

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: P735569

Luminaire Tested: **4APN6-19-B2750-W2D-3000K**

Issue Date: 1/5/2024



Test Information

Test Method: LM-79-08
Report Number: P735569
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-3000K
Description: 4FT 1900 AMBIENT LUMEN OUTPUT APN WITH BIO UP LEDS AT 3000K CCT

Light Source: -
Ballast/Driver: -

Summary

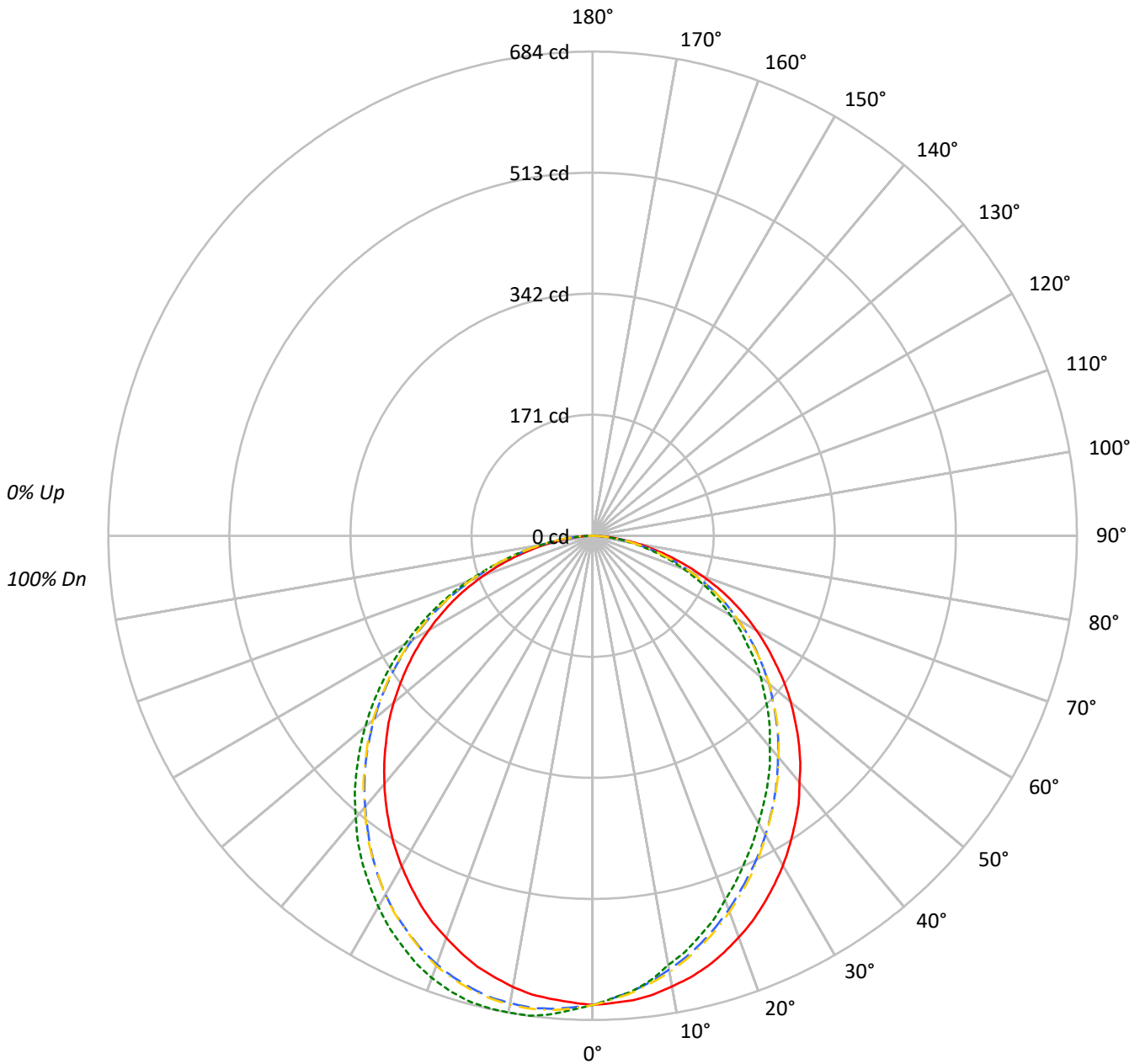
Lumens per Lamp: N/A
Luminaire Lumens: 1778.0 lumens
Efficiency: N/A
Efficacy: 93.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.33
Luminous Opening: Rectangular (W 0.29' x L: 4' x H: 0')
CIE Type: Direct

