

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: P301224

Luminaire Tested: **GLNA-AF-05-LED-E1-T3R-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301224
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-05-LED-E1-T3R-7027-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(5) 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: 17349 lumens
Efficiency: N/A
Efficacy: 107.1 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type III - Short - Full Cutoff
BUG Rating: B2 - U0 - G3

Input Watts (W): 162
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

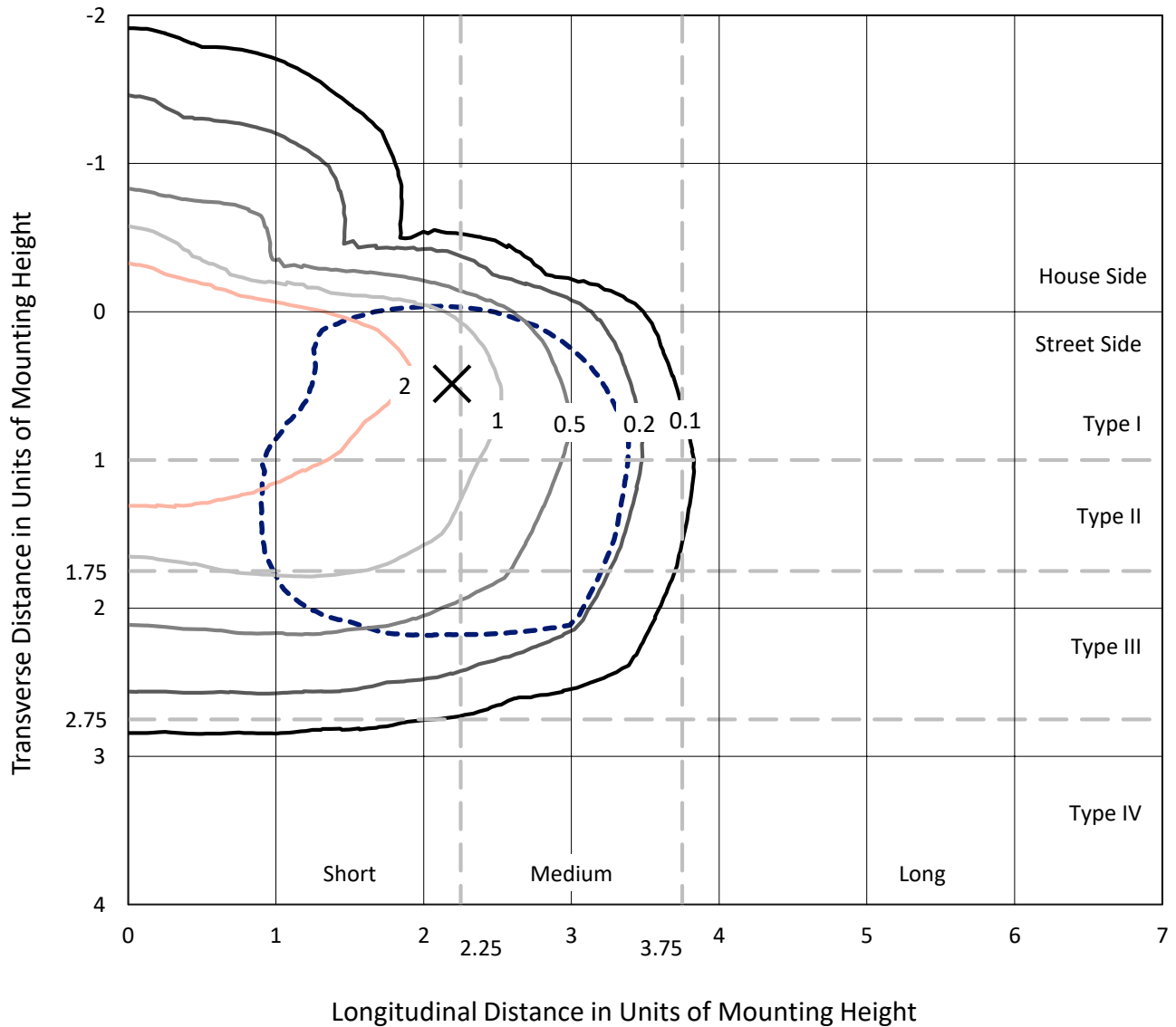


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

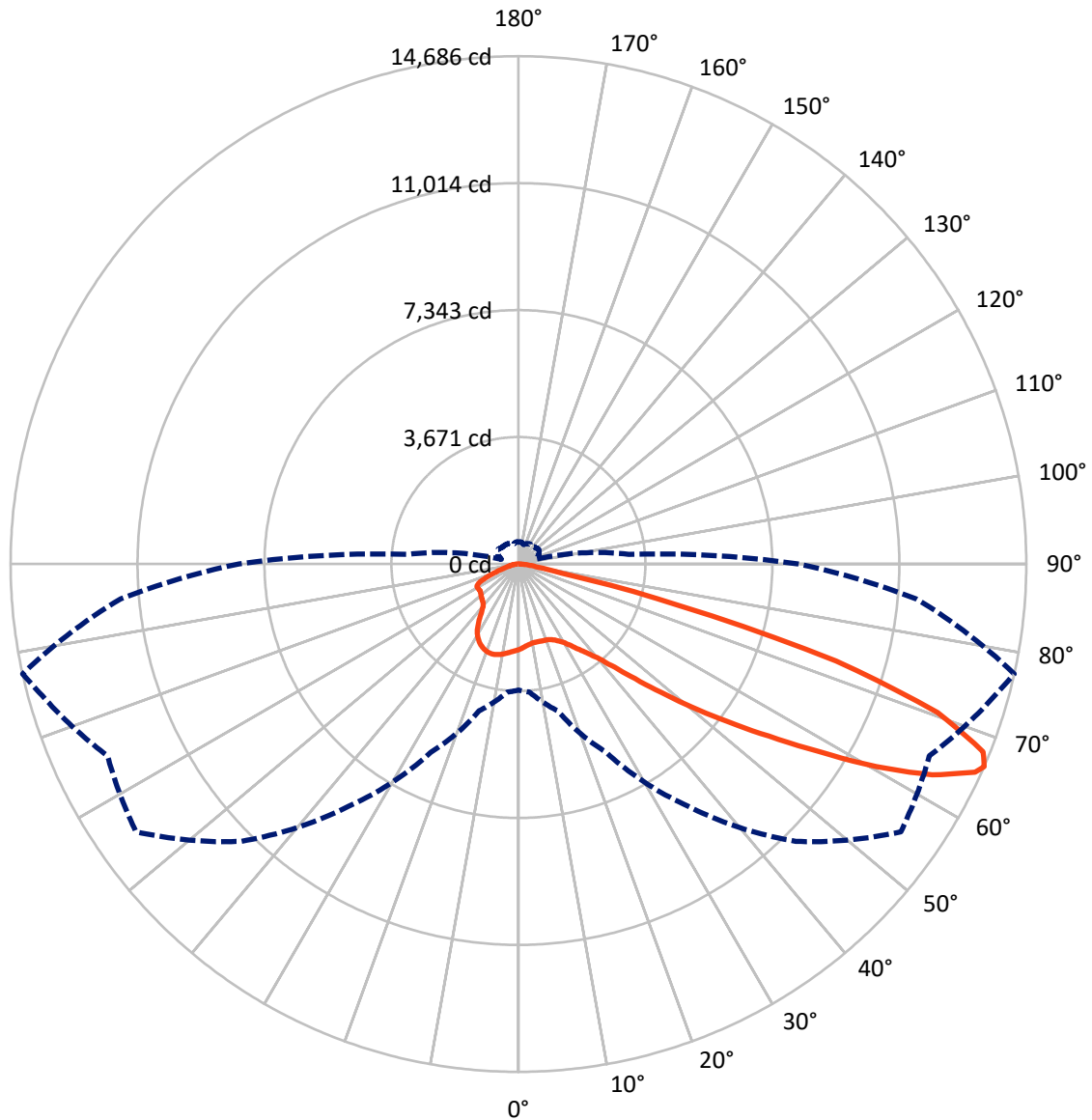


Based on 25 foot mounting height. Maximum calculated value = 4.9 fc
 Type III - Short - Full Cutoff

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Luminous Intensity Polar Plot



