

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: P735612

Luminaire Tested: **4APN6-29-B2750-W2D-CP250-5000K**

Issue Date: 1/5/2024



Test Information

Test Method: LM-79-08
Report Number: P735612
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-CP250-5000K
Description: 4FT 2900 AMBIENT LUMEN OUTPUT APN WITH BIO UP LEDS AT 5000K CCT, AND CP250 LENS

Light Source: -
Ballast/Driver: -

Summary

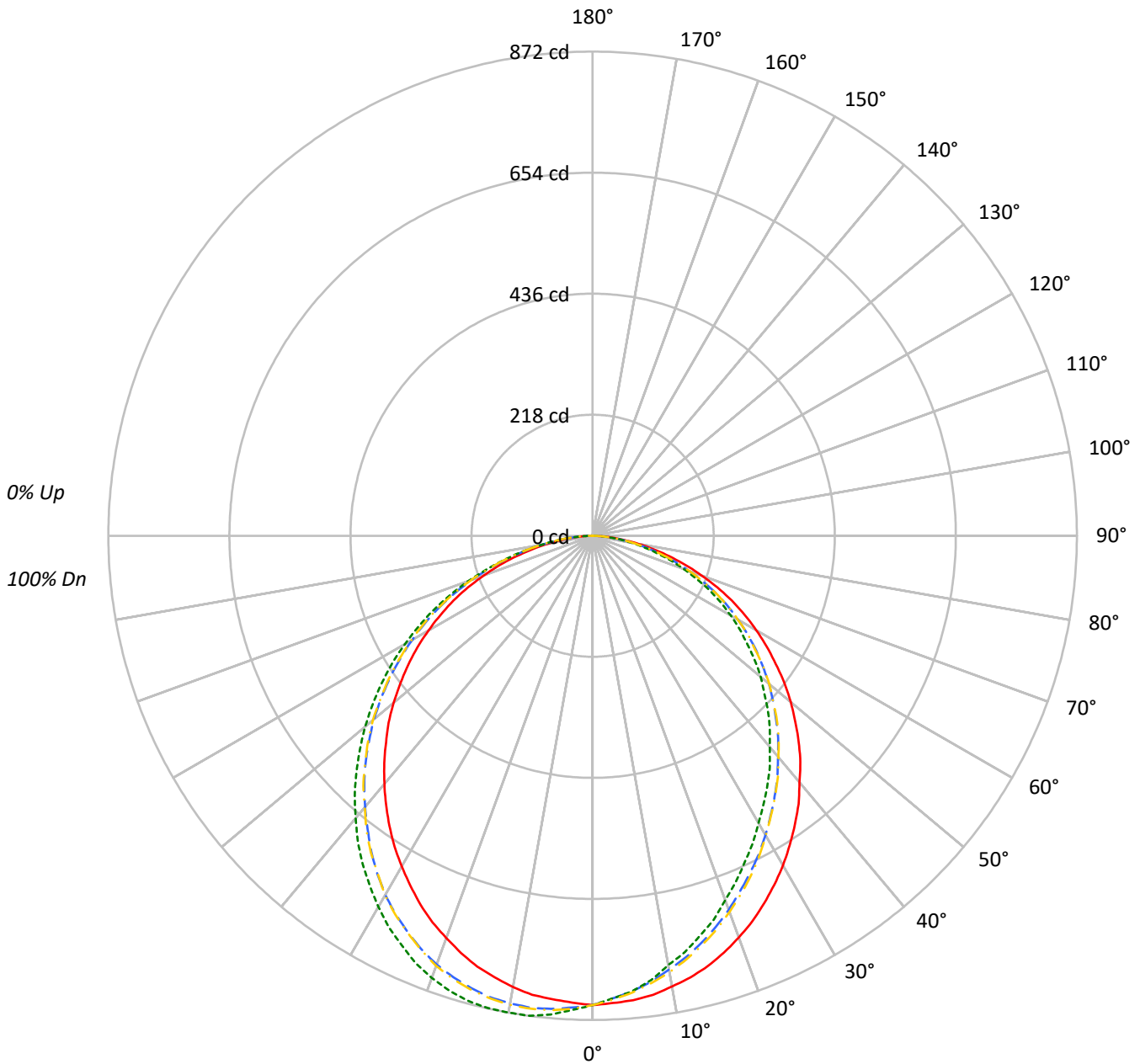
Lumens per Lamp: N/A
Luminaire Lumens: 2267.0 lumens
Efficiency: N/A
Efficacy: 79.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.33
Luminous Opening: Rectangular (W 0.29' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	7799	7799	7799	7799
5°	7776	7625	7757	8015
10°	7722	7354	7731	8169
15°	7662	7125	7673	8283
20°	7558	6854	7567	8318
25°	7436	6600	7466	8283
30°	7303	6368	7324	8220
35°	7151	6181	7182	8132
40°	6978	5976	7025	7992
45°	6849	5827	6862	7847
50°	6684	5668	6710	7672
55°	6474	5461	6521	7460
60°	6281	5294	6300	7198
65°	6032	5071	6032	6890
70°	5622	4696	5597	6420
75°	5112	4260	5044	5764
80°	4421	3661	4272	4931
85°	3451	2731	3239	4054



