

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: P453143

Luminaire Tested: **GALN-SA4A-827-U-T3R**

Issue Date: 1/4/2021

Test Information

Test Method: LM-79-08
Report Number: P453143
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-042-8)
Test Lab: INNOVATION CENTER
Issue Date: 1/4/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GALN-SA4A-827-U-T3R
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(4) 80 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13609 lumens
Efficiency: N/A
Efficacy: 112.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Medium
BUG Rating: B2 - U0 - G3

Input Watts (W): 121
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: 24 FT

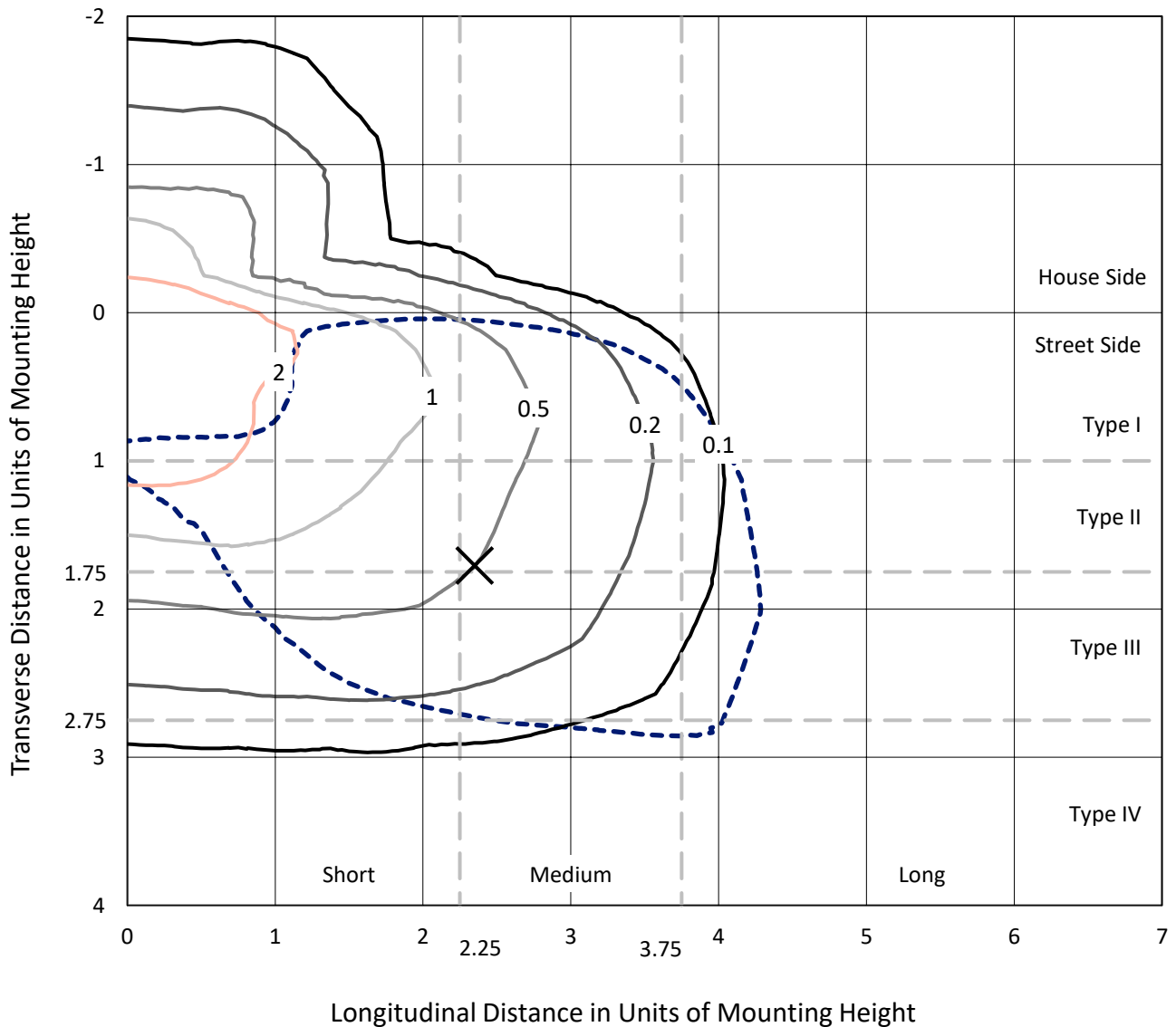




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Iso-Footcandle Lines of Horizontal Illumination