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					20					
RC	80					70					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°	6116	6116	6116	6116
5°	6099	5980	6085	6286
10°	6056	5768	6063	6407
15°	6010	5588	6018	6497
20°	5927	5376	5935	6524
25°	5832	5177	5856	6497
30°	5728	4993	5744	6447
35°	5608	4848	5634	6377
40°	5474	4688	5510	6268
45°	5372	4571	5382	6155
50°	5243	4445	5263	6017
55°	5078	4282	5114	5850
60°	4927	4152	4942	5646
65°	4731	3978	4731	5403
70°	4411	3682	4392	5036
75°	4010	3340	3957	4520
80°	3469	2869	3347	3868
85°	2699	2149	2541	3176



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.6	3.5
10°-20°	177.8	10.0
20°-30°	264.3	14.9
30°-40°	311.5	17.5
40°-50°	317.2	17.8
50°-60°	282.6	15.9
60°-70°	212.9	12.0
70°-80°	118.4	6.7
80°-90°	30.8	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°	504.7	28.4
0°-40°	816.2	45.9
0°-60°	1416.0	79.6
0°-90°	1778.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1778.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	663	663	663	663	663	
5°	658	646	657	679	658	62
15°	629	585	630	680	629	177
25°	573	508	575	638	573	264
35°	498	430	500	566	498	312
45°	412	350	412	472	412	317
55°	316	266	318	364	316	283
65°	217	182	217	248	217	214
75°	112	94	111	127	112	120
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°	662.9	662.9	662.9	662.9	662.9	662.9	662.9	662.9	662.9	662.9	662.9
2.5°	660.7	660.7	661.4	658.5	654.7	653.2	652.5	651.7	653.2	653.9	653.2
5°	658.5	657.0	655.4	651.7	647.2	644.2	642.7	642.0	643.5	645.7	643.5
7.5°	653.9	651.0	647.9	642.7	637.5	632.9	630.7	629.2	630.7	632.9	631.4
10°	646.4	642.7	638.2	632.2	624.7	619.5	617.2	615.0	615.7	615.7	615.7
12.5°	638.9	633.7	628.5	621.0	612.7	606.7	602.9	600.0	601.4	602.2	602.2
15°	629.2	622.5	615.0	606.7	598.5	591.7	587.2	584.2	585.0	585.0	585.7
17.5°	617.2	609.7	602.2	592.5	582.7	575.2	570.0	566.2	567.7	568.5	569.2
20°	603.7	595.4	587.2	576.7	566.2	557.9	552.7	548.2	547.5	547.5	548.2
22.5°	589.5	580.4	570.7	559.5	548.2	539.2	533.9	529.5	528.7	528.7	529.5
25°	572.9	563.2	553.5	542.2	530.2	521.2	514.5	510.0	509.2	508.5	510.0
27.5°	555.7	546.0	536.2	525.0	512.2	503.2	496.4	492.0	490.4	489.7	491.2
30°	537.7	526.4	516.0	503.9	492.7	483.7	477.0	471.7	470.3	468.7	470.3
32.5°	518.2	507.0	495.7	483.7	472.5	463.5	456.7	451.5	450.0	449.2	450.7
35°	497.9	486.7	476.2	464.2	452.9	444.0	437.2	432.8	431.2	430.4	431.2
37.5°	477.7	466.5	456.0	444.0	432.8	423.7	417.0	412.5	411.7	411.0	411.7
40°	454.5	444.7	434.2	422.9	411.7	402.8	397.5	392.2	390.7	389.2	391.5
42.5°	434.2	424.5	414.0	403.5	392.2	383.2	377.2	372.8	371.2	370.4	371.2
45°	411.7	401.2	390.7	381.0	370.4	362.2	356.2	351.7	351.0	350.3	351.0
47.5°	387.8	378.7	369.7	360.0	349.5	341.2	336.0	331.5	330.0	328.5	330.0
50°	365.3	356.2	347.2	338.2	328.5	321.0	315.7	311.2	310.4	309.7	310.4
52.5°	341.2	332.2	324.0	315.0	306.7	299.2	294.0	290.3	289.5	288.7	289.5
55°	315.7	308.2	300.7	293.2	285.0	278.2	273.7	269.2	267.8	266.2	267.8
57.5°	291.7	285.0	277.5	270.0	262.5	256.5	252.0	248.2	247.5	246.7	247.5
60°	267.0	261.0	254.2	247.5	240.0	234.0	230.3	227.2	225.7	225.0	225.7
62.5°	242.2	236.2	231.0	224.2	217.5	212.9	209.2	206.2	204.7	204.0	204.7
65°	216.7	211.5	206.2	200.3	195.0	190.4	186.7	183.7	182.9	182.2	182.2
67.5°	190.4	186.0	181.5	176.2	170.3	165.7	162.0	159.7	159.0	158.2	159.0
70°	163.5	159.7	155.3	150.7	146.2	142.5	140.3	138.0	137.2	136.5	136.5
72.5°	138.0	135.0	131.2	127.5	123.7	120.0	117.8	116.2	115.5	114.7	114.7
75°	112.5	109.5	107.2	104.3	100.5	98.2	96.0	94.5	93.7	93.7	93.7
77.5°	88.5	86.2	84.0	81.0	78.7	76.5	75.0	74.3	73.5	73.5	73.5
80°	65.3	63.7	62.2	60.7	58.5	56.2	55.5	54.7	54.0	54.0	54.0
82.5°	44.3	43.5	42.0	40.5	39.0	38.2	37.5	36.8	36.8	36.8	36.8
85°	25.5	24.7	24.0	23.2	22.5	22.5	21.8	21.0	20.3	20.3	20.3
87.5°	10.5	10.5	10.5	9.7	9.0	9.0	9.0	9.0	9.0	9.0	9.0
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):

