

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: P735608

Luminaire Tested: **4APN6-29-B2750-W2D-CP250-2700K**

Issue Date: 1/5/2024



Test Information

Test Method: LM-79-08
Report Number: P735608
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-CP250-2700K
Description: 4FT 2900 AMBIENT LUMEN OUTPUT APN WITH BIO UP LEDS AT 2700K CCT, AND CP250 LENS

Light Source: -
Ballast/Driver: -

Summary

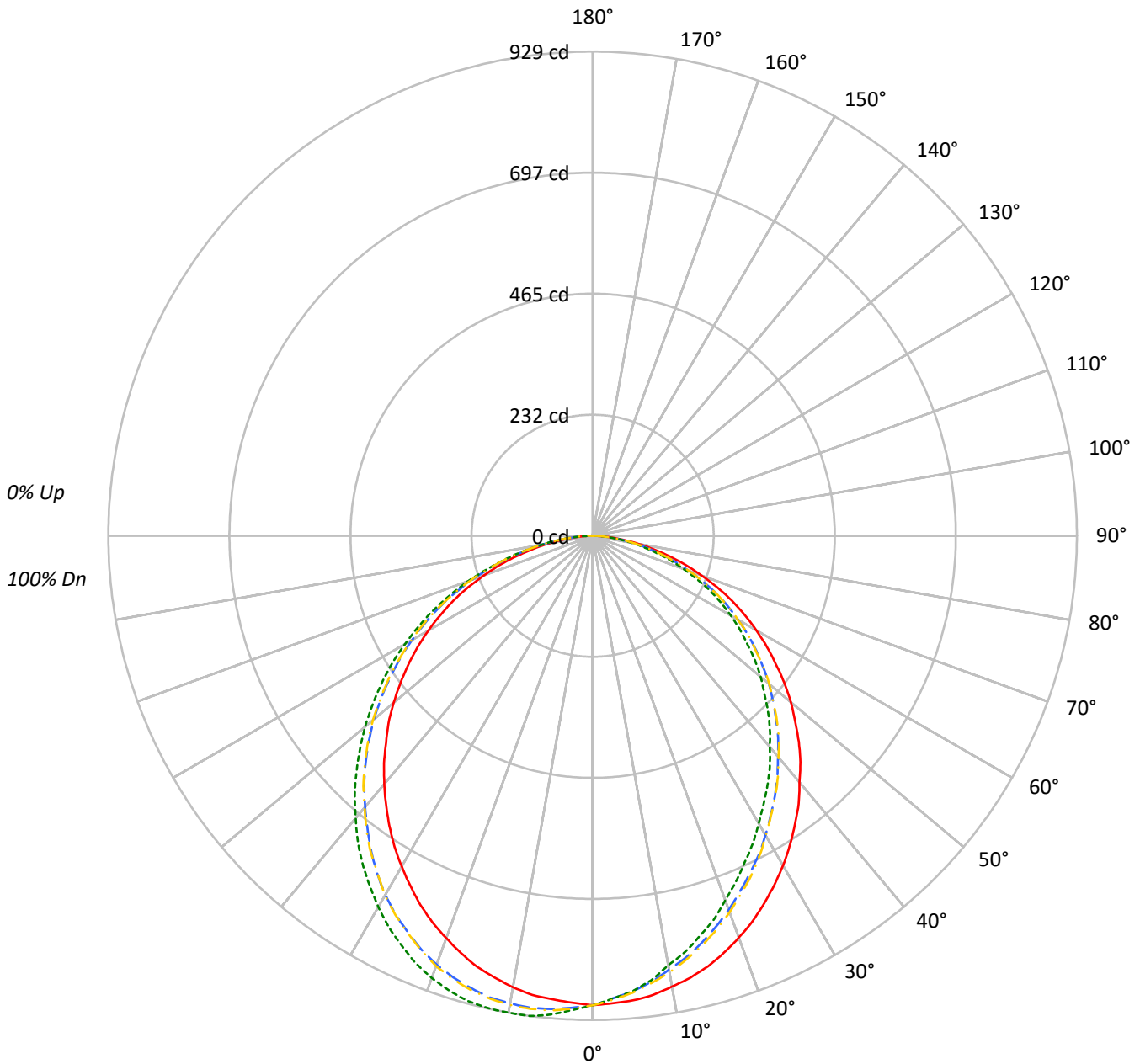
Lumens per Lamp: N/A
Luminaire Lumens: 2416.0 lumens
Efficiency: N/A
Efficacy: 84.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.33
Luminous Opening: Rectangular (W 0.29' x L: 4' x H: 0')
CIE Type: Direct