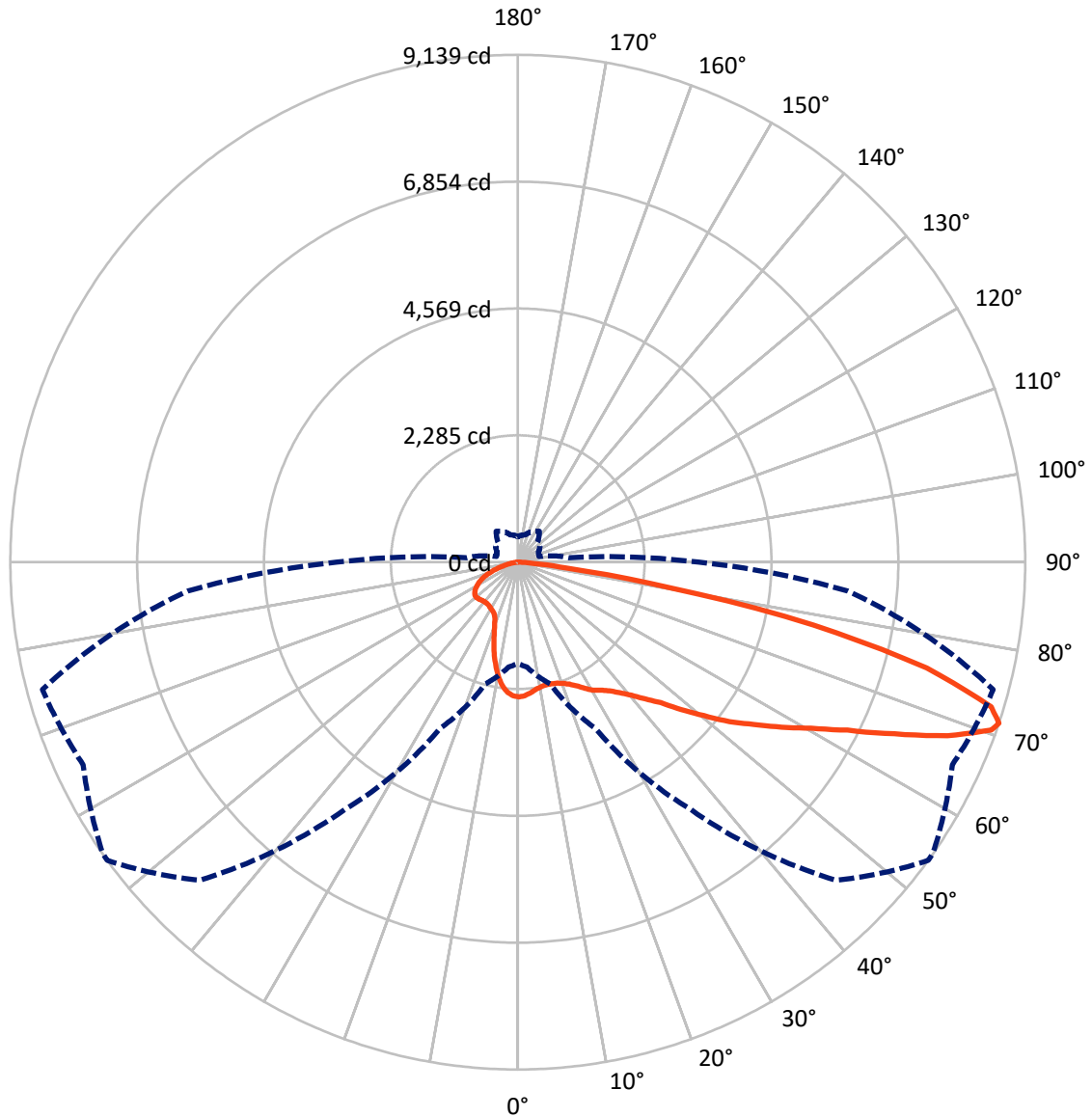
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.9 fc
 Type IV - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 54-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical

