

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: P735568

Luminaire Tested: **4APN6-19-B2750-W2D-2700K**

Issue Date: 1/5/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P735568  
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: 4APN6-19-B2750-W2D-2700K  
Description: 4FT 1900 AMBIENT LUMEN OUTPUT APN WITH BIO UP LEDS AT 2700K CCT

Light Source: -  
Ballast/Driver: -

**Summary**

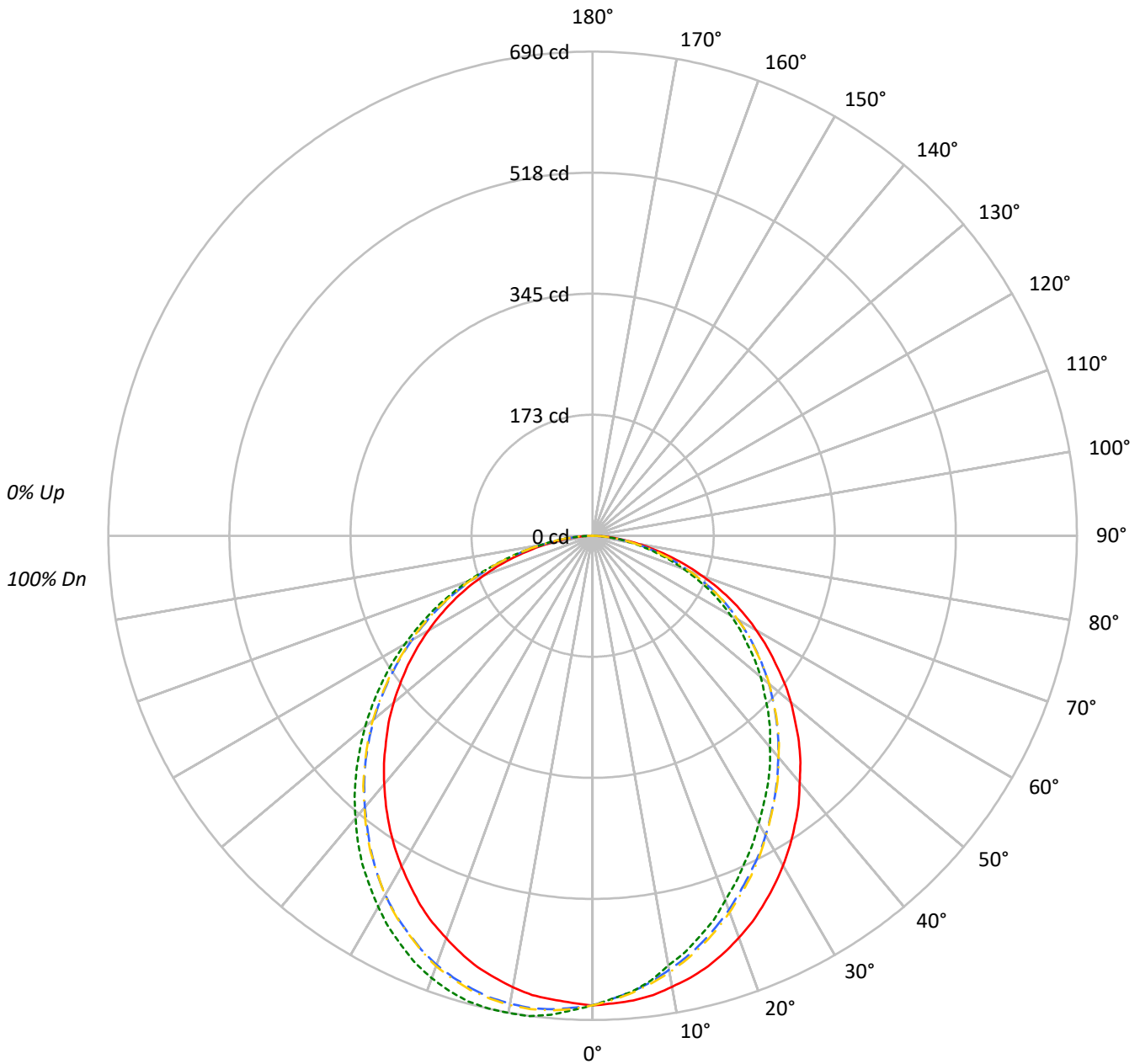
Lumens per Lamp: N/A  
Luminaire Lumens: 1795.0 lumens  
Efficiency: N/A  
Efficacy: 94.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.33  
Luminous Opening: Rectangular (W 0.29' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 19  
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°	6175	6175	6175	6175
5°	6157	6038	6142	6346
10°	6114	5823	6121	6469
15°	6067	5641	6075	6559
20°	5984	5427	5991	6586
25°	5888	5225	5912	6559
30°	5783	5041	5799	6509
35°	5662	4895	5688	6439
40°	5526	4732	5563	6328
45°	5423	4614	5433	6213
50°	5294	4488	5314	6074
55°	5126	4324	5163	5907
60°	4973	4191	4988	5700
65°	4777	4017	4777	5456
70°	4451	3717	4432	5085
75°	4050	3372	3992	4563
80°	3501	2896	3379	3905
85°	2731	2170	2562	3208



