

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: McGRAW-EDISON

Report Number: P301254

Luminaire Tested: **GLNA-AF-10-LED-E1-T3R-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301254
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P194839)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-10-LED-E1-T3R-7027-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(10) 70 CRI, 2700K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III
Roadway OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 34357.4 lumens
Efficiency: N/A
Efficacy: 106.4 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type III - Short - Full Cutoff
BUG Rating: B3 - U0 - G5

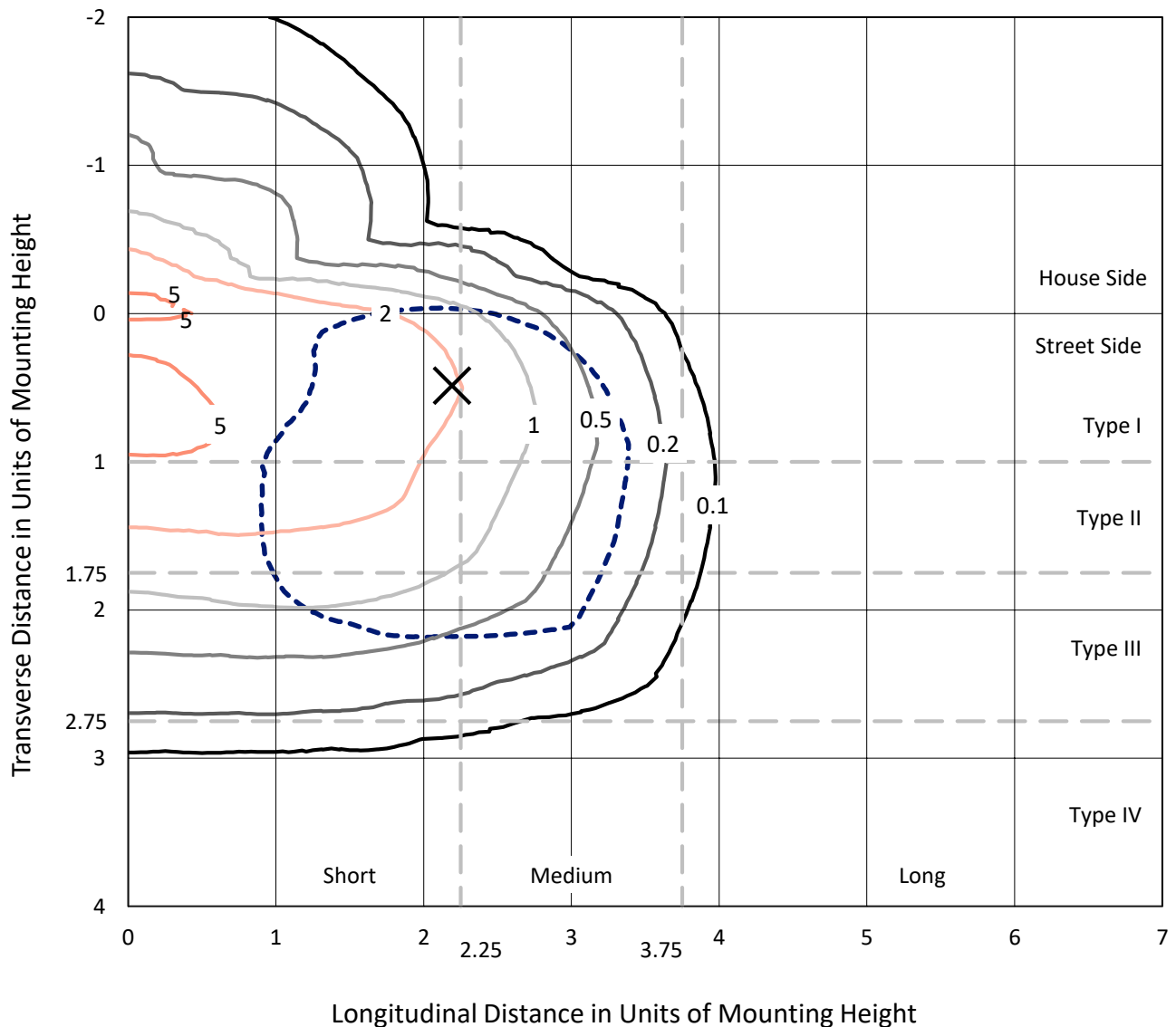
Input Watts (W): 323
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P301254
 CATALOG NUMBER: GLNA-AF-10-LED-E1-T3R-7027-600