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°	8311	8311	8311	8311
5°	8287	8126	8268	8542
10°	8229	7838	8240	8706
15°	8167	7593	8177	8828
20°	8055	7304	8065	8865
25°	7925	7033	7957	8828
30°	7783	6785	7806	8760
35°	7621	6588	7654	8666
40°	7437	6369	7488	8517
45°	7299	6209	7313	8362
50°	7124	6041	7152	8176
55°	6901	5820	6949	7951
60°	6695	5641	6713	7673
65°	6427	5405	6427	7342
70°	5991	5004	5967	6844
75°	5450	4541	5376	6142
80°	4713	3900	4553	5255
85°	3673	2911	3451	4319



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.1	3.5
10°-20°	241.6	10.0
20°-30°	359.1	14.9
30°-40°	423.3	17.5
40°-50°	431.0	17.8
50°-60°	384.0	15.9
60°-70°	289.3	12.0
70°-80°	160.9	6.7
80°-90°	41.8	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°	685.8	28.4
0°-40°	1109.1	45.9
0°-60°	1924.1	79.6
0°-90°	2416.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2416.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	901	901	901	901	901	
5°	895	877	893	922	895	85
15°	855	795	856	924	855	241
25°	778	691	782	867	778	359
35°	677	585	680	769	677	423
45°	559	476	560	641	559	431
55°	429	362	432	494	429	384
65°	294	248	294	336	294	291
75°	153	127	151	172	153	162
85°	35	28	33	41	35	42
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°	900.8	900.8	900.8	900.8	900.8	900.8	900.8	900.8	900.8	900.8	900.8
2.5°	897.8	897.8	898.8	894.8	889.7	887.6	886.6	885.5	887.6	888.6	887.6
5°	894.8	892.7	890.6	885.5	879.5	875.3	873.3	872.3	874.4	877.4	874.4
7.5°	888.6	884.6	880.4	873.3	866.2	860.1	857.0	855.0	857.0	860.1	858.0
10°	878.4	873.3	867.2	859.1	848.9	841.7	838.7	835.7	836.6	836.6	836.6
12.5°	868.2	861.1	854.0	843.8	832.5	824.4	819.3	815.3	817.2	818.3	818.3
15°	855.0	845.9	835.7	824.4	813.2	804.0	797.9	793.8	794.9	794.9	795.9
17.5°	838.7	828.5	818.3	805.1	791.7	781.6	774.5	769.4	771.4	772.5	773.4
20°	820.4	809.1	797.9	783.6	769.4	758.1	751.0	744.9	743.9	743.9	744.9
22.5°	801.0	788.7	775.5	760.2	744.9	732.7	725.5	719.4	718.5	718.5	719.4
25°	778.5	765.3	752.1	736.8	720.4	708.3	699.1	693.0	691.9	690.9	693.0
27.5°	755.1	741.9	728.7	713.4	696.0	683.8	674.6	668.5	666.4	665.5	667.5
30°	730.6	715.3	701.1	684.7	669.5	657.3	648.1	640.9	639.0	636.9	639.0
32.5°	704.2	688.9	673.6	657.3	642.0	629.8	620.6	613.5	611.5	610.4	612.4
35°	676.6	661.3	647.1	630.8	615.5	603.3	594.1	588.0	586.0	584.9	586.0
37.5°	649.1	633.9	619.6	603.3	588.0	575.8	566.6	560.5	559.4	558.4	559.4
40°	617.5	604.3	590.0	574.7	559.4	547.3	540.1	533.0	530.9	528.8	532.0
42.5°	590.0	576.8	562.6	548.3	533.0	520.7	512.6	506.5	504.5	503.4	504.5
45°	559.4	545.2	530.9	517.7	503.4	492.2	484.1	477.9	476.9	475.9	476.9
47.5°	526.9	514.6	502.4	489.2	474.9	463.7	456.5	450.5	448.4	446.3	448.4
50°	496.3	484.1	471.8	459.6	446.3	436.2	429.0	422.9	421.8	420.9	421.8
52.5°	463.7	451.4	440.3	428.0	416.7	406.6	399.5	394.4	393.3	392.4	393.3
55°	429.0	418.8	408.6	398.4	387.3	378.0	372.0	365.8	363.8	361.8	363.8
57.5°	396.4	387.3	377.1	366.9	356.7	348.6	342.4	337.3	336.3	335.2	336.3
60°	362.8	354.6	345.4	336.3	326.1	318.0	312.9	308.8	306.7	305.7	306.7
62.5°	329.1	321.0	313.9	304.6	295.5	289.4	284.3	280.3	278.2	277.2	278.2
65°	294.4	287.4	280.3	272.1	265.0	258.8	253.7	249.7	248.6	247.6	247.6
67.5°	258.8	252.7	246.6	239.5	231.4	225.2	220.1	217.0	216.1	215.0	216.1
70°	222.1	217.0	211.0	204.8	198.7	193.6	190.6	187.6	186.5	185.5	185.5
72.5°	187.6	183.4	178.3	173.2	168.2	163.1	160.0	158.0	157.0	155.9	155.9
75°	152.9	148.7	145.7	141.7	136.6	133.5	130.4	128.4	127.4	127.4	127.4
77.5°	120.2	117.2	114.2	110.0	107.0	104.0	101.9	100.9	99.8	99.8	99.8
80°	88.7	86.6	84.6	82.5	79.5	76.4	75.5	74.4	73.4	73.4	73.4
82.5°	60.2	59.1	57.0	55.1	53.0	51.9	51.0	50.0	50.0	50.0	50.0
85°	34.7	33.6	32.6	31.5	30.6	30.6	29.6	28.5	27.5	27.5	27.5
87.5°	14.3	14.3	14.3	13.2	12.3	12.3	12.3	12.3	12.3	12.3	12.3
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):