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

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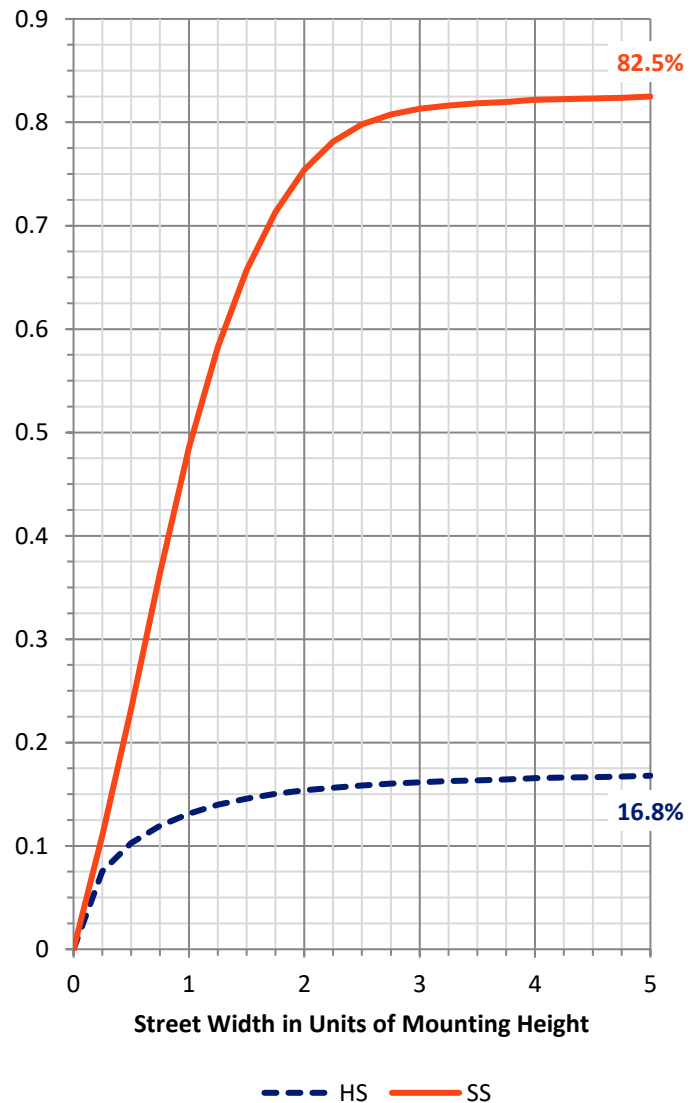
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2964.0	0.0	2964.0
	% Fixture	17.1	0.0	17.1
Street Side	Lumens	14385.0	0.0	14385.0
	% Fixture	82.9	0.0	82.9
Total	Lumens	17349.0	0.0	17349.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	220.9	1.3
10°-20°	623.1	3.6
20°-30°	1063.5	6.1
30°-40°	1702.4	9.8
40°-50°	2630.1	15.2
50°-60°	3730.4	21.5
60°-70°	4990.3	28.8
70°-80°	2167.2	12.5
80°-90°	221.0	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°	17349.0	100.0
0°-180°	17349.0	100.0



