**Summary**

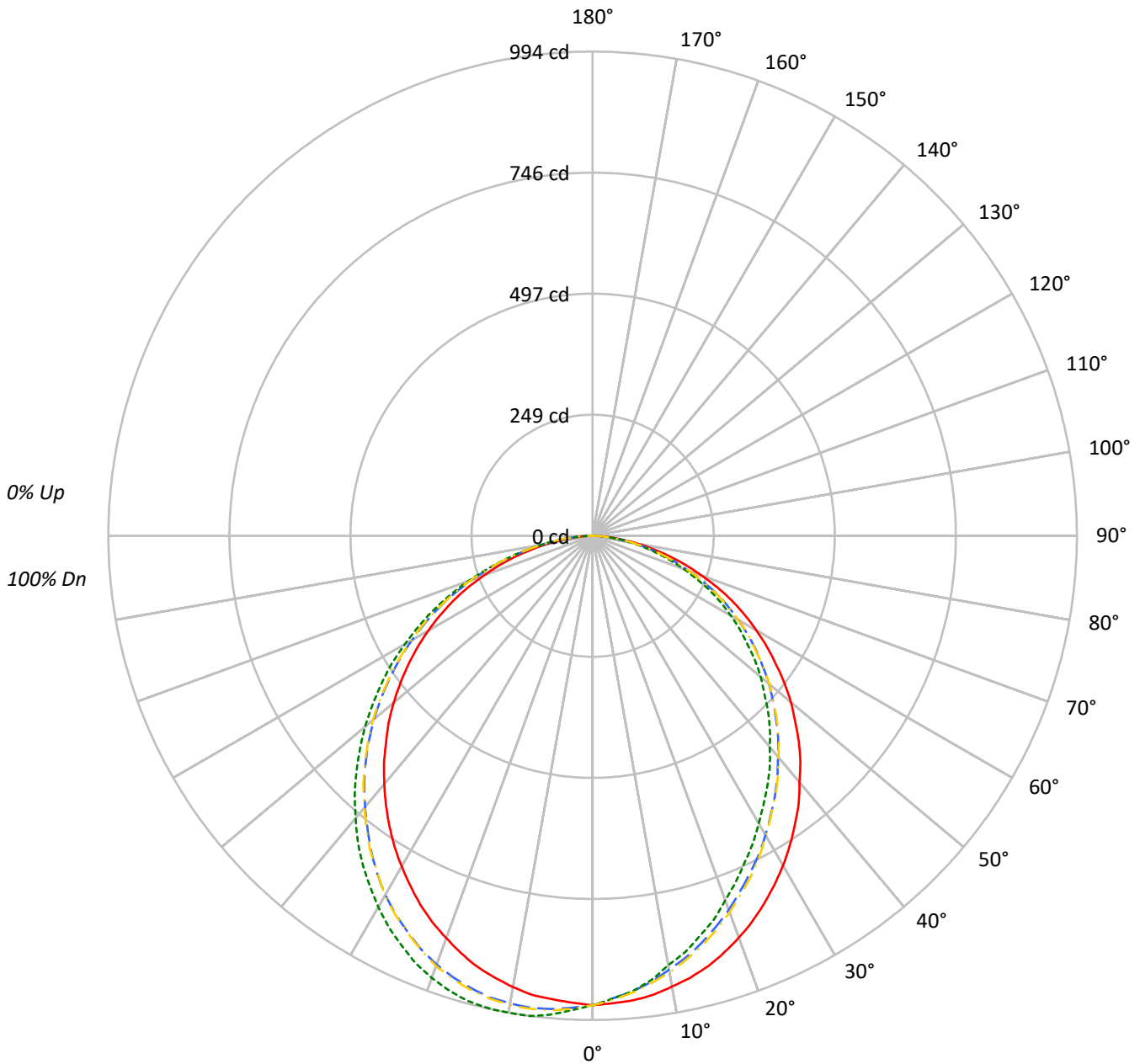
Lumens per Lamp: N/A  
Luminaire Lumens: 2585.0 lumens  
Efficiency: N/A  
Efficacy: 90.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.33  
Luminous Opening: Rectangular (W 0.29' x L: 4' x H: 0')  
CIE Type: Direct

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°	8892	8892	8892	8892
5°	8866	8695	8846	9139
10°	8805	8387	8816	9315
15°	8738	8124	8748	9446
20°	8619	7815	8628	9484
25°	8480	7526	8513	9446
30°	8328	7260	8351	9373
35°	8153	7048	8191	9272
40°	7957	6814	8010	9114
45°	7809	6644	7825	8948
50°	7622	6463	7652	8748
55°	7383	6227	7435	8506
60°	7161	6036	7184	8209
65°	6877	5783	6877	7855
70°	6412	5355	6382	7321
75°	5832	4859	5753	6570
80°	5042	4171	4867	5621
85°	3927	3123	3694	4615



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	91.1	3.5
10°-20°	258.5	10.0
20°-30°	384.3	14.9
30°-40°	452.9	17.5
40°-50°	461.1	17.8
50°-60°	410.8	15.9
60°-70°	309.5	12.0
70°-80°	172.1	6.7
80°-90°	44.7	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°	733.8	28.4
0°-40°	1186.7	45.9
0°-60°	2058.7	79.6
0°-90°	2585.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2585.0	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	964	964	964	964	964	
5°	957	939	955	987	957	91
15°	915	850	916	989	915	258
25°	833	739	836	928	833	384
35°	724	626	727	823	724	453
45°	598	509	600	686	598	461
55°	459	387	462	529	459	411
65°	315	265	315	360	315	311
75°	164	136	161	184	164	174
85°	37	30	35	44	37	45
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°	963.8	963.8	963.8	963.8	963.8	963.8	963.8	963.8	963.8	963.8	963.8
2.5°	960.6	960.6	961.6	957.3	951.9	949.7	948.6	947.5	949.7	950.7	949.7
5°	957.3	955.1	952.9	947.5	941.0	936.6	934.4	933.3	935.5	938.8	935.5
7.5°	950.7	946.4	942.0	934.4	926.8	920.2	917.0	914.8	917.0	920.2	918.0
10°	939.8	934.4	927.9	919.2	908.3	900.6	897.4	894.1	895.2	895.2	895.2
12.5°	928.9	921.4	913.7	902.8	890.7	882.1	876.6	872.3	874.4	875.6	875.6
15°	914.8	905.0	894.1	882.1	870.1	860.2	853.8	849.3	850.5	850.5	851.5
17.5°	897.4	886.5	875.6	861.4	847.1	836.2	828.7	823.2	825.3	826.5	827.5