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	63.2	3.5
10°-20°	179.5	10.0
20°-30°	266.8	14.9
30°-40°	314.5	17.5
40°-50°	320.2	17.8
50°-60°	285.3	15.9
60°-70°	214.9	12.0
70°-80°	119.5	6.7
80°-90°	31.1	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°	509.5	28.4
0°-40°	824.0	45.9
0°-60°	1429.5	79.6
0°-90°	1795.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1795.0	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	669	669	669	669	669	
5°	665	652	663	685	665	63
15°	635	591	636	687	635	179
25°	578	513	581	644	578	266
35°	503	435	505	572	503	314
45°	416	354	416	476	416	320
55°	319	269	321	367	319	286
65°	219	184	219	250	219	216
75°	114	95	112	128	114	121
85°	26	20	24	30	26	31
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°	669.3	669.3	669.3	669.3	669.3	669.3	669.3	669.3	669.3	669.3	669.3
2.5°	667.0	667.0	667.7	664.8	661.0	659.4	658.7	657.9	659.4	660.2	659.4
5°	664.8	663.2	661.7	657.9	653.4	650.3	648.8	648.1	649.6	651.9	649.6
7.5°	660.2	657.2	654.1	648.8	643.6	639.0	636.7	635.2	636.7	639.0	637.5
10°	652.6	648.8	644.3	638.3	630.7	625.4	623.1	620.9	621.6	621.6	621.6
12.5°	645.0	639.8	634.5	626.9	618.5	612.5	608.7	605.7	607.2	608.0	608.0
15°	635.2	628.4	620.9	612.5	604.2	597.3	592.8	589.8	590.6	590.6	591.3
17.5°	623.1	615.6	608.0	598.2	588.2	580.7	575.4	571.7	573.1	573.9	574.6
20°	609.5	601.1	592.8	582.2	571.7	563.3	558.0	553.4	552.7	552.7	553.4
22.5°	595.1	586.0	576.2	564.8	553.4	544.3	539.0	534.5	533.8	533.8	534.5
25°	578.4	568.6	558.8	547.4	535.2	526.2	519.4	514.9	514.1	513.3	514.9
27.5°	561.0	551.2	541.4	530.0	517.1	508.0	501.2	496.7	495.1	494.4	495.9
30°	542.8	531.5	520.9	508.7	497.4	488.4	481.5	476.2	474.8	473.2	474.8
32.5°	523.2	511.8	500.4	488.4	477.0	467.9	461.1	455.8	454.3	453.5	455.0
35°	502.7	491.3	480.8	468.6	457.3	448.3	441.4	436.9	435.4	434.6	435.4
37.5°	482.2	471.0	460.3	448.3	436.9	427.8	420.9	416.4	415.6	414.9	415.6
40°	458.8	449.0	438.3	427.0	415.6	406.6	401.3	396.0	394.4	392.9	395.3
42.5°	438.3	428.5	418.0	407.3	396.0	386.9	380.8	376.3	374.8	374.0	374.8
45°	415.6	405.1	394.4	384.6	374.0	365.7	359.7	355.1	354.3	353.6	354.3
47.5°	391.5	382.4	373.3	363.4	352.8	344.5	339.2	334.7	333.2	331.6	333.2
50°	368.8	359.7	350.5	341.4	331.6	324.0	318.7	314.2	313.4	312.7	313.4
52.5°	344.5	335.4	327.1	318.0	309.6	302.1	296.8	293.0	292.2	291.5	292.2
55°	318.7	311.2	303.6	296.0	287.7	280.9	276.4	271.8	270.3	268.8	270.3
57.5°	294.5	287.7	280.1	272.6	265.0	259.0	254.4	250.6	249.9	249.1	249.9
60°	269.5	263.5	256.6	249.9	242.3	236.3	232.5	229.4	227.9	227.1	227.9
62.5°	244.5	238.5	233.2	226.3	219.6	215.0	211.2	208.2	206.7	206.0	206.7
65°	218.8	213.5	208.2	202.2	196.9	192.3	188.5	185.5	184.7	184.0	184.0
67.5°	192.3	187.8	183.3	177.9	171.9	167.3	163.5	161.3	160.5	159.7	160.5
70°	165.0	161.3	156.8	152.2	147.6	143.9	141.6	139.4	138.5	137.8	137.8
72.5°	139.4	136.3	132.5	128.7	124.9	121.1	118.9	117.4	116.6	115.8	115.8
75°	113.6	110.5	108.3	105.3	101.5	99.2	96.9	95.4	94.6	94.6	94.6