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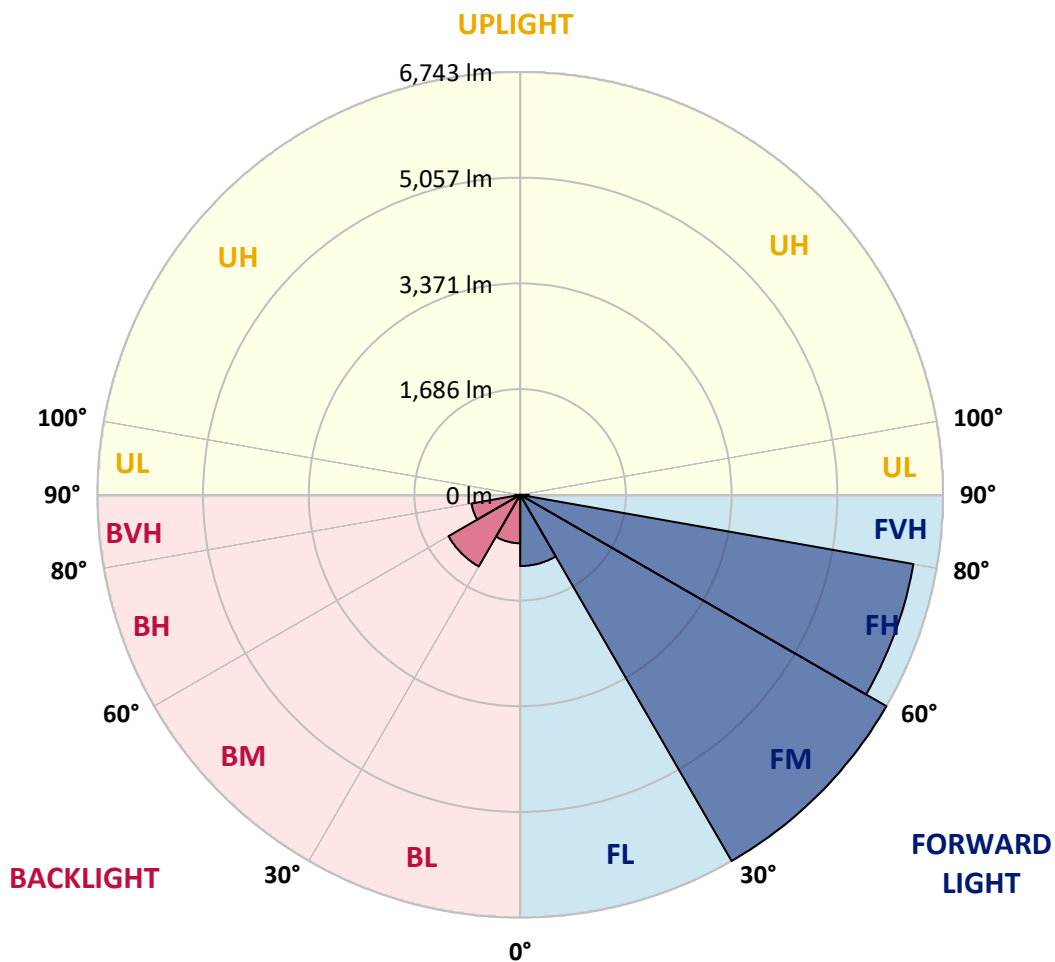
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1135.6	6.5			
FM	(30°-60°)	6742.7	38.9			
FH	(60°-80°)	6368.1	36.7			G3/7500
FVH	(80°-90°)	138.6	0.8			G2/225
BL	(0°-30°)	771.9	4.4	B2/1000		
BM	(30°-60°)	1320.3	7.6	B2/2500		
BH	(60°-80°)	789.4	4.5	B2/1000		G2/1000
BVH	(80°-90°)	82.4	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	2472.3	2472.3	2472.3	2472.3	2472.3	2472.3	2472.3	2472.3	2472.3	2472.3	2472.3
2.5°	2187.1	2201.8	2214.2	2225.6	2248.4	2286.1	2329.6	2364.8	2415.7	2425.6	2452.7
5°	1986.3	1986.3	1996.0	2013.4	2044.4	2101.0	2160.1	2238.7	2349.4	2375.5	2447.7
7.5°	1888.8	1889.5	1895.2	1909.9	1936.9	1988.6	2053.3	2146.2	2296.1	2339.5	2462.4
10°	1924.8	1916.6	1904.2	1897.0	1900.9	1931.2	1992.8	2096.0	2263.3	2318.9	2495.4
12.5°	2126.3	2110.9	2068.2	2011.6	1957.5	1935.4	1971.4	2072.2	2249.4	2314.2	2538.8
15°	2455.9	2449.5	2369.8	2252.6	2121.6	2011.6	1987.1	2063.3	2250.9	2319.9	2590.4
17.5°	2869.2	2860.0	2755.2	2584.7	2370.8	2156.8	2041.9	2070.7	2256.6	2329.6	2640.3
20°	3286.4	3258.3	3145.4	2942.1	2667.4	2354.1	2133.0	2089.6	2264.0	2340.2	2692.9
22.5°	3597.9	3574.8	3473.3	3275.7	2959.2	2583.0	2255.1	2122.3	2287.9	2371.5	2757.5
25°	3871.6	3873.1	3772.3	3581.5	3254.4	2825.7	2412.5	2209.9	2348.4	2435.3	2846.1
27.5°	4210.2	4190.6	4096.2	3906.9	3546.2	3070.7	2602.6	2330.6	2438.8	2526.4	2962.5
30°	4615.0	4601.1	4492.1	4277.4	3869.9	3333.8	2819.8	2470.5	2555.2	2646.0	3114.9
32.5°	5091.3	5084.8	4971.6	4695.4	4243.7	3643.8	3074.9	2656.0	2728.9	2823.2	3333.8
35°	5650.4	5651.2	5517.7	5185.6	4652.7	4004.4	3364.1	2894.5	2940.4	3038.7	3594.6
37.5°	5994.7	6036.4	5986.5	5648.0	5115.8	4407.7	3739.6	3210.9	3181.4	3280.7	3874.1
40°	6068.4	6119.3	6277.4	6105.4	5634.1	4852.0	4072.4	3515.0	3478.2	3599.3	4234.0
42.5°	5965.2	6035.6	6370.2	6491.3	6184.1	5399.5	4519.9	3966.7	3920.0	4083.1	4681.5
45°	5903.6	5956.2	6343.2	6692.4	6661.1	6018.5	5089.8	4533.8	4516.7	4730.6	5198.0
47.5°	5797.1	5844.8	6216.8	6739.0	6941.6	6585.6	5774.3	5227.5	5261.0	5541.5	5780.7
50°	5854.5	5874.1	6075.9	6620.1	7022.7	7001.4	6539.0	6030.7	6145.6	6495.6	6440.7