20°	877.8	865.7	853.8	838.4	823.2	811.2	803.5	797.0	796.0	796.0	797.0
22.5°	857.0	843.9	829.7	813.4	797.0	783.9	776.3	769.8	768.7	768.7	769.8
25°	833.0	818.8	804.7	788.3	770.8	757.8	748.0	741.5	740.3	739.3	741.5
27.5°	807.9	793.8	779.6	763.3	744.7	731.6	721.7	715.2	713.0	712.0	714.2
30°	781.7	765.4	750.2	732.6	716.3	703.3	693.4	685.8	683.7	681.5	683.7
32.5°	753.4	737.1	720.7	703.3	686.9	673.8	664.0	656.4	654.2	653.1	655.3
35°	723.9	707.6	692.4	674.9	658.5	645.5	635.7	629.2	627.0	625.8	627.0
37.5°	694.5	678.3	662.9	645.5	629.2	616.1	606.2	599.7	598.5	597.5	598.5
40°	660.7	646.6	631.3	614.9	598.5	585.6	577.9	570.3	568.0	565.8	569.2
42.5°	631.3	617.1	601.9	586.6	570.3	557.1	548.4	542.0	539.7	538.6	539.7
45°	598.5	583.4	568.0	553.9	538.6	526.6	517.9	511.3	510.3	509.2	510.3
47.5°	563.8	550.6	537.5	523.4	508.1	496.1	488.5	482.0	479.8	477.6	479.8
50°	531.0	517.9	504.8	491.7	477.6	466.7	459.0	452.5	451.3	450.3	451.3
52.5°	496.1	483.0	471.1	458.0	445.9	435.0	427.5	422.0	420.8	419.8	420.8
55°	459.0	448.1	437.2	426.3	414.3	404.5	398.0	391.4	389.3	387.1	389.3
57.5°	424.1	414.3	403.4	392.5	381.6	372.9	366.3	360.9	359.8	358.7	359.8
60°	388.1	379.4	369.6	359.8	348.9	340.2	334.8	330.4	328.2	327.1	328.2
62.5°	352.2	343.5	335.8	325.9	316.2	309.6	304.1	299.9	297.7	296.6	297.7
65°	315.0	307.5	299.9	291.2	283.5	276.9	271.4	267.1	266.0	264.9	264.9
67.5°	276.9	270.4	263.9	256.2	247.5	240.9	235.5	232.2	231.2	230.0	231.2
70°	237.7	232.2	225.7	219.1	212.6	207.2	203.9	200.7	199.5	198.5	198.5
72.5°	200.7	196.3	190.8	185.4	179.9	174.5	171.2	169.0	168.0	166.8	166.8
75°	163.6	159.1	155.9	151.6	146.2	142.8	139.5	137.3	136.3	136.3	136.3
77.5°	128.6	125.4	122.2	117.7	114.5	111.2	109.0	108.0	106.8	106.8	106.8
80°	94.9	92.7	90.5	88.3	85.0	81.8	80.7	79.6	78.5	78.5	78.5
82.5°	64.4	63.2	61.0	58.9	56.7	55.6	54.5	53.5	53.5	53.5	53.5
85°	37.1	36.0	34.9	33.8	32.7	32.7	31.7	30.5	29.5	29.5	29.5
87.5°	15.3	15.3	15.3	14.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1
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°	963.8	963.8	963.8	963.8	963.8	963.8	963.8	963.8	963.8	963.8	963.8