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.9	3.5
10°-20°	226.7	10.0
20°-30°	337.0	14.9
30°-40°	397.2	17.5
40°-50°	404.4	17.8
50°-60°	360.3	15.9
60°-70°	271.4	12.0
70°-80°	151.0	6.7
80°-90°	39.2	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°	643.5	28.4
0°-40°	1040.7	45.9
0°-60°	1805.4	79.6
0°-90°	2267.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2267.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	845	845	845	845	845	
5°	840	823	838	865	840	80
15°	802	746	803	867	802	226
25°	730	648	733	814	730	337
35°	635	549	638	722	635	397
45°	525	447	526	601	525	404
55°	402	340	405	464	402	361
65°	276	232	276	316	276	273
75°	143	120	142	162	143	152
85°	33	26	31	38	33	39
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°	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3
2.5°	842.4	842.4	843.3	839.6	834.8	832.9	831.9	830.9	832.9	833.8	832.9
5°	839.6	837.6	835.7	830.9	825.2	821.4	819.4	818.5	820.4	823.3	820.4
7.5°	833.8	830.0	826.1	819.4	812.8	807.0	804.2	802.2	804.2	807.0	805.1
10°	824.2	819.4	813.7	806.1	796.5	789.8	787.0	784.1	785.0	785.0	785.0
12.5°	814.6	808.0	801.3	791.8	781.2	773.5	768.8	765.0	766.8	767.9	767.9
15°	802.2	793.7	784.1	773.5	763.1	754.4	748.7	744.9	745.9	745.9	746.8
17.5°	787.0	777.4	767.9	755.4	742.9	733.4	726.8	722.0	723.8	724.8	725.7
20°	769.8	759.2	748.7	735.3	722.0	711.4	704.7	699.0	698.1	698.1	699.0
22.5°	751.6	740.1	727.7	713.3	699.0	687.5	680.8	675.1	674.2	674.2	675.1
25°	730.5	718.1	705.7	691.4	676.0	664.6	655.9	650.3	649.2	648.3	650.3
27.5°	708.5	696.1	683.7	669.4	653.1	641.6	633.0	627.3	625.3	624.4	626.3
30°	685.5	671.2	657.9	642.5	628.2	616.8	608.1	601.4	599.6	597.7	599.6
32.5°	660.7	646.4	632.0	616.8	602.4	590.9	582.3	575.7	573.8	572.7	574.7
35°	634.9	620.5	607.2	591.9	577.5	566.1	557.5	551.8	549.8	548.8	549.8
37.5°	609.0	594.8	581.4	566.1	551.8	540.3	531.6	525.9	524.9	524.0	524.9
40°	579.4	567.0	553.6	539.3	524.9	513.5	506.8	500.1	498.2	496.2	499.2
42.5°	553.6	541.2	527.9	514.4	500.1	488.6	481.0	475.3	473.3	472.3	473.3
45°	524.9	511.6	498.2	485.8	472.3	461.8	454.2	448.4	447.5	446.6	447.5
47.5°	494.4	482.9	471.4	459.0	445.6	435.1	428.4	422.7	420.8	418.8	420.8
50°	465.7	454.2	442.7	431.2	418.8	409.3	402.5	396.8	395.8	394.9	395.8
52.5°	435.1	423.6	413.1	401.6	391.0	381.5	374.9	370.1	369.1	368.2	369.1
55°	402.5	393.0	383.4	373.9	363.4	354.7	349.0	343.2	341.4	339.5	341.4