52.5°	5846.3	5897.2	6059.5	6425.1	7033.4	7258.0	7292.3	6926.7	7168.7	7570.2	7172.6
55°	4726.7	4820.0	5866.9	6375.9	7070.9	7509.4	7962.9	7871.1	8321.8	8789.9	7998.9
57.5°	4513.5	4572.5	5152.8	6479.2	7270.9	7989.9	8708.7	8910.5	9664.5	10208.1	9005.6
60°	4471.5	4544.5	5145.4	6605.5	7676.7	8772.8	9814.7	10168.9	11298.4	11893.6	10172.8
62.5°	4341.2	4419.9	5097.0	6588.9	8253.0	9855.6	11230.4	11506.6	12847.6	13426.4	11149.2
65°	3928.2	4001.9	4702.8	6324.3	8641.7	11011.5	12905.7	12733.0	14070.8	14505.9	11636.0
66°	3645.3	3717.5	4392.1	6012.8	8551.4	11339.4	13499.4	13112.5	14344.5	14685.5	11540.9
67.5°	3128.0	3184.6	3788.7	5315.1	8071.8	11431.2	13998.5	13397.7	14373.1	14493.7	10997.6
70°	1976.4	1992.8	2462.4	3669.1	6110.4	9913.7	13238.6	12689.5	13187.9	12861.5	9219.5
72.5°	857.5	851.8	1182.2	1866.4	3459.4	6652.2	10708.9	10470.4	10345.1	9600.7	6453.9
75°	477.0	483.7	614.0	866.5	1405.8	3267.5	7005.3	6703.8	5660.1	4829.9	2926.5
77.5°	382.7	391.9	509.1	614.8	631.2	1139.5	3278.2	2667.4	1605.8	1288.6	813.1
80°	302.6	318.9	444.3	478.8	425.4	469.6	1059.1	846.8	635.4	582.8	421.4
82.5°	239.3	250.9	381.2	362.4	297.6	316.5	507.3	494.4	413.2	376.3	243.5
85°	172.2	193.3	313.2	273.0	195.1	213.2	336.8	322.9	236.8	193.3	107.5
87.5°	70.5	91.8	221.4	181.2	109.0	99.3	168.0	158.1	112.2	81.9	53.4
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2472.3	2472.3	2472.3	2472.3	2472.3	2472.3	2472.3	2472.3	2472.3	2472.3	2472.3
2.5°	2469.8	2489.4	2515.0	2530.6	2538.8	2544.5	2553.4	2552.7	2555.2	2555.9	2559.2
5°	2486.2	2518.9	2555.9	2565.9	2565.9	2556.7	2547.7	2532.8	2527.1	2525.6	2527.1
7.5°	2528.9	2564.9	2596.9	2585.5	2560.9	2524.7	2478.0	2437.0	2415.0	2407.5	2406.0
10°	2583.0	2626.4	2639.6	2596.1	2523.9	2437.0	2344.5	2277.2	2238.7	2228.1	2224.8
12.5°	2648.5	2689.5	2671.6	2579.8	2446.0	2306.0	2177.9	2070.7	1990.3	1965.0	1963.2
15°	2720.7	2752.7	2689.5	2528.9	2329.6	2123.1	1895.2	1710.1	1610.1	1578.0	1575.6
17.5°	2788.0	2804.4	2678.8	2440.3	2158.3	1824.0	1521.4	1378.7	1344.5	1352.7	1354.2
20°	2845.3	2845.3	2642.8	2313.2	1888.8	1429.6	1238.5	1236.3	1260.8	1285.4	1290.4