2.5°	947.5	949.7	951.9	955.1	958.4	961.6	960.6	959.5	963.8	969.3	970.5
5°	933.3	935.5	938.8	944.2	949.7	954.1	955.1	955.1	963.8	971.5	973.7
7.5°	915.9	919.2	923.5	928.9	936.6	943.2	946.4	950.7	959.5	969.3	973.7
10°	894.1	899.6	906.1	913.7	921.4	928.9	935.5	941.0	951.9	962.8	969.3
12.5°	874.4	879.8	886.5	895.2	905.0	914.8	921.4	928.9	942.0	955.1	962.8
15°	852.6	858.0	865.7	874.4	885.3	896.2	906.1	915.9	928.9	943.2	951.9
17.5°	828.7	834.2	841.7	852.6	864.7	876.6	887.5	898.4	913.7	928.9	938.8
20°	799.2	806.9	816.6	827.5	841.7	856.0	866.9	878.8	895.2	911.5	922.4
22.5°	770.8	778.5	789.4	802.5	817.8	833.0	846.1	859.2	876.6	893.0	905.0
25°	743.5	752.4	763.3	776.3	790.5	805.7	821.0	836.2	853.8	871.1	883.2
27.5°	716.3	723.9	734.8	748.0	764.3	779.6	794.8	810.1	828.7	847.1	860.2
30°	685.8	694.5	704.3	717.5	734.8	752.4	767.6	783.9	802.5	821.0	834.2
32.5°	657.5	665.1	674.9	688.0	705.4	722.9	739.3	756.7	774.2	792.6	805.7
35°	629.2	636.7	646.6	659.7	677.1	694.5	710.8	727.2	744.7	762.1	775.2
37.5°	600.8	608.4	618.3	631.3	647.6	665.1	680.3	696.7	714.2	731.6	743.5
40°	571.3	578.9	586.6	599.7	616.1	633.5	648.8	665.1	682.5	699.9	712.0
42.5°	542.0	549.5	559.3	572.5	587.6	603.0	618.3	633.5	649.8	666.2	678.3
45°	512.5	519.0	528.8	540.8	556.1	570.3	585.6	599.7	616.1	631.3	643.3
47.5°	482.0	488.5	496.1	508.1	523.4	538.6	553.9	568.0	582.2	597.5	608.4
50°	452.5	459.0	467.7	478.6	492.9	507.0	520.1	533.1	547.4	561.6	571.3
52.5°	422.0	428.5	436.2	447.1	459.0	472.1	484.1	497.2	510.3	523.4	533.1
55°	391.4	395.8	402.3	412.1	425.3	438.4	450.3	462.2	474.3	485.2	495.0
57.5°	360.9	366.3	374.0	382.7	393.6	404.5	415.4	426.3	437.2	448.1	456.8
60°	330.4	334.8	340.2	347.8	358.7	368.5	379.4	389.3	399.0	408.9	416.6
62.5°	298.7	303.1	308.6	316.2	324.9	333.6	343.5	352.2	360.9	369.6	377.2
65°	266.0	270.4	275.8	282.3	290.0	297.7	306.3	315.0	321.7	328.2	335.8
67.5°	232.2	236.6	242.1	247.5	254.0	261.7	269.4	276.9	283.5	290.0	295.4
70°	199.5	202.8	208.2	212.6	218.1	223.5	230.0	236.6	240.9	246.4	253.0
72.5°	168.0	171.2	175.5	179.9	183.2	187.6	194.1	199.5	205.0	211.6	214.8
75°	137.3	139.5	142.8	146.2	149.4	152.7	157.1	161.4	165.8	169.0	173.4