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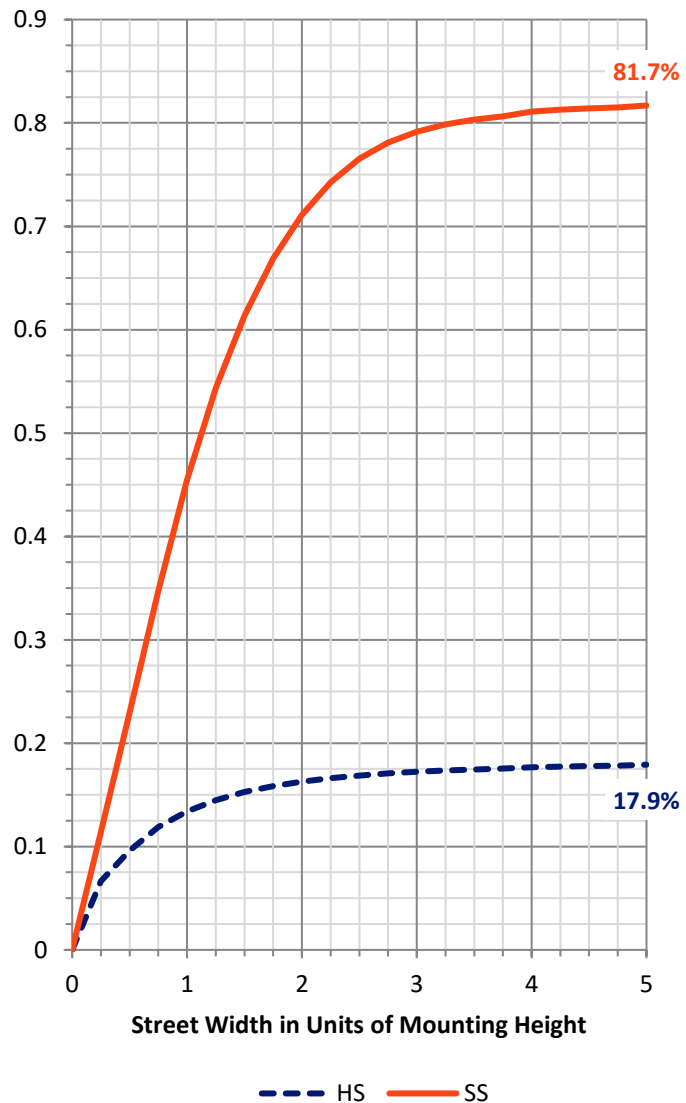
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2457.0	0.0	2457.0
	% Fixture	18.1	0.0	18.1
Street Side	Lumens	11152.0	0.0	11152.0
	% Fixture	81.9	0.0	81.9
Total	Lumens	13609.0	0.0	13609.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	216.4	1.6
10°-20°	571.3	4.2
20°-30°	951.3	7.0
30°-40°	1406.7	10.3
40°-50°	1981.3	14.6
50°-60°	2653.1	19.5
60°-70°	3344.0	24.6
70°-80°	2284.0	16.8
80°-90°	200.9	1.5
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°	13609.0	100.0
0°-180°	13609.0	100.0