77.5°	89.3	87.1	84.8	81.8	79.5	77.2	75.7	75.0	74.2	74.2	74.2
80°	65.9	64.4	62.8	61.3	59.0	56.8	56.1	55.3	54.5	54.5	54.5
82.5°	44.7	43.9	42.4	40.9	39.4	38.6	37.9	37.1	37.1	37.1	37.1
85°	25.8	25.0	24.2	23.4	22.7	22.7	22.0	21.2	20.5	20.5	20.5
87.5°	10.6	10.6	10.6	9.8	9.1	9.1	9.1	9.1	9.1	9.1	9.1
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°	669.3	669.3	669.3	669.3	669.3	669.3	669.3	669.3	669.3	669.3	669.3
2.5°	657.9	659.4	661.0	663.2	665.5	667.7	667.0	666.3	669.3	673.1	673.9
5°	648.1	649.6	651.9	655.7	659.4	662.5	663.2	663.2	669.3	674.6	676.1
7.5°	636.0	638.3	641.2	645.0	650.3	654.9	657.2	660.2	666.3	673.1	676.1
10°	620.9	624.7	629.2	634.5	639.8	645.0	649.6	653.4	661.0	668.6	673.1
12.5°	607.2	611.0	615.6	621.6	628.4	635.2	639.8	645.0	654.1	663.2	668.6
15°	592.0	595.8	601.1	607.2	614.7	622.3	629.2	636.0	645.0	654.9	661.0
17.5°	575.4	579.2	584.5	592.0	600.4	608.7	616.3	623.8	634.5	645.0	651.9
20°	555.0	560.3	567.1	574.6	584.5	594.4	601.9	610.2	621.6	632.9	640.5
22.5°	535.2	540.6	548.1	557.2	567.9	578.4	587.5	596.6	608.7	620.1	628.4
25°	516.3	522.4	530.0	539.0	548.9	559.5	570.1	580.7	592.8	604.9	613.3
27.5°	497.4	502.7	510.3	519.4	530.7	541.4	551.9	562.6	575.4	588.2	597.3
30°	476.2	482.2	489.1	498.2	510.3	522.4	533.0	544.3	557.2	570.1	579.2
32.5°	456.5	461.9	468.6	477.7	489.8	502.0	513.3	525.4	537.6	550.4	559.5
35°	436.9	442.1	449.0	458.1	470.2	482.2	493.6	505.0	517.1	529.2	538.3
37.5°	417.2	422.5	429.3	438.3	449.7	461.9	472.4	483.8	495.9	508.0	516.3
40°	396.7	402.0	407.3	416.4	427.8	439.9	450.5	461.9	473.9	486.0	494.4
42.5°	376.3	381.6	388.4	397.5	408.1	418.7	429.3	439.9	451.2	462.6	471.0
45°	355.9	360.4	367.2	375.5	386.2	396.0	406.6	416.4	427.8	438.3	446.7
47.5°	334.7	339.2	344.5	352.8	363.4	374.0	384.6	394.4	404.3	414.9	422.5
50°	314.2	318.7	324.8	332.3	342.3	352.1	361.2	370.2	380.1	389.9	396.7
52.5°	293.0	297.5	302.9	310.4	318.7	327.8	336.1	345.2	354.3	363.4	370.2
55°	271.8	274.8	279.3	286.2	295.3	304.4	312.7	321.0	329.4	336.9	343.7
57.5°	250.6	254.4	259.7	265.7	273.3	280.9	288.4	296.0	303.6	311.2	317.2
60°	229.4	232.5	236.3	241.5	249.1	255.9	263.5	270.3	277.1	283.9	289.3
62.5°	207.4	210.5	214.3	219.6	225.6	231.7	238.5	244.5	250.6	256.6	261.9
65°	184.7	187.8	191.5	196.1	201.4	206.7	212.7	218.8	223.4	227.9	233.2
67.5°	161.3	164.3	168.1	171.9	176.4	181.7	187.0	192.3	196.9	201.4	205.2
70°	138.5	140.8	144.6	147.6	151.4	155.2	159.7	164.3	167.3	171.1	175.7
72.5°	116.6	118.9	121.9	124.9	127.2	130.2	134.8	138.5	142.3	146.9	149.2
75°	95.4	96.9	99.2	101.5	103.7	106.0	109.1	112.0	115.1	117.4	120.4
77.5°	74.2	75.7	78.0	79.5	81.0	82.6	84.8	87.1	89.3	90.9	93.9
80°	54.5	56.1	57.5	59.0	60.6	62.1	62.8	63.6	66.6	68.9	70.4
82.5°	37.1	37.9	38.6	40.1	40.9	41.6	42.4	42.4	43.9	45.4	47.7
85°	21.2	22.0	22.7	22.7	22.7	22.7	23.4	24.2	25.0	26.5	28.0
87.5°	8.3	8.3	9.1	9.1	9.1	9.1	9.1	9.1	9.8	11.4	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):**