77.5°	106.8	109.0	112.3	114.5	116.7	118.9	122.2	125.4	128.6	130.8	135.3
80°	78.5	80.7	82.8	85.0	87.2	89.4	90.5	91.6	95.9	99.2	101.4
82.5°	53.5	54.5	55.6	57.8	58.9	60.0	61.0	61.0	63.2	65.4	68.7
85°	30.5	31.7	32.7	32.7	32.7	32.7	33.8	34.9	36.0	38.2	40.4
87.5°	11.9	11.9	13.1	13.1	13.1	13.1	13.1	13.1	14.1	16.4	17.4
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°	963.8	963.8	963.8	963.8	963.8	963.8	963.8	963.8	963.8	963.8	963.8
2.5°	969.3	970.5	972.5	973.7	974.7	974.7	975.9	976.9	974.7	972.5	971.5
5°	974.7	975.9	979.1	982.4	984.6	986.8	985.6	984.6	982.4	979.1	976.9
7.5°	975.9	979.1	982.4	986.8	990.1	994.3	992.3	990.1	985.6	981.4	978.0
10°	972.5	976.9	982.4	987.8	991.1	994.3	992.3	990.1	985.6	980.2	975.9
12.5°	968.2	973.7	980.2	985.6	988.9	993.3	990.1	986.8	981.4	975.9	970.5
15°	958.4	965.0	972.5	979.1	984.6	988.9	985.6	983.4	976.9	969.3	961.6
17.5°	946.4	955.1	962.8	970.5	974.7	979.1	976.9	974.7	967.1	958.4	949.7
20°	932.3	941.0	948.6	956.2	961.6	966.0	962.8	959.5	951.9	944.2	935.5
22.5°	914.8	923.5	932.3	939.8	945.3	949.7	945.3	939.8	932.3	924.6	915.9
25°	893.0	902.8	912.6	920.2	923.5	927.9	923.5	919.2	911.5	903.9	894.1
27.5°	871.1	881.0	890.7	898.4	901.7	906.1	901.7	897.4	889.7	882.1	872.3
30°	846.1	856.0	865.7	873.4	876.6	879.8	875.6	871.1	864.7	857.0	847.1
32.5°	817.8	827.5	835.2	842.8	847.1	851.5	847.1	843.9	836.2	826.5	816.6
35°	787.2	797.0	806.9	814.4	818.8	823.2	817.8	812.3	805.7	798.1	789.4
37.5°	753.4	764.3	775.2	783.9	787.2	791.6	787.2	781.7	775.2	767.6	757.8
40°	721.7	731.6	741.5	750.2	753.4	756.7	752.4	748.0	740.3	732.6	722.9
42.5°	689.2	698.9	707.6	715.2	718.5	722.9	718.5	713.0	707.6	701.1	692.4
45°	654.2	664.0	671.6	679.3	682.5	685.8	681.5	676.0	670.6	665.1	656.4
47.5°	618.3	627.0	634.6	642.2	644.4	647.6	643.3	640.1	634.6	629.2	621.5
50°	581.2	589.9	597.5	604.0	606.2	609.5	605.2	600.8	596.5	592.1	585.6
52.5°	543.0	550.6	558.3	564.8	567.0	569.2	564.8	560.4	556.1	551.7	545.2
55°	503.8	511.3	519.0	524.4	526.6	528.8	524.4	521.2	516.8	513.5	507.0
57.5°	464.5	472.1	478.6	484.1	486.3	488.5	484.1	479.8	476.5	473.2	467.7