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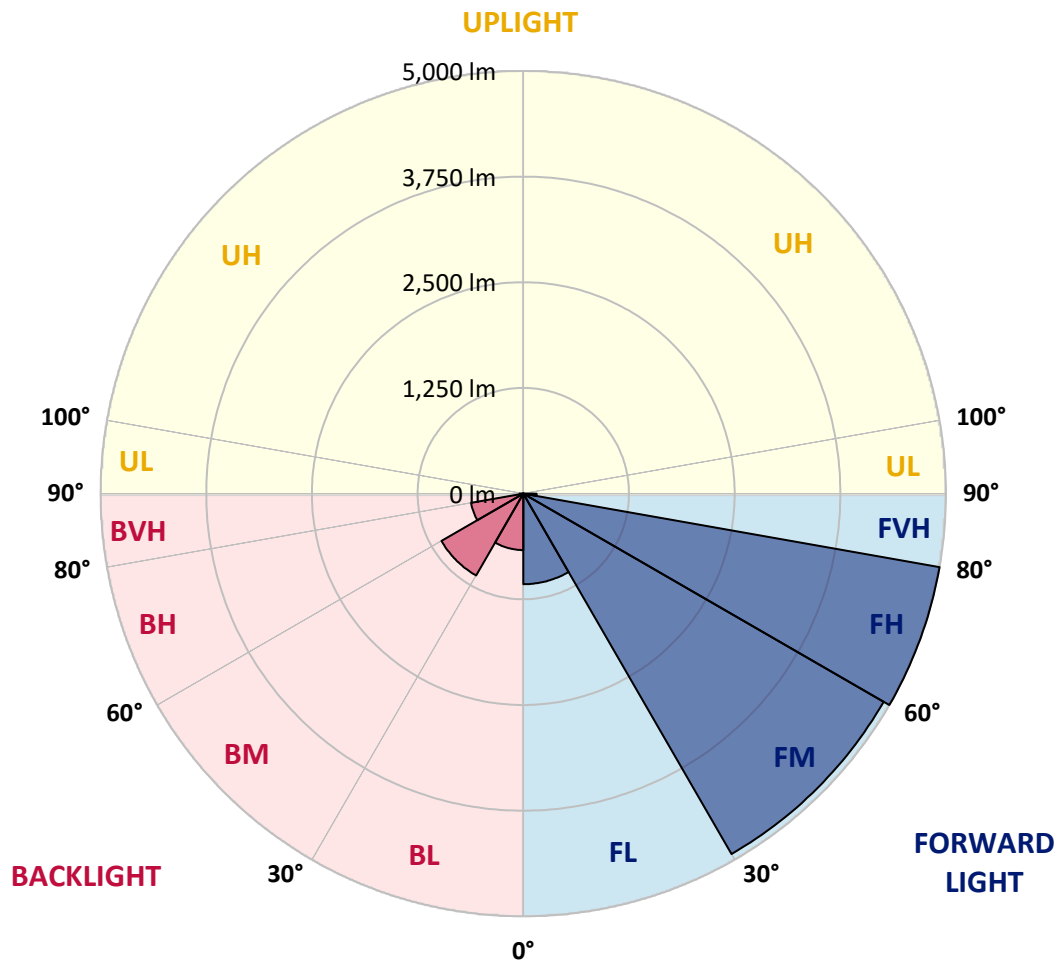
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1071.3	7.9			
FM	(30°-60°)	4923.2	36.2			
FH	(60°-80°)	5000.5	36.7			G3/7500
FVH	(80°-90°)	157.0	1.2			G2/225
BL	(0°-30°)	667.8	4.9	B2/1000		
BM	(30°-60°)	1117.9	8.2	B2/2500		
BH	(60°-80°)	627.5	4.6	B2/1000		G2/1000
BVH	(80°-90°)	43.9	0.3			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 IV Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	54°	55°	65°	75°	85°
0°	2428.0	2428.0	2428.0	2428.0	2428.0	2428.0	2428.0	2428.0	2428.0	2428.0	2428.0
2.5°	2345.7	2356.7	2359.7	2367.0	2382.5	2395.0	2407.5	2406.0	2423.6	2431.0	2437.6
5°	2241.3	2244.3	2255.3	2270.0	2297.2	2331.7	2365.6	2366.3	2409.7	2444.2	2461.1
7.5°	2164.9	2174.4	2181.8	2197.2	2225.9	2263.4	2317.0	2321.5	2398.6	2467.0	2503.0
10°	2114.9	2125.9	2134.0	2153.1	2181.8	2223.7	2281.8	2289.8	2390.6	2503.0	2566.2
12.5°	2069.3	2080.3	2087.7	2112.7	2150.2	2201.6	2267.1	2276.6	2393.5	2544.9	2635.3
15°	2097.3	2106.1	2103.1	2110.5	2135.5	2194.3	2272.9	2282.5	2404.5	2585.4	2703.7
17.5°	2221.5	2228.8	2204.6	2176.6	2164.9	2208.3	2291.3	2301.6	2426.6	2627.3	2773.5
20°	2404.5	2424.4	2371.4	2309.0	2252.4	2258.2	2329.5	2340.6	2457.5	2669.2	2844.9
22.5°	2642.7	2657.4	2592.7	2489.8	2385.4	2331.7	2386.9	2393.5	2503.8	2723.6	2922.8
25°	2922.8	2931.6	2841.9	2709.6	2558.9	2457.5	2465.5	2477.3	2580.2	2785.3	2991.9
27.5°	3194.8	3222.7	3119.0	2957.3	2758.8	2589.8	2573.6	2580.9	2663.3	2819.9	3039.7
30°	3517.5	3515.3	3405.7	3218.3	2963.9	2733.9	2675.8	2674.3	2708.1	2836.8	3074.2
32.5°	3774.8	3804.9	3697.6	3493.2	3198.4	2883.1	2746.3	2743.4	2742.7	2866.2	3125.7
35°	4067.3	4071.7	3973.2	3767.4	3452.0	3070.5	2844.9	2830.1	2813.2	2929.4	3195.5
37.5°	4329.0	4349.6	4259.2	4028.4	3701.2	3265.3	2980.1	2970.6	2919.1	3038.9	3307.2
40°	4533.4	4548.8	4494.4	4274.6	3946.8	3475.6	3152.1	3134.5	3072.0	3218.3	3456.5
42.5°	4600.3	4631.9	4653.2	4545.1	4229.1	3724.8	3363.8	3341.8	3294.0	3490.3	3628.5
45°	4605.4	4655.4	4767.9	4773.0	4512.8	4023.2	3610.8	3595.4	3591.7	3838.7	3870.3
47.5°	4566.5	4617.2	4806.1	4908.3	4765.7	4324.6	3967.4	3943.1	3945.3	4269.5	4141.6