Iso-Footcandle Lines of Horizontal Illumination

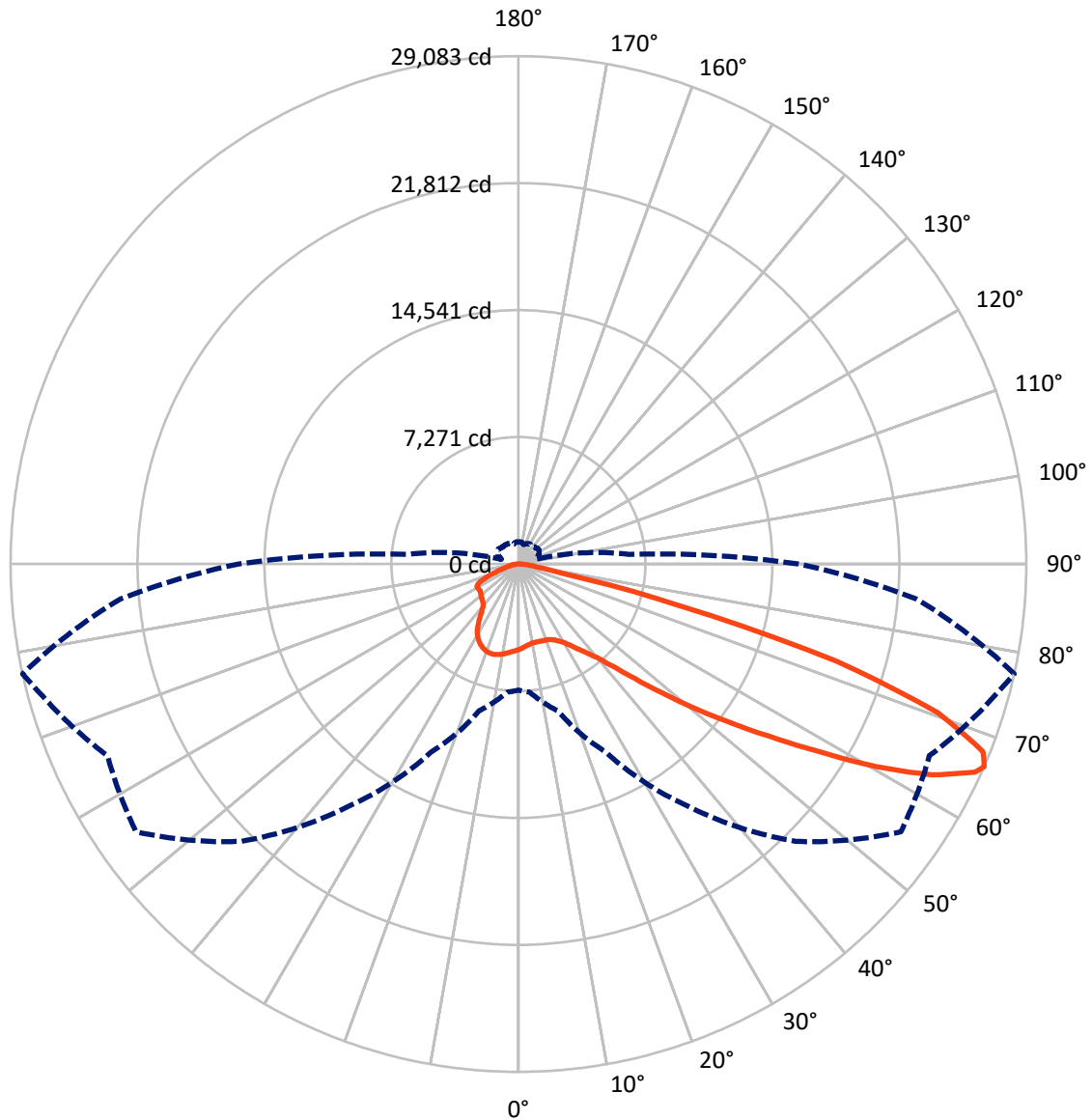
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 6.7 fc
 Type III - Short - Full Cutoff

REPORT NUMBER: P301254
CATALOG NUMBER: GLNA-AF-10-LED-E1-T3R-7027-600

Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral - - - Horizontal Cone Through 66-Deg Vertical