57.5°	371.9	363.4	353.8	344.3	334.7	327.1	321.3	316.5	315.6	314.5	315.6
60°	340.4	332.8	324.1	315.6	306.0	298.4	293.6	289.7	287.8	286.9	287.8
62.5°	308.8	301.2	294.5	285.9	277.3	271.5	266.7	263.0	261.0	260.1	261.0
65°	276.3	269.7	263.0	255.3	248.6	242.8	238.0	234.3	233.3	232.3	232.3
67.5°	242.8	237.1	231.4	224.7	217.1	211.3	206.5	203.7	202.7	201.7	202.7
70°	208.4	203.7	198.0	192.2	186.5	181.7	178.8	176.0	175.0	174.1	174.1
72.5°	176.0	172.1	167.3	162.6	157.8	153.0	150.2	148.2	147.3	146.3	146.3
75°	143.4	139.6	136.7	133.0	128.2	125.2	122.4	120.4	119.5	119.5	119.5
77.5°	112.8	110.0	107.1	103.3	100.4	97.6	95.6	94.7	93.7	93.7	93.7
80°	83.2	81.3	79.3	77.4	74.6	71.7	70.8	69.8	68.9	68.9	68.9
82.5°	56.5	55.4	53.5	51.7	49.7	48.7	47.8	46.9	46.9	46.9	46.9
85°	32.6	31.5	30.6	29.6	28.7	28.7	27.8	26.8	25.8	25.8	25.8
87.5°	13.4	13.4	13.4	12.4	11.5	11.5	11.5	11.5	11.5	11.5	11.5
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°	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3
2.5°	830.9	832.9	834.8	837.6	840.5	843.3	842.4	841.5	845.3	850.0	851.1
5°	818.5	820.4	823.3	828.1	832.9	836.7	837.6	837.6	845.3	852.0	853.9
7.5°	803.3	806.1	809.9	814.6	821.4	827.2	830.0	833.8	841.5	850.0	853.9
10°	784.1	788.9	794.6	801.3	808.0	814.6	820.4	825.2	834.8	844.4	850.0
12.5°	766.8	771.6	777.4	785.0	793.7	802.2	808.0	814.6	826.1	837.6	844.4
15°	747.7	752.5	759.2	766.8	776.4	786.0	794.6	803.3	814.6	827.2	834.8
17.5°	726.8	731.5	738.1	747.7	758.3	768.8	778.3	787.9	801.3	814.6	823.3
20°	700.9	707.6	716.2	725.7	738.1	750.7	760.2	770.7	785.0	799.4	808.9
22.5°	676.0	682.7	692.3	703.8	717.2	730.5	742.0	753.5	768.8	783.1	793.7
25°	652.1	659.8	669.4	680.8	693.3	706.6	720.0	733.4	748.7	764.0	774.6
27.5°	628.2	634.9	644.4	655.9	670.3	683.7	697.0	710.5	726.8	742.9	754.4
30°	601.4	609.0	617.7	629.2	644.4	659.8	673.1	687.5	703.8	720.0	731.5
32.5°	576.6	583.3	591.9	603.4	618.6	634.0	648.3	663.6	678.9	695.1	706.6
35°	551.8	558.4	567.0	578.5	593.8	609.0	623.4	637.7	653.1	668.4	679.9
37.5°	526.9	533.6	542.2	553.6	567.9	583.3	596.6	611.0	626.3	641.6	652.1
40°	501.0	507.7	514.4	525.9	540.3	555.5	569.0	583.3	598.6	613.8	624.4
42.5°	475.3	481.9	490.5	502.0	515.4	528.8	542.2	555.5	569.9	584.2	594.8
45°	449.4	455.1	463.8	474.3	487.7	500.1	513.5	525.9	540.3	553.6	564.2
47.5°	422.7	428.4	435.1	445.6	459.0	472.3	485.8	498.2	510.6	524.0	533.6
50°	396.8	402.5	410.2	419.7	432.3	444.7	456.2	467.5	480.1	492.5	501.0