50°	4472.4	4532.6	4762.0	4995.0	4963.4	4637.8	4343.7	4335.6	4381.2	4761.3	4423.1
52.5°	4295.2	4368.0	4716.4	5049.4	5110.4	4907.6	4771.6	4748.8	4864.2	5295.0	4731.1
55°	3804.9	3914.4	4549.6	5079.6	5250.1	5165.6	5156.8	5197.9	5350.8	5877.2	5070.0
57.5°	3549.1	3631.4	4187.1	5084.7	5426.5	5465.5	5606.6	5616.9	5884.5	6495.4	5453.0
60°	3409.4	3482.2	3988.7	5050.9	5672.8	5836.7	6066.8	6103.6	6405.7	7165.1	5850.0
62.5°	3287.4	3349.9	3869.6	4934.0	5950.7	6387.3	6663.0	6680.6	6997.5	7904.6	6241.8
65°	3000.0	3071.3	3629.9	4817.1	6190.3	7075.4	7454.0	7433.4	7627.4	8542.6	6487.3
67.5°	2612.6	2703.0	3182.3	4413.6	6308.7	7827.4	8344.9	8319.2	8249.3	8960.9	6557.9
70°	2117.8	2166.4	2609.6	3715.9	5836.0	8222.1	9048.4	9021.2	8634.5	9016.0	6224.1
71°	1822.3	1898.0	2272.2	3300.6	5442.7	8101.6	9138.8	9131.5	8635.3	8863.9	5972.7
72.5°	1422.4	1468.7	1799.5	2557.4	4626.0	7416.5	8915.3	8943.3	8447.8	8441.2	5454.5
75°	899.8	920.3	1129.1	1505.5	2538.3	5252.3	7610.5	7686.2	7501.0	6909.2	4056.3
77.5°	522.7	549.1	676.3	887.3	1096.8	2850.7	5445.6	5528.0	5211.9	3804.2	1660.6
80°	304.3	333.7	445.5	515.3	503.5	1057.8	2772.8	2913.2	2256.8	960.8	466.1
82.5°	169.1	188.9	313.2	313.9	268.3	345.5	872.6	913.0	644.0	387.4	190.4
85°	122.8	138.9	202.2	183.0	128.6	148.5	303.6	318.3	260.2	163.2	61.7
87.5°	43.4	61.7	111.0	88.2	35.3	30.9	87.5	71.3	66.2	45.6	14.0
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2428.0	2428.0	2428.0	2428.0	2428.0	2428.0	2428.0	2428.0	2428.0	2428.0	2428.0
2.5°	2441.3	2442.7	2435.4	2422.2	2408.9	2392.0	2372.9	2358.2	2351.6	2350.9	2350.1
5°	2467.7	2471.4	2443.5	2402.3	2356.7	2300.9	2253.1	2198.7	2184.7	2162.7	2169.3
7.5°	2510.4	2508.2	2453.0	2365.6	2259.0	2140.6	2040.6	1982.6	1922.3	1905.4	1906.1
10°	2571.4	2557.4	2453.0	2290.6	2112.7	1937.0	1797.3	1709.1	1661.3	1621.6	1606.9
12.5°	2636.1	2600.8	2429.5	2185.5	1924.5	1709.1	1559.2	1440.1	1409.2	1376.8	1377.6
15°	2697.8	2639.0	2383.2	2037.7	1721.6	1465.8	1320.2	1248.9	1239.4	1243.1	1242.3
17.5°	2753.7	2666.2	2312.6	1873.0	1484.9	1257.0	1179.8	1185.0	1210.7	1229.1	1231.3
20°	2810.3	2682.4	2207.5	1652.5	1261.4	1130.6	1133.5	1174.0	1212.9	1237.9	1241.6
