

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: LUMARK

Report Number: P966156

Luminaire Tested: **NAV-SB4B-735-U-T3R**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P966156
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-5)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4B-735-U-T3R
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 3500K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE III
ROADWAY OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 23747.2 lumens
Efficiency: N/A
Efficacy: 161.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B3 - U0 - G4

Input Watts (W): 147
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: 24 FT

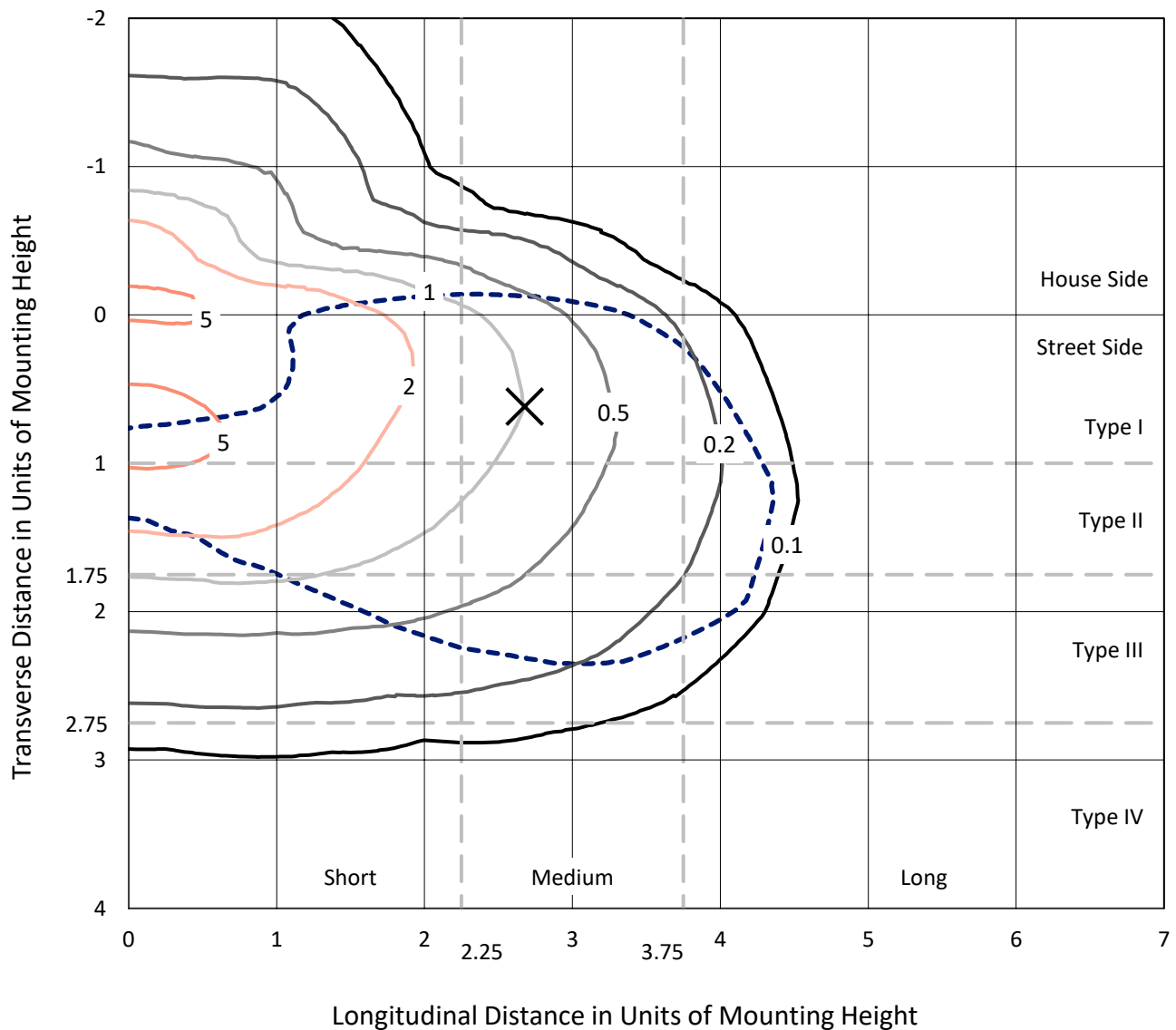


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Iso-Footcandle Lines of Horizontal Illumination