52.5°	370.1	375.8	382.5	392.1	402.5	414.0	424.5	436.0	447.5	459.0	467.5
55°	343.2	347.1	352.8	361.4	372.9	384.4	394.9	405.4	416.0	425.5	434.1
57.5°	316.5	321.3	328.0	335.6	345.2	354.7	364.3	373.9	383.4	393.0	400.6
60°	289.7	293.6	298.4	305.0	314.5	323.2	332.8	341.4	349.9	358.6	365.3
62.5°	261.9	265.8	270.6	277.3	284.9	292.6	301.2	308.8	316.5	324.1	330.8
65°	233.3	237.1	241.9	247.6	254.3	261.0	268.7	276.3	282.1	287.8	294.5
67.5°	203.7	207.5	212.3	217.1	222.8	229.5	236.2	242.8	248.6	254.3	259.1
70°	175.0	177.8	182.6	186.5	191.3	196.0	201.7	207.5	211.3	216.1	221.9
72.5°	147.3	150.2	153.9	157.8	160.6	164.5	170.2	175.0	179.8	185.6	188.4
75°	120.4	122.4	125.2	128.2	131.0	133.9	137.7	141.5	145.4	148.2	152.1
77.5°	93.7	95.6	98.5	100.4	102.3	104.3	107.1	110.0	112.8	114.8	118.6
80°	68.9	70.8	72.6	74.6	76.5	78.4	79.3	80.4	84.1	87.0	88.9
82.5°	46.9	47.8	48.7	50.7	51.7	52.6	53.5	53.5	55.4	57.4	60.2
85°	26.8	27.8	28.7	28.7	28.7	28.7	29.6	30.6	31.5	33.5	35.4
87.5°	10.5	10.5	11.5	11.5	11.5	11.5	11.5	11.5	12.4	14.3	15.3
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°	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3
2.5°	850.0	851.1	852.9	853.9	854.8	854.8	855.8	856.8	854.8	852.9	852.0
5°	854.8	855.8	858.7	861.5	863.5	865.4	864.4	863.5	861.5	858.7	856.8
7.5°	855.8	858.7	861.5	865.4	868.3	872.0	870.2	868.3	864.4	860.6	857.7
10°	852.9	856.8	861.5	866.3	869.2	872.0	870.2	868.3	864.4	859.6	855.8
12.5°	849.1	853.9	859.6	864.4	867.2	871.1	868.3	865.4	860.6	855.8	851.1
15°	840.5	846.3	852.9	858.7	863.5	867.2	864.4	862.5	856.8	850.0	843.3
17.5°	830.0	837.6	844.4	851.1	854.8	858.7	856.8	854.8	848.1	840.5	832.9
20°	817.6	825.2	831.9	838.5	843.3	847.2	844.4	841.5	834.8	828.1	820.4
22.5°	802.2	809.9	817.6	824.2	829.0	832.9	829.0	824.2	817.6	810.9	803.3
25°	783.1	791.8	800.3	807.0	809.9	813.7	809.9	806.1	799.4	792.7	784.1
27.5°	764.0	772.6	781.2	787.9	790.7	794.6	790.7	787.0	780.3	773.5	765.0
30°	742.0	750.7	759.2	765.9	768.8	771.6	767.9	764.0	758.3	751.6	742.9
32.5°	717.2	725.7	732.4	739.2	742.9	746.8	742.9	740.1	733.4	724.8	716.2
35°	690.3	699.0	707.6	714.2	718.1	722.0	717.2	712.4	706.6	699.9	692.3
37.5°	660.7	670.3	679.9	687.5	690.3	694.2	690.3	685.5	679.9	673.1	664.6
40°	633.0	641.6	650.3	657.9	660.7	663.6	659.8	655.9	649.2	642.5	634.0
42.5°	604.4	612.9	620.5	627.3	630.1	634.0	630.1	625.3	620.5	614.9	607.2
45°	573.8	582.3	589.0	595.7	598.6	601.4	597.7	592.9	588.1	583.3	575.7