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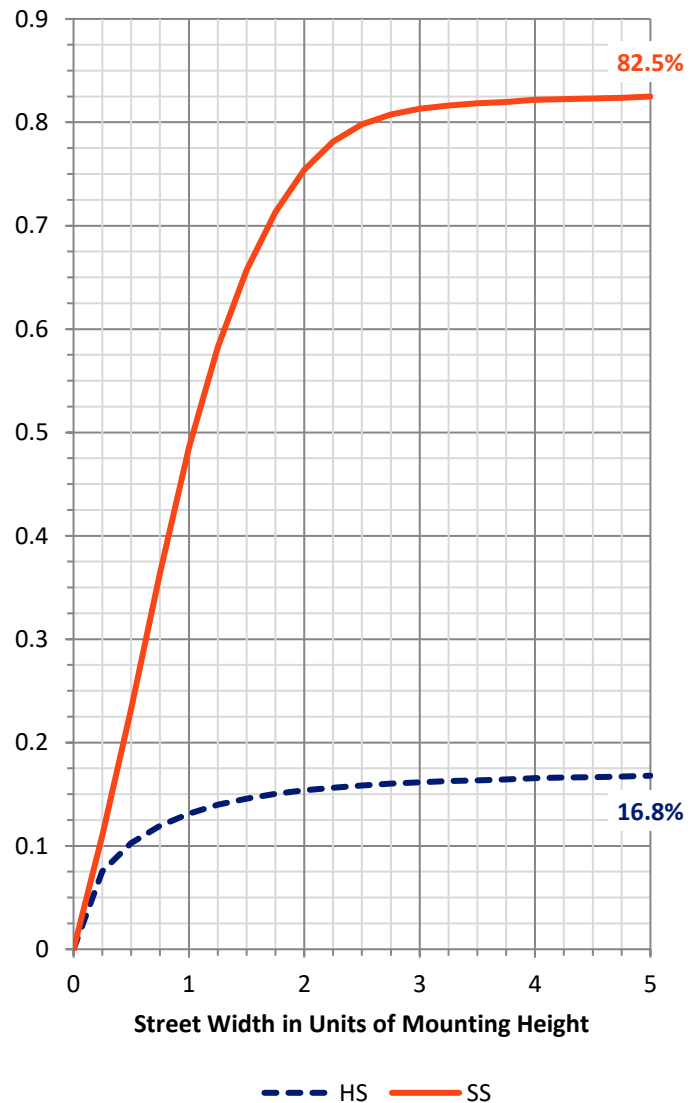
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5869.8	0.0	5869.8
	% Fixture	17.1	0.0	17.1
Street Side	Lumens	28487.7	0.0	28487.7
	% Fixture	82.9	0.0	82.9
Total	Lumens	34357.4	0.0	34357.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	437.4	1.3
10°-20°	1234.1	3.6
20°-30°	2106.1	6.1
30°-40°	3371.5	9.8
40°-50°	5208.6	15.2
50°-60°	7387.6	21.5
60°-70°	9882.6	28.8
70°-80°	4291.9	12.5
80°-90°	437.6	1.3
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°-90°	34357.4	100.0
0°-180°	34357.4	100.0