22.5°	2908.4	2870.6	2579.8	2133.7	1506.6	1169.8	1142.0	1164.8	1192.6	1219.6	1223.9
25°	2986.3	2891.2	2491.9	1861.7	1184.4	1062.3	1073.0	1091.8	1105.7	1123.1	1125.6
27.5°	3073.2	2917.3	2376.5	1486.9	1028.0	995.3	1003.5	1009.9	1008.2	1014.9	1016.4
30°	3177.2	2947.8	2218.1	1162.3	963.3	937.7	923.0	917.3	917.3	928.0	932.0
32.5°	3316.7	2992.8	1991.0	996.0	932.0	896.7	849.3	828.0	836.2	872.2	880.4
35°	3470.0	3041.2	1683.8	939.4	925.5	877.9	804.2	764.7	765.7	799.2	809.9
37.5°	3637.1	3102.7	1346.7	928.8	940.2	878.9	780.3	726.2	704.1	704.1	708.4
40°	3851.0	3165.7	1090.3	936.2	971.4	888.5	768.2	695.9	633.6	635.4	638.6
42.5°	4129.7	3219.9	952.6	951.6	1009.2	901.7	767.2	655.7	601.6	638.6	672.1
45°	4439.7	3246.9	891.8	965.7	1039.4	909.9	754.3	649.3	605.8	715.6	779.6
47.5°	4796.2	3231.3	858.3	970.4	1046.9	909.9	739.4	664.9	634.4	828.7	903.4
50°	5187.3	3186.3	825.5	960.8	1044.4	908.2	753.3	680.3	645.1	848.3	900.0
52.5°	5647.2	3148.6	791.0	939.4	1027.0	899.2	769.7	673.9	611.6	771.4	807.4
55°	6171.7	3159.3	752.5	909.1	1000.0	882.1	763.9	647.5	576.3	679.6	701.7
57.5°	6842.3	3286.4	706.6	870.7	963.3	853.3	743.6	635.4	565.6	616.5	629.7
60°	7590.6	3507.5	649.3	832.0	917.3	807.4	728.0	641.1	570.6	611.6	618.0
62.5°	8139.9	3636.3	600.1	775.4	855.0	756.5	708.4	648.3	583.8	628.7	627.2
65°	8289.0	3424.9	538.6	692.7	770.7	703.4	683.5	656.5	589.5	642.6	635.4
66°	8080.0	3197.0	511.5	654.2	728.0	677.1	671.4	655.7	587.0	644.3	631.9
67.5°	7572.7	2729.7	464.9	597.7	660.0	637.9	651.8	648.3	580.3	642.6	625.5
70°	6175.9	1862.5	397.6	497.6	549.3	561.4	614.0	622.2	558.9	614.0	576.3
72.5°	4315.1	1134.5	351.7	386.2	444.3	478.8	562.4	586.0	530.4	536.1	500.1
75°	2085.3	602.6	318.9	299.3	345.0	400.1	500.1	536.8	485.2	448.5	435.3
77.5°	650.0	368.1	270.5	241.0	270.5	322.9	418.0	470.6	432.1	375.5	370.6
80°	349.2	270.5	208.2	193.3	213.9	253.4	328.6	392.6	371.3	336.8	300.8
82.5°	230.3	175.5	154.1	149.9	163.1	193.3	244.2	325.4	325.4	288.7	210.0
85°	118.9	107.5	105.7	105.7	113.9	128.8	166.3	250.9	267.3	152.4	126.3
87.5°	59.1	61.6	57.3	59.8	64.0	63.0	79.4	126.3	150.9	92.6	76.9
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)