47.5°	542.2	549.8	556.6	563.2	565.1	567.9	564.2	561.3	556.6	551.8	545.1
50°	509.7	517.3	524.0	529.7	531.6	534.5	530.7	526.9	523.1	519.2	513.5
52.5°	476.2	482.9	489.6	495.3	497.3	499.2	495.3	491.4	487.7	483.8	478.1
55°	441.8	448.4	455.1	459.9	461.8	463.8	459.9	457.1	453.2	450.4	444.7
57.5°	407.3	414.0	419.7	424.5	426.4	428.4	424.5	420.8	417.9	414.9	410.2
60°	371.9	378.6	383.4	387.3	389.2	390.1	386.3	383.4	381.5	379.7	374.9
62.5°	337.5	342.3	347.1	349.9	351.9	352.8	349.9	348.0	346.2	344.3	340.4
65°	301.2	306.9	310.8	313.6	314.5	315.6	312.7	310.8	308.8	306.9	304.1
67.5°	264.9	269.7	272.5	275.4	276.3	276.3	276.3	275.4	273.4	270.6	267.8
70°	228.5	232.3	235.2	237.1	238.0	238.0	236.2	234.3	234.3	233.3	231.4
72.5°	191.3	194.1	196.0	198.0	198.0	198.0	198.0	198.9	198.0	196.0	193.2
75°	155.8	158.7	160.6	161.7	161.7	161.7	161.7	162.6	161.7	160.6	158.7
77.5°	122.4	124.3	125.2	126.2	126.2	126.2	127.2	128.2	127.2	126.2	125.2
80°	90.8	91.8	92.8	93.7	92.8	92.8	93.7	95.6	94.7	93.7	92.8
82.5°	62.2	63.1	64.1	64.1	65.0	66.0	66.0	66.0	66.0	65.0	64.1
85°	37.3	38.3	38.3	38.3	38.3	38.3	39.2	40.2	40.2	39.2	39.2
87.5°	17.2	18.2	17.2	16.3	15.3	15.3	17.2	19.1	19.1	18.2	18.2
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°	845.3	845.3	845.3	845.3
2.5°	852.9	852.0	847.2	842.4
5°	855.8	852.9	846.3	839.6
7.5°	855.8	852.0	842.4	833.8
10°	851.1	845.3	834.8	824.2
12.5°	845.3	838.5	826.1	814.6
15°	836.7	829.0	815.7	802.2
17.5°	824.2	814.6	801.3	787.0
20°	811.8	801.3	785.0	769.8
22.5°	794.6	785.0	767.9	751.6
25°	775.5	765.0	747.7	730.5
27.5°	755.4	742.9	725.7	708.5
30°	732.4	720.0	702.8	685.5
32.5°	707.6	696.1	678.9	660.7
35°	682.7	670.3	653.1	634.9
37.5°	655.0	643.5	626.3	609.0
40°	625.3	613.8	596.6	579.4
42.5°	597.7	587.1	569.9	553.6
45°	567.0	556.6	540.3	524.9
47.5°	535.5	524.9	509.7	494.4
50°	504.9	494.4	480.1	465.7
52.5°	470.5	461.8	448.4	435.1
55°	437.0	428.4	414.9	402.5
57.5°	403.6	395.8	383.4	371.9
60°	368.2	360.5	351.0	340.4
62.5°	334.7	328.0	318.4	308.8
65°	299.3	293.6	284.9	276.3
67.5°	263.0	258.2	250.6	242.8
70°	226.7	220.8	215.2	208.4
72.5°	190.3	187.4	181.7	176.0
75°	155.8	153.0	148.2	143.4
77.5°	123.4	120.4	116.7	112.8
80°	90.8	88.9	86.1	83.2
82.5°	63.1	61.2	59.3	56.5
85°	38.3	36.3	34.4	32.6
87.5°	17.2	16.3	14.3	13.4
90°	0.0	0.0	0.0	0.0



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













(END OF REPORT)