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	669.3	669.3	669.3	669.3	669.3	669.3	669.3	669.3	669.3	669.3	669.3
2.5°	673.1	673.9	675.3	676.1	676.8	676.8	677.7	678.4	676.8	675.3	674.6
5°	676.8	677.7	679.9	682.2	683.7	685.2	684.4	683.7	682.2	679.9	678.4
7.5°	677.7	679.9	682.2	685.2	687.5	690.5	689.0	687.5	684.4	681.4	679.1
10°	675.3	678.4	682.2	686.0	688.2	690.5	689.0	687.5	684.4	680.6	677.7
12.5°	672.3	676.1	680.6	684.4	686.7	689.7	687.5	685.2	681.4	677.7	673.9
15°	665.5	670.1	675.3	679.9	683.7	686.7	684.4	682.9	678.4	673.1	667.7
17.5°	657.2	663.2	668.6	673.9	676.8	679.9	678.4	676.8	671.5	665.5	659.4
20°	647.4	653.4	658.7	664.0	667.7	670.8	668.6	666.3	661.0	655.7	649.6
22.5°	635.2	641.2	647.4	652.6	656.4	659.4	656.4	652.6	647.4	642.1	636.0
25°	620.1	626.9	633.7	639.0	641.2	644.3	641.2	638.3	632.9	627.6	620.9
27.5°	604.9	611.8	618.5	623.8	626.1	629.2	626.1	623.1	617.8	612.5	605.7
30°	587.5	594.4	601.1	606.4	608.7	611.0	608.0	604.9	600.4	595.1	588.2
32.5°	567.9	574.6	579.9	585.3	588.2	591.3	588.2	586.0	580.7	573.9	567.1
35°	546.6	553.4	560.3	565.5	568.6	571.7	567.9	564.1	559.5	554.2	548.1
37.5°	523.2	530.7	538.3	544.3	546.6	549.7	546.6	542.8	538.3	533.0	526.2
40°	501.2	508.0	514.9	520.9	523.2	525.4	522.4	519.4	514.1	508.7	502.0
42.5°	478.5	485.3	491.3	496.7	498.9	502.0	498.9	495.1	491.3	486.8	480.8
45°	454.3	461.1	466.4	471.7	473.9	476.2	473.2	469.4	465.7	461.9	455.8
47.5°	429.3	435.4	440.7	445.9	447.4	449.7	446.7	444.5	440.7	436.9	431.6
50°	403.5	409.6	414.9	419.4	420.9	423.2	420.2	417.2	414.2	411.1	406.6
52.5°	377.0	382.4	387.7	392.2	393.7	395.3	392.2	389.1	386.2	383.1	378.6
55°	349.8	355.1	360.4	364.2	365.7	367.2	364.2	361.9	358.8	356.6	352.1
57.5°	322.5	327.8	332.3	336.1	337.7	339.2	336.1	333.2	330.9	328.6	324.8
60°	294.5	299.8	303.6	306.6	308.2	308.9	305.8	303.6	302.1	300.6	296.8
62.5°	267.3	271.0	274.8	277.1	278.6	279.3	277.1	275.6	274.1	272.6	269.5
65°	238.5	243.0	246.1	248.3	249.1	249.9	247.6	246.1	244.5	243.0	240.8
67.5°	209.8	213.5	215.8	218.0	218.8	218.8	218.8	218.0	216.5	214.3	212.0
70°	180.9	184.0	186.2	187.8	188.5	188.5	187.0	185.5	185.5	184.7	183.3
72.5°	151.4	153.7	155.2	156.8	156.8	156.8	156.8	157.5	156.8	155.2	153.0
75°	123.4	125.7	127.2	128.0	128.0	128.0	128.0	128.7	128.0	127.2	125.7
77.5°	96.9	98.4	99.2	100.0	100.0	100.0	100.7	101.5	100.7	100.0	99.2
80°	71.9	72.7	73.5	74.2	73.5	73.5	74.2	75.7	75.0	74.2	73.5
82.5°	49.2	49.9	50.7	50.7	51.5	52.3	52.3	52.3	52.3	51.5	50.7
85°	29.6	30.3	30.3	30.3	30.3	30.3	31.0	31.8	31.8	31.0	31.0
87.5°	13.6	14.4	13.6	12.9	12.1	12.1	13.6	15.1	15.1	14.4	14.4
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):**