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	900.8	900.8	900.8	900.8	900.8	900.8	900.8	900.8	900.8	900.8	900.8
2.5°	885.5	887.6	889.7	892.7	895.7	898.8	897.8	896.8	900.8	905.9	907.0
5°	872.3	874.4	877.4	882.5	887.6	891.7	892.7	892.7	900.8	908.0	910.0
7.5°	856.1	859.1	863.1	868.2	875.3	881.5	884.6	888.6	896.8	905.9	910.0
10°	835.7	840.8	846.8	854.0	861.1	868.2	874.4	879.5	889.7	899.8	905.9
12.5°	817.2	822.3	828.5	836.6	845.9	855.0	861.1	868.2	880.4	892.7	899.8
15°	796.8	801.9	809.1	817.2	827.4	837.6	846.8	856.1	868.2	881.5	889.7
17.5°	774.5	779.6	786.7	796.8	808.1	819.3	829.5	839.7	854.0	868.2	877.4
20°	747.0	754.1	763.2	773.4	786.7	800.0	810.2	821.4	836.6	851.9	862.1
22.5°	720.4	727.6	737.8	750.0	764.3	778.5	790.8	803.0	819.3	834.6	845.9
25°	694.9	703.2	713.4	725.5	738.9	753.0	767.4	781.6	797.9	814.2	825.5
27.5°	669.5	676.6	686.8	699.1	714.3	728.7	742.9	757.2	774.5	791.7	804.0
30°	640.9	649.1	658.3	670.5	686.8	703.2	717.4	732.7	750.0	767.4	779.6
32.5°	614.5	621.7	630.8	643.0	659.3	675.6	690.9	707.2	723.6	740.8	753.0
35°	588.0	595.1	604.3	616.6	632.8	649.1	664.4	679.6	696.0	712.3	724.5
37.5°	561.5	568.6	577.9	590.0	605.3	621.7	635.9	651.1	667.5	683.8	694.9
40°	533.9	541.1	548.3	560.5	575.8	592.1	606.4	621.7	637.9	654.2	665.5
42.5°	506.5	513.6	522.8	535.0	549.2	563.5	577.9	592.1	607.3	622.6	633.9
45°	479.0	485.0	494.3	505.4	519.7	533.0	547.3	560.5	575.8	590.0	601.3
47.5°	450.5	456.5	463.7	474.9	489.2	503.4	517.7	530.9	544.1	558.4	568.6
50°	422.9	429.0	437.1	447.3	460.7	473.9	486.1	498.3	511.6	524.8	533.9
52.5°	394.4	400.5	407.6	417.8	429.0	441.2	452.4	464.7	476.9	489.2	498.3
55°	365.8	369.9	376.0	385.2	397.5	409.7	420.9	432.0	443.3	453.5	462.6
57.5°	337.3	342.4	349.5	357.7	367.8	378.0	388.2	398.4	408.6	418.8	426.9
60°	308.8	312.9	318.0	325.0	335.2	344.4	354.6	363.8	372.9	382.2	389.3
62.5°	279.2	283.3	288.4	295.5	303.7	311.8	321.0	329.1	337.3	345.4	352.6
65°	248.6	252.7	257.8	263.9	271.0	278.2	286.3	294.4	300.6	306.7	313.9
67.5°	217.0	221.2	226.3	231.4	237.4	244.6	251.7	258.8	265.0	271.0	276.1
70°	186.5	189.5	194.6	198.7	203.8	208.9	215.0	221.2	225.2	230.3	236.5
72.5°	157.0	160.0	164.0	168.2	171.2	175.3	181.4	186.5	191.6	197.8	200.8
75°	128.4	130.4	133.5	136.6	139.6	142.7	146.8	150.8	154.9	158.0	162.1
77.5°	99.8	101.9	104.9	107.0	109.1	111.1	114.2	117.2	120.2	122.3	126.4
80°	73.4	75.5	77.4	79.5	81.5	83.6	84.6	85.7	89.7	92.7	94.8
82.5°	50.0	51.0	51.9	54.0	55.1	56.1	57.0	57.0	59.1	61.1	64.2
85°	28.5	29.6	30.6	30.6	30.6	30.6	31.5	32.6	33.6	35.7	37.7
87.5°	11.2	11.2	12.3	12.3	12.3	12.3	12.3	12.3	13.2	15.3	16.3
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):