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	662.9	662.9	662.9	662.9	662.9	662.9	662.9	662.9	662.9	662.9	662.9
2.5°	651.7	653.2	654.7	657.0	659.2	661.4	660.7	660.0	662.9	666.7	667.5
5°	642.0	643.5	645.7	649.5	653.2	656.2	657.0	657.0	662.9	668.2	669.7
7.5°	630.0	632.2	635.2	638.9	644.2	648.7	651.0	653.9	660.0	666.7	669.7
10°	615.0	618.7	623.2	628.5	633.7	638.9	643.5	647.2	654.7	662.2	666.7
12.5°	601.4	605.2	609.7	615.7	622.5	629.2	633.7	638.9	647.9	657.0	662.2
15°	586.4	590.2	595.4	601.4	608.9	616.4	623.2	630.0	638.9	648.7	654.7
17.5°	570.0	573.7	578.9	586.4	594.7	602.9	610.4	617.9	628.5	638.9	645.7
20°	549.7	555.0	561.7	569.2	578.9	588.7	596.2	604.5	615.7	627.0	634.5
22.5°	530.2	535.4	542.9	552.0	562.5	572.9	582.0	591.0	602.9	614.2	622.5
25°	511.4	517.5	525.0	533.9	543.7	554.2	564.7	575.2	587.2	599.2	607.5
27.5°	492.7	497.9	505.4	514.5	525.7	536.2	546.7	557.2	570.0	582.7	591.7
30°	471.7	477.7	484.5	493.5	505.4	517.5	527.9	539.2	552.0	564.7	573.7
32.5°	452.2	457.5	464.2	473.2	485.2	497.2	508.5	520.4	532.5	545.2	554.2
35°	432.8	437.9	444.7	453.7	465.7	477.7	488.9	500.2	512.2	524.2	533.2
37.5°	413.2	418.5	425.3	434.2	445.4	457.5	467.9	479.2	491.2	503.2	511.4
40°	392.9	398.2	403.5	412.5	423.7	435.7	446.2	457.5	469.5	481.4	489.7
42.5°	372.8	377.9	384.7	393.7	404.2	414.7	425.3	435.7	447.0	458.2	466.5
45°	352.5	357.0	363.7	372.0	382.5	392.2	402.8	412.5	423.7	434.2	442.5
47.5°	331.5	336.0	341.2	349.5	360.0	370.4	381.0	390.7	400.4	411.0	418.5
50°	311.2	315.7	321.7	329.2	339.0	348.7	357.8	366.7	376.5	386.2	392.9
52.5°	290.3	294.7	300.0	307.5	315.7	324.7	332.9	342.0	351.0	360.0	366.7
55°	269.2	272.2	276.7	283.5	292.5	301.5	309.7	317.9	326.2	333.7	340.4
57.5°	248.2	252.0	257.2	263.2	270.7	278.2	285.7	293.2	300.7	308.2	314.2
60°	227.2	230.3	234.0	239.2	246.7	253.5	261.0	267.8	274.5	281.2	286.5
62.5°	205.4	208.5	212.2	217.5	223.5	229.5	236.2	242.2	248.2	254.2	259.5
65°	182.9	186.0	189.7	194.2	199.5	204.7	210.7	216.7	221.2	225.7	231.0
67.5°	159.7	162.8	166.5	170.3	174.7	180.0	185.3	190.4	195.0	199.5	203.2
70°	137.2	139.5	143.2	146.2	150.0	153.7	158.2	162.8	165.7	169.5	174.0