REPORT NUMBER: P301254

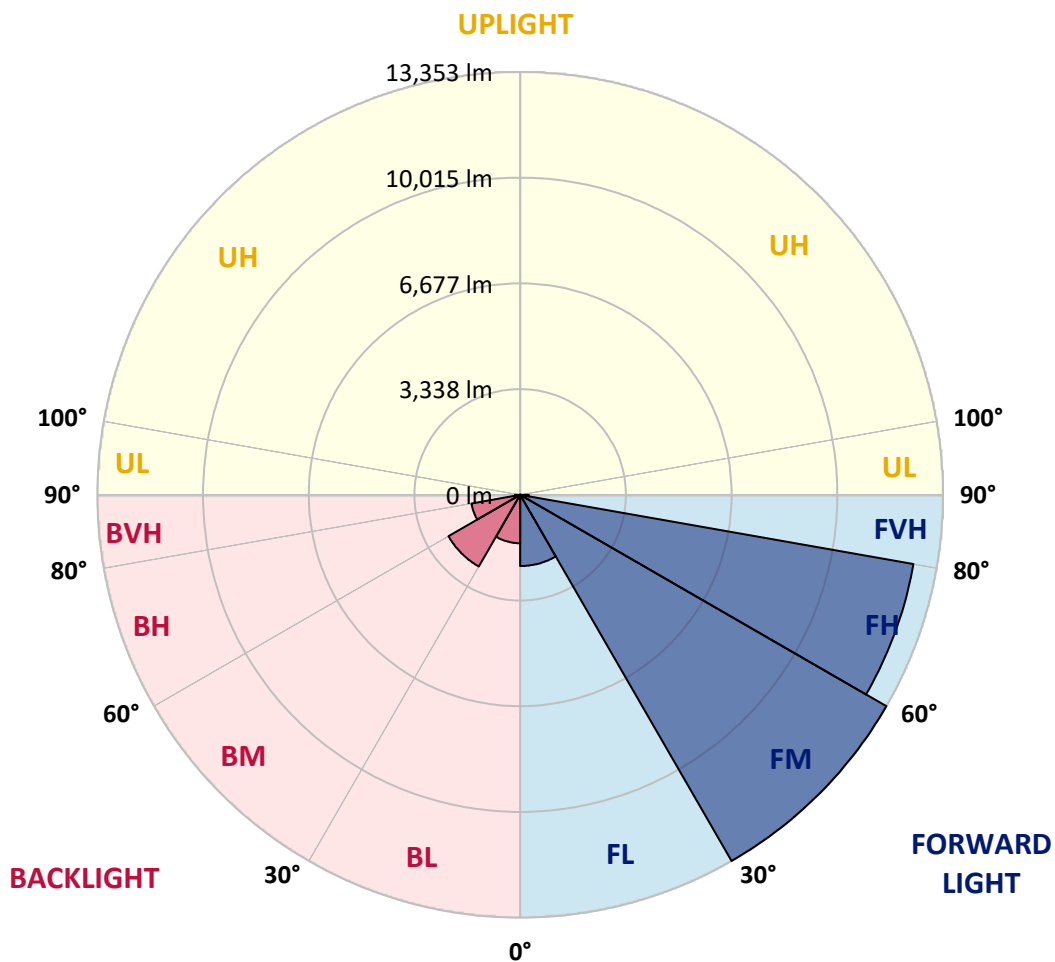
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2248.9	6.5			
FM	(30°-60°)	13353.1	38.9			
FH	(60°-80°)	12611.3	36.7			G5
FVH	(80°-90°)	274.5	0.8			G3/500
BL	(0°-30°)	1528.7	4.4	B3/2500		
BM	(30°-60°)	2614.6	7.6	B3/5000		
BH	(60°-80°)	1563.2	4.5	B3/2500		G3/2500
BVH	(80°-90°)	163.2	0.5			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G5