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	900.8	900.8	900.8	900.8	900.8	900.8	900.8	900.8	900.8	900.8	900.8
2.5°	905.9	907.0	908.9	910.0	911.0	911.0	912.1	913.1	911.0	908.9	908.0
5°	911.0	912.1	915.1	918.2	920.2	922.3	921.2	920.2	918.2	915.1	913.1
7.5°	912.1	915.1	918.2	922.3	925.3	929.3	927.4	925.3	921.2	917.2	914.0
10°	908.9	913.1	918.2	923.3	926.3	929.3	927.4	925.3	921.2	916.1	912.1
12.5°	904.9	910.0	916.1	921.2	924.2	928.4	925.3	922.3	917.2	912.1	907.0
15°	895.7	901.9	908.9	915.1	920.2	924.2	921.2	919.1	913.1	905.9	898.8
17.5°	884.6	892.7	899.8	907.0	911.0	915.1	913.1	911.0	903.9	895.7	887.6
20°	871.3	879.5	886.6	893.7	898.8	902.9	899.8	896.8	889.7	882.5	874.4
22.5°	855.0	863.1	871.3	878.4	883.5	887.6	883.5	878.4	871.3	864.2	856.1
25°	834.6	843.8	852.9	860.1	863.1	867.2	863.1	859.1	851.9	844.8	835.7
27.5°	814.2	823.4	832.5	839.7	842.7	846.8	842.7	838.7	831.5	824.4	815.3
30°	790.8	800.0	809.1	816.3	819.3	822.3	818.3	814.2	808.1	801.0	791.7
32.5°	764.3	773.4	780.6	787.7	791.7	795.9	791.7	788.7	781.6	772.5	763.2
35°	735.7	744.9	754.1	761.2	765.3	769.4	764.3	759.2	753.0	745.9	737.8
37.5°	704.2	714.3	724.5	732.7	735.7	739.8	735.7	730.6	724.5	717.4	708.3
40°	674.6	683.8	693.0	701.1	704.2	707.2	703.2	699.1	691.9	684.7	675.6
42.5°	644.1	653.2	661.3	668.5	671.5	675.6	671.5	666.4	661.3	655.3	647.1
45°	611.5	620.6	627.7	634.9	637.9	640.9	636.9	631.8	626.8	621.7	613.5
47.5°	577.9	586.0	593.1	600.2	602.2	605.3	601.3	598.2	593.1	588.0	580.9
50°	543.2	551.3	558.4	564.5	566.6	569.6	565.6	561.5	557.5	553.4	547.3
52.5°	507.5	514.6	521.8	527.9	529.9	532.0	527.9	523.7	519.7	515.6	509.6
55°	470.9	477.9	485.0	490.1	492.2	494.3	490.1	487.1	483.0	480.0	473.9
57.5°	434.1	441.2	447.3	452.4	454.5	456.5	452.4	448.4	445.4	442.2	437.1
60°	396.4	403.5	408.6	412.7	414.8	415.8	411.6	408.6	406.6	404.6	399.5
62.5°	359.7	364.8	369.9	372.9	375.0	376.0	372.9	370.9	368.9	366.9	362.8
65°	321.0	327.1	331.2	334.2	335.2	336.3	333.3	331.2	329.1	327.1	324.1
67.5°	282.3	287.4	290.4	293.5	294.4	294.4	294.4	293.5	291.4	288.4	285.4
70°	243.5	247.6	250.7	252.7	253.7	253.7	251.7	249.7	249.7	248.6	246.6
72.5°	203.8	206.9	208.9	211.0	211.0	211.0	211.0	212.0	211.0	208.9	205.9
75°	166.1	169.1	171.2	172.3	172.3	172.3	172.3	173.2	172.3	171.2	169.1
77.5°	130.4	132.5	133.5	134.5	134.5	134.5	135.5	136.6	135.5	134.5	133.5
80°	96.8	97.8	98.9	99.8	98.9	98.9	99.8	101.9	100.9	99.8	98.9
82.5°	66.2	67.2	68.3	68.3	69.3	70.4	70.4	70.4	70.4	69.3	68.3
85°	39.8	40.8	40.8	40.8	40.8	40.8	41.7	42.8	42.8	41.7	41.7
87.5°	18.3	19.4	18.3	17.3	16.3	16.3	18.3	20.4	20.4	19.4	19.4
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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CATALOG NUMBER: 4APN6-29-B2750-W2D-CP250-2700K