72.5°	115.5	117.8	120.7	123.7	126.0	129.0	133.5	137.2	141.0	145.5	147.8
75°	94.5	96.0	98.2	100.5	102.8	105.0	108.0	111.0	114.0	116.2	119.3
77.5°	73.5	75.0	77.2	78.7	80.3	81.8	84.0	86.2	88.5	90.0	93.0
80°	54.0	55.5	57.0	58.5	60.0	61.5	62.2	63.0	66.0	68.2	69.7
82.5°	36.8	37.5	38.2	39.7	40.5	41.2	42.0	42.0	43.5	45.0	47.2
85°	21.0	21.8	22.5	22.5	22.5	22.5	23.2	24.0	24.7	26.2	27.8
87.5°	8.2	8.2	9.0	9.0	9.0	9.0	9.0	9.0	9.7	11.2	12.0
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°	662.9	662.9	662.9	662.9	662.9	662.9	662.9	662.9	662.9	662.9	662.9
2.5°	666.7	667.5	668.9	669.7	670.4	670.4	671.2	672.0	670.4	668.9	668.2
5°	670.4	671.2	673.5	675.7	677.2	678.7	677.9	677.2	675.7	673.5	672.0
7.5°	671.2	673.5	675.7	678.7	681.0	683.9	682.5	681.0	677.9	675.0	672.7
10°	668.9	672.0	675.7	679.5	681.7	683.9	682.5	681.0	677.9	674.2	671.2
12.5°	666.0	669.7	674.2	677.9	680.2	683.2	681.0	678.7	675.0	671.2	667.5
15°	659.2	663.7	668.9	673.5	677.2	680.2	677.9	676.4	672.0	666.7	661.4
17.5°	651.0	657.0	662.2	667.5	670.4	673.5	672.0	670.4	665.2	659.2	653.2
20°	641.2	647.2	652.5	657.7	661.4	664.5	662.2	660.0	654.7	649.5	643.5
22.5°	629.2	635.2	641.2	646.4	650.2	653.2	650.2	646.4	641.2	636.0	630.0
25°	614.2	621.0	627.7	632.9	635.2	638.2	635.2	632.2	627.0	621.7	615.0
27.5°	599.2	606.0	612.7	617.9	620.2	623.2	620.2	617.2	612.0	606.7	600.0
30°	582.0	588.7	595.4	600.7	602.9	605.2	602.2	599.2	594.7	589.5	582.7
32.5°	562.5	569.2	574.5	579.7	582.7	585.7	582.7	580.4	575.2	568.5	561.7
35°	541.4	548.2	555.0	560.2	563.2	566.2	562.5	558.7	554.2	548.9	542.9
37.5°	518.2	525.7	533.2	539.2	541.4	544.5	541.4	537.7	533.2	527.9	521.2
40°	496.4	503.2	510.0	516.0	518.2	520.4	517.5	514.5	509.2	503.9	497.2
42.5°	474.0	480.7	486.7	492.0	494.2	497.2	494.2	490.4	486.7	482.2	476.2
45°	450.0	456.7	462.0	467.2	469.5	471.7	468.7	465.0	461.2	457.5	451.5
47.5°	425.3	431.2	436.5	441.7	443.2	445.4	442.5	440.3	436.5	432.8	427.5
50°	399.7	405.7	411.0	415.4	417.0	419.2	416.2	413.2	410.3	407.2	402.8
52.5°	373.5	378.7	384.0	388.5	390.0	391.5	388.5	385.4	382.5	379.5	375.0
55°	346.5	351.7	357.0	360.7	362.2	363.7	360.7	358.5	355.4	353.2	348.7