22.5°	2864.0	2689.7	2084.0	1439.3	1099.7	1076.9	1120.3	1163.7	1201.9	1226.2	1229.8
25°	2899.2	2672.8	1909.1	1216.6	1020.3	1057.8	1103.4	1140.1	1172.5	1197.5	1203.4
27.5°	2908.8	2618.4	1692.2	1036.5	983.6	1039.4	1081.3	1108.5	1133.5	1157.1	1161.5
30°	2903.7	2538.3	1454.0	930.6	962.3	1018.1	1050.5	1070.3	1100.5	1118.8	1122.5
32.5°	2895.6	2445.0	1205.6	874.0	944.6	998.3	1017.4	1035.0	1034.3	1026.9	1032.1
35°	2898.5	2333.2	1004.2	840.2	929.2	983.6	999.7	977.7	914.5	911.5	908.6
37.5°	2914.0	2223.0	857.9	816.7	921.1	981.4	990.2	888.7	832.9	807.1	800.5
40°	2953.6	2094.3	761.6	799.1	920.3	998.3	946.8	843.9	736.6	686.6	682.9
42.5°	3006.6	1967.9	702.8	788.0	929.2	1024.0	929.2	780.7	663.8	634.4	630.0
45°	3085.2	1823.1	670.4	782.9	942.4	1033.6	923.3	734.4	634.4	610.9	610.9
47.5°	3174.2	1684.9	652.8	779.2	959.3	1026.9	871.1	719.7	620.4	623.4	637.3
50°	3262.4	1565.0	639.5	771.1	974.0	1023.3	849.8	718.9	624.1	661.6	686.6
52.5°	3364.6	1480.5	623.4	757.9	974.0	999.7	843.2	733.6	634.4	645.4	656.4
55°	3488.1	1454.0	602.8	729.2	956.4	940.9	839.5	755.0	641.7	616.0	620.4
57.5°	3651.3	1496.7	582.9	693.2	915.9	879.9	838.0	760.8	624.8	603.5	599.1
60°	3840.9	1581.2	577.1	656.4	860.8	827.7	829.2	743.9	601.3	579.3	582.9
62.5°	3974.0	1631.9	573.4	628.5	800.5	770.4	807.9	723.3	591.0	571.9	575.6
65°	3974.0	1570.2	539.6	585.9	722.6	701.3	782.2	697.6	577.8	555.7	552.1
67.5°	3823.3	1390.1	488.1	521.9	636.6	622.6	746.1	666.7	557.9	541.0	532.2
70°	3430.7	1054.1	423.4	446.9	527.8	540.3	699.8	624.8	524.9	504.3	491.0
71°	3258.0	918.1	396.2	408.7	485.9	504.3	677.8	607.2	510.2	480.8	457.2
72.5°	2925.0	773.3	355.1	360.2	415.3	448.4	631.5	573.4	482.2	440.3	413.9
75°	2222.2	564.6	286.0	283.0	307.3	355.8	534.4	510.9	422.7	366.1	350.6
77.5°	960.0	307.3	213.9	216.1	208.8	269.8	420.5	438.9	362.4	297.7	283.7
80°	291.1	177.2	146.3	149.2	139.7	180.8	296.2	344.0	291.1	231.6	212.4
82.5°	149.2	105.9	100.0	98.5	88.9	102.2	179.4	235.2	208.0	144.8	127.9
85°	64.7	56.6	49.3	47.8	41.9	36.8	64.0	117.6	110.3	80.9	77.2
87.5°	16.2	14.7	9.6	8.8	5.1	0.7	0.0	0.0	0.0	0.0	0.0
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)