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	900.8	900.8	900.8	900.8
2.5°	908.9	908.0	902.9	897.8
5°	912.1	908.9	901.9	894.8
7.5°	912.1	908.0	897.8	888.6
10°	907.0	900.8	889.7	878.4
12.5°	900.8	893.7	880.4	868.2
15°	891.7	883.5	869.3	855.0
17.5°	878.4	868.2	854.0	838.7
20°	865.1	854.0	836.6	820.4
22.5°	846.8	836.6	818.3	801.0
25°	826.4	815.3	796.8	778.5
27.5°	805.1	791.7	773.4	755.1
30°	780.6	767.4	749.0	730.6
32.5°	754.1	741.9	723.6	704.2
35°	727.6	714.3	696.0	676.6
37.5°	698.1	685.8	667.5	649.1
40°	666.4	654.2	635.9	617.5
42.5°	636.9	625.7	607.3	590.0
45°	604.3	593.1	575.8	559.4
47.5°	570.7	559.4	543.2	526.9
50°	538.1	526.9	511.6	496.3
52.5°	501.4	492.2	477.9	463.7
55°	465.8	456.5	442.2	429.0
57.5°	430.1	421.8	408.6	396.4
60°	392.4	384.2	374.0	362.8
62.5°	356.7	349.5	339.3	329.1
65°	319.0	312.9	303.7	294.4
67.5°	280.3	275.2	267.0	258.8
70°	241.6	235.4	229.3	222.1
72.5°	202.9	199.7	193.6	187.6
75°	166.1	163.1	158.0	152.9
77.5°	131.5	128.4	124.4	120.2
80°	96.8	94.8	91.7	88.7
82.5°	67.2	65.3	63.2	60.2
85°	40.8	38.7	36.6	34.7
87.5°	18.3	17.3	15.3	14.3
90°	0.0	0.0	0.0	0.0



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













(END OF REPORT)