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	4896.0	4896.0	4896.0	4896.0	4896.0	4896.0	4896.0	4896.0	4896.0	4896.0	4896.0
2.5°	4331.3	4360.3	4384.9	4407.5	4452.7	4527.4	4613.4	4683.2	4784.0	4803.6	4857.2
5°	3933.7	3933.7	3952.8	3987.2	4048.7	4160.7	4277.7	4433.5	4652.7	4704.4	4847.4
7.5°	3740.5	3742.0	3753.3	3782.3	3835.8	3938.1	4066.4	4250.2	4547.1	4633.1	4876.4
10°	3811.8	3795.5	3771.0	3756.7	3764.6	3824.5	3946.4	4150.9	4482.2	4592.3	4941.8
12.5°	4210.9	4180.4	4095.9	3983.8	3876.6	3832.9	3904.2	4103.7	4454.7	4583.0	5027.8
15°	4863.6	4850.8	4693.1	4461.1	4201.5	3983.8	3935.1	4086.0	4457.6	4594.3	5130.0
17.5°	5682.0	5663.8	5456.4	5118.7	4695.0	4271.3	4043.8	4100.8	4468.9	4613.4	5228.8
20°	6508.2	6452.7	6229.1	5826.5	5282.4	4662.1	4224.1	4138.1	4483.7	4634.6	5333.0
22.5°	7125.1	7079.4	6878.4	6487.1	5860.4	5115.3	4466.0	4203.0	4530.8	4696.5	5460.8
25°	7667.3	7670.2	7470.6	7092.7	6444.8	5596.0	4777.6	4376.5	4650.8	4822.8	5636.3
27.5°	8337.7	8298.9	8112.1	7737.0	7022.9	6081.1	5154.1	4615.4	4829.7	5003.2	5866.8
30°	9139.4	9111.8	8896.1	8470.9	7663.8	6602.1	5584.2	4892.6	5060.2	5240.1	6168.6
32.5°	10082.6	10069.8	9845.7	9298.6	8404.0	7216.0	6089.5	5259.8	5404.3	5591.1	6602.1
35°	11190.0	11191.5	10927.0	10269.4	9214.1	7930.2	6662.1	5732.1	5823.1	6017.7	7118.7
37.5°	11871.7	11954.3	11855.5	11185.1	10131.3	8728.9	7405.8	6358.8	6300.3	6496.9	7672.2
40°	12017.7	12118.5	12431.6	12090.9	11157.5	9608.8	8064.9	6960.9	6888.2	7128.1	8384.9
42.5°	11813.2	11952.8	12615.4	12855.3	12246.8	10693.1	8951.1	7855.5	7763.1	8086.0	9271.1
45°	11691.3	11795.5	12561.8	13253.4	13191.5	11918.9	10079.6	8978.6	8944.7	9368.4	10293.9
47.5°	11480.5	11574.8	12311.6	13345.8	13746.9	13042.0	11435.3	10352.4	10418.8	10974.2	11448.0
50°	11594.0	11632.8	12032.5	13110.4	13907.6	13865.3	12949.6	11943.0	12170.6	12863.6	12755.0
52.5°	11577.8	11678.6	12000.0	12724.0	13928.7	14373.6	14441.4	13717.4	14196.6	14991.9	14204.5
55°	9360.5	9545.4	11618.6	12626.7	14003.0	14871.5	15769.5	15587.6	16480.2	17407.2	15840.8
57.5°	8938.3	9055.3	10204.5	12831.2	14399.1	15823.1	17246.5	17646.1	19139.4	20215.8	17834.4
60°	8855.3	8999.8	10189.7	13081.4	15202.8	17373.3	19436.7	20138.1	22375.1	23553.7	20146.0
62.5°	8597.2	8753.0	10093.9	13048.4	16344.1	19517.8	22240.4	22787.4	25443.1	26589.4	22079.7
65°	7779.3	7925.3	9313.4	12524.5	17113.8	21806.9	25558.2	25216.1	27865.4	28727.0	23043.5
66°	7219.0	7362.0	8698.0	11907.6	16934.9	22456.2	26733.9	25967.6	28407.5	29082.9	22855.3
67.5°	6194.7	6306.7	7503.1	10525.9	15985.3	22638.0	27722.3	26532.4	28464.0	28702.9	21779.3
70°	3914.0	3946.4	4876.4	7266.2	12100.8	19632.9	26217.3	25130.0	26117.0	25470.7	18258.1
72.5°	1698.2	1686.9	2341.1	3696.2	6850.8	13173.8	21207.7	20735.3	20487.1	19013.1	12781.0
75°	944.7	958.0	1216.0	1715.9	2784.0	6470.9	13873.2	13276.0	11209.2	9565.0	5795.5
77.5°	757.9	776.1	1008.1	1217.5	1249.9	2256.6	6492.0	5282.4	3180.1	2552.0	1610.2
80°	599.2	631.6	879.8	948.1	842.5	930.0	2097.3	1677.1	1258.3	1154.1	834.6
82.5°	473.8	496.9	755.0	717.6	589.3	626.7	1004.7	979.1	818.4	745.1	482.2
85°	341.1	382.9	620.3	540.7	386.3	422.2	667.0	639.5	468.9	382.9	212.8