	330°	340°	350°	360°
0°	669.3	669.3	669.3	669.3
2.5°	675.3	674.6	670.8	667.0
5°	677.7	675.3	670.1	664.8
7.5°	677.7	674.6	667.0	660.2
10°	673.9	669.3	661.0	652.6
12.5°	669.3	664.0	654.1	645.0
15°	662.5	656.4	645.8	635.2
17.5°	652.6	645.0	634.5	623.1
20°	642.8	634.5	621.6	609.5
22.5°	629.2	621.6	608.0	595.1
25°	614.0	605.7	592.0	578.4
27.5°	598.2	588.2	574.6	561.0
30°	579.9	570.1	556.5	542.8
32.5°	560.3	551.2	537.6	523.2
35°	540.6	530.7	517.1	502.7
37.5°	518.7	509.6	495.9	482.2
40°	495.1	486.0	472.4	458.8
42.5°	473.2	464.8	451.2	438.3
45°	449.0	440.7	427.8	415.6
47.5°	424.0	415.6	403.5	391.5
50°	399.8	391.5	380.1	368.8
52.5°	372.5	365.7	355.1	344.5
55°	346.0	339.2	328.6	318.7
57.5°	319.5	313.4	303.6	294.5
60°	291.5	285.5	277.9	269.5
62.5°	265.0	259.7	252.1	244.5
65°	237.0	232.5	225.6	218.8
67.5°	208.2	204.4	198.4	192.3
70°	179.5	174.9	170.4	165.0
72.5°	150.7	148.4	143.9	139.4
75°	123.4	121.1	117.4	113.6
77.5°	97.7	95.4	92.4	89.3
80°	71.9	70.4	68.1	65.9
82.5°	49.9	48.5	47.0	44.7
85°	30.3	28.8	27.2	25.8
87.5°	13.6	12.9	11.4	10.6
90°	0.0	0.0	0.0	0.0



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















(END OF REPORT)