57.5°	319.5	324.7	329.2	332.9	334.5	336.0	332.9	330.0	327.8	325.4	321.7
60°	291.7	297.0	300.7	303.7	305.3	306.0	302.9	300.7	299.2	297.8	294.0
62.5°	264.7	268.5	272.2	274.5	276.0	276.7	274.5	272.9	271.5	270.0	267.0
65°	236.2	240.7	243.7	246.0	246.7	247.5	245.3	243.7	242.2	240.7	238.5
67.5°	207.8	211.5	213.7	216.0	216.7	216.7	216.7	216.0	214.5	212.2	210.0
70°	179.2	182.2	184.5	186.0	186.7	186.7	185.3	183.7	183.7	182.9	181.5
72.5°	150.0	152.2	153.7	155.3	155.3	155.3	155.3	156.0	155.3	153.7	151.5
75°	122.2	124.5	126.0	126.8	126.8	126.8	126.8	127.5	126.8	126.0	124.5
77.5°	96.0	97.5	98.2	99.0	99.0	99.0	99.7	100.5	99.7	99.0	98.2
80°	71.2	72.0	72.8	73.5	72.8	72.8	73.5	75.0	74.3	73.5	72.8
82.5°	48.7	49.5	50.3	50.3	51.0	51.8	51.8	51.8	51.8	51.0	50.3
85°	29.3	30.0	30.0	30.0	30.0	30.0	30.7	31.5	31.5	30.7	30.7
87.5°	13.5	14.3	13.5	12.8	12.0	12.0	13.5	15.0	15.0	14.3	14.3
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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CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	662.9	662.9	662.9	662.9
2.5°	668.9	668.2	664.5	660.7
5°	671.2	668.9	663.7	658.5
7.5°	671.2	668.2	660.7	653.9
10°	667.5	662.9	654.7	646.4
12.5°	662.9	657.7	647.9	638.9
15°	656.2	650.2	639.7	629.2
17.5°	646.4	638.9	628.5	617.2
20°	636.7	628.5	615.7	603.7
22.5°	623.2	615.7	602.2	589.5
25°	608.2	600.0	586.4	572.9
27.5°	592.5	582.7	569.2	555.7
30°	574.5	564.7	551.2	537.7
32.5°	555.0	546.0	532.5	518.2
35°	535.4	525.7	512.2	497.9
37.5°	513.7	504.7	491.2	477.7
40°	490.4	481.4	467.9	454.5
42.5°	468.7	460.4	447.0	434.2
45°	444.7	436.5	423.7	411.7
47.5°	420.0	411.7	399.7	387.8
50°	396.0	387.8	376.5	365.3
52.5°	369.0	362.2	351.7	341.2
55°	342.8	336.0	325.4	315.7
57.5°	316.5	310.4	300.7	291.7
60°	288.7	282.8	275.3	267.0
62.5°	262.5	257.2	249.7	242.2
65°	234.7	230.3	223.5	216.7
67.5°	206.2	202.5	196.5	190.4
70°	177.8	173.2	168.7	163.5
72.5°	149.3	147.0	142.5	138.0
75°	122.2	120.0	116.2	112.5
77.5°	96.8	94.5	91.5	88.5
80°	71.2	69.7	67.5	65.3
82.5°	49.5	48.0	46.5	44.3
85°	30.0	28.5	27.0	25.5
87.5°	13.5	12.8	11.2	10.5
90°	0.0	0.0	0.0	0.0



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













(END OF REPORT)