60°	424.1	431.7	437.2	441.6	443.8	444.9	440.4	437.2	435.0	432.9	427.5
62.5°	384.9	390.3	395.8	399.0	401.2	402.3	399.0	396.8	394.7	392.5	388.1
65°	343.5	350.0	354.4	357.6	358.7	359.8	356.6	354.4	352.2	350.0	346.7
67.5°	302.1	307.5	310.8	314.0	315.0	315.0	315.0	314.0	311.8	308.6	305.3
70°	260.5	264.9	268.2	270.4	271.4	271.4	269.4	267.1	267.1	266.0	263.9
72.5°	218.1	221.3	223.5	225.7	225.7	225.7	225.7	226.8	225.7	223.5	220.3
75°	177.7	181.0	183.2	184.3	184.3	184.3	184.3	185.4	184.3	183.2	181.0
77.5°	139.5	141.8	142.8	144.0	144.0	144.0	145.0	146.2	145.0	144.0	142.8
80°	103.6	104.6	105.8	106.8	105.8	105.8	106.8	109.0	108.0	106.8	105.8
82.5°	70.9	71.9	73.1	73.1	74.1	75.3	75.3	75.3	75.3	74.1	73.1
85°	42.6	43.6	43.6	43.6	43.6	43.6	44.7	45.8	45.8	44.7	44.7
87.5°	19.6	20.8	19.6	18.6	17.4	17.4	19.6	21.8	21.8	20.8	20.8
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: P735601

CATALOG NUMBER: 4APN6-29-B2750-W2D-4000K

**CANDELA DISTRIBUTION (continued):**

	330°	340°	350°	360°
0°	963.8	963.8	963.8	963.8
2.5°	972.5	971.5	966.0	960.6
5°	975.9	972.5	965.0	957.3
7.5°	975.9	971.5	960.6	950.7
10°	970.5	963.8	951.9	939.8
12.5°	963.8	956.2	942.0	928.9
15°	954.1	945.3	930.1	914.8
17.5°	939.8	928.9	913.7	897.4
20°	925.7	913.7	895.2	877.8
22.5°	906.1	895.2	875.6	857.0
25°	884.3	872.3	852.6	833.0
27.5°	861.4	847.1	827.5	807.9
30°	835.2	821.0	801.4	781.7
32.5°	806.9	793.8	774.2	753.4
35°	778.5	764.3	744.7	723.9
37.5°	746.9	733.8	714.2	694.5
40°	713.0	699.9	680.3	660.7
42.5°	681.5	669.4	649.8	631.3
45°	646.6	634.6	616.1	598.5
47.5°	610.6	598.5	581.2	563.8
50°	575.7	563.8	547.4	531.0
52.5°	536.5	526.6	511.3	496.1
55°	498.3	488.5	473.2	459.0
57.5°	460.2	451.3	437.2	424.1
60°	419.8	411.1	400.2	388.1
62.5°	381.6	374.0	363.1	352.2
65°	341.3	334.8	324.9	315.0
67.5°	299.9	294.4	285.7	276.9
70°	258.4	251.8	245.3	237.7
72.5°	217.0	213.7	207.2	200.7
75°	177.7	174.5	169.0	163.6
77.5°	140.7	137.3	133.1	128.6
80°	103.6	101.4	98.1	94.9
82.5°	71.9	69.8	67.6	64.4
85°	43.6	41.4	39.2	37.1
87.5°	19.6	18.6	16.4	15.3
90°	0.0	0.0	0.0	0.0



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















(END OF REPORT)