87.5°	139.6	181.9	438.4	358.8	215.8	196.6	332.8	313.1	222.2	162.2	105.7
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4896.0	4896.0	4896.0	4896.0	4896.0	4896.0	4896.0	4896.0	4896.0	4896.0	4896.0
2.5°	4891.1	4930.0	4980.6	5011.6	5027.8	5039.1	5056.8	5055.3	5060.2	5061.7	5068.1
5°	4923.6	4988.5	5061.7	5081.4	5081.4	5063.2	5045.5	5016.0	5004.7	5001.7	5004.7
7.5°	5008.1	5079.4	5142.8	5120.2	5071.5	4999.8	4907.4	4826.3	4782.5	4767.8	4764.8
10°	5115.3	5201.3	5227.3	5141.3	4998.3	4826.3	4642.9	4509.7	4433.5	4412.4	4406.0
12.5°	5245.0	5326.1	5290.7	5108.9	4843.9	4566.7	4313.1	4100.8	3941.5	3891.4	3887.9
15°	5388.1	5451.5	5326.1	5008.1	4613.4	4204.5	3753.3	3386.6	3188.5	3125.1	3120.2
17.5°	5521.3	5553.7	5305.0	4832.6	4274.3	3612.2	3013.0	2730.4	2662.6	2678.8	2681.7
20°	5634.8	5634.8	5233.7	4581.0	3740.5	2831.2	2452.7	2448.3	2496.9	2545.6	2555.4
22.5°	5759.7	5684.9	5108.9	4225.6	2983.5	2316.5	2261.5	2306.7	2361.8	2415.3	2423.7
25°	5914.0	5725.7	4934.9	3686.9	2345.5	2103.7	2124.8	2162.2	2189.7	2224.1	2229.1
27.5°	6086.0	5777.3	4706.3	2944.7	2035.9	1971.0	1987.2	2000.0	1996.6	2009.8	2012.8
30°	6292.0	5837.8	4392.7	2301.8	1907.6	1857.0	1828.0	1816.7	1816.7	1837.8	1845.7
32.5°	6568.2	5926.8	3943.0	1972.5	1845.7	1775.9	1682.0	1639.7	1655.9	1727.2	1743.4
35°	6872.0	6022.6	3334.5	1860.4	1832.9	1738.5	1592.5	1514.4	1516.3	1582.7	1603.8
37.5°	7202.8	6144.5	2667.0	1839.3	1861.9	1740.5	1545.3	1438.2	1394.4	1394.4	1402.8
40°	7626.5	6269.4	2159.3	1854.0	1923.8	1759.6	1521.3	1378.2	1254.9	1258.3	1264.7
42.5°	8178.4	6376.5	1886.5	1884.5	1998.5	1785.7	1519.3	1298.6	1191.4	1264.7	1331.0
45°	8792.3	6430.1	1766.0	1912.5	2058.5	1801.9	1493.7	1285.8	1199.8	1417.1	1543.9
47.5°	9498.2	6399.1	1699.7	1921.9	2073.2	1801.9	1464.2	1316.8	1256.3	1641.2	1789.1
50°	10272.8	6310.2	1634.8	1902.7	2068.3	1798.5	1491.8	1347.3	1277.5	1680.0	1782.3
52.5°	11183.6	6235.4	1566.5	1860.4	2033.9	1780.8	1524.2	1334.5	1211.1	1527.7	1598.9
55°	12222.2	6256.6	1490.3	1800.4	1980.3	1746.9	1512.9	1282.4	1141.3	1345.8	1389.5
57.5°	13550.3	6508.2	1399.4	1724.3	1907.6	1689.9	1472.6	1258.3	1120.2	1220.9	1247.0
60°	15032.2	6946.2	1285.8	1647.6	1816.7	1598.9	1441.6	1269.6	1130.0	1211.1	1223.9
62.5°	16120.0	7201.3	1188.5	1535.5	1693.3	1498.2	1402.8	1283.9	1156.1	1245.0	1242.1
65°	16415.4	6782.5	1066.6	1371.8	1526.2	1393.0	1353.7	1300.1	1167.4	1272.6	1258.3
66°	16001.5	6331.3	1013.0	1295.7	1441.6	1340.9	1329.6	1298.6	1162.4	1276.0	1251.4
67.5°	14996.8	5405.8	920.6	1183.6	1307.0	1263.2	1290.7	1283.9	1149.2	1272.6	1238.6
70°	12230.5	3688.4	787.4	985.5	1087.7	1111.8	1216.0	1232.2	1106.9	1216.0	1141.3
72.5°	8545.6	2246.7	696.5	764.8	879.8	948.1	1113.8	1160.5	1050.4	1061.7	990.4
75°	4129.8	1193.4	631.6	592.8	683.2	792.3	990.4	1063.2	960.9	888.2	862.1
77.5°	1287.3	728.9	535.8	477.3	535.8	639.5	827.7	931.9	855.7	743.7	733.8
80°	691.6	535.8	412.4	382.9	423.7	501.8	650.8	777.6	735.3	667.0	595.7
82.5°	456.1	347.5	305.2	296.9	322.9	382.9	483.7	644.4	644.4	571.6	415.8
85°	235.4	212.8	209.4	209.4	225.6	255.1	329.3	496.9	529.4	301.8	250.2
87.5°	117.0	121.9	113.5	118.5	126.8	124.8	157.3	250.2	298.8	183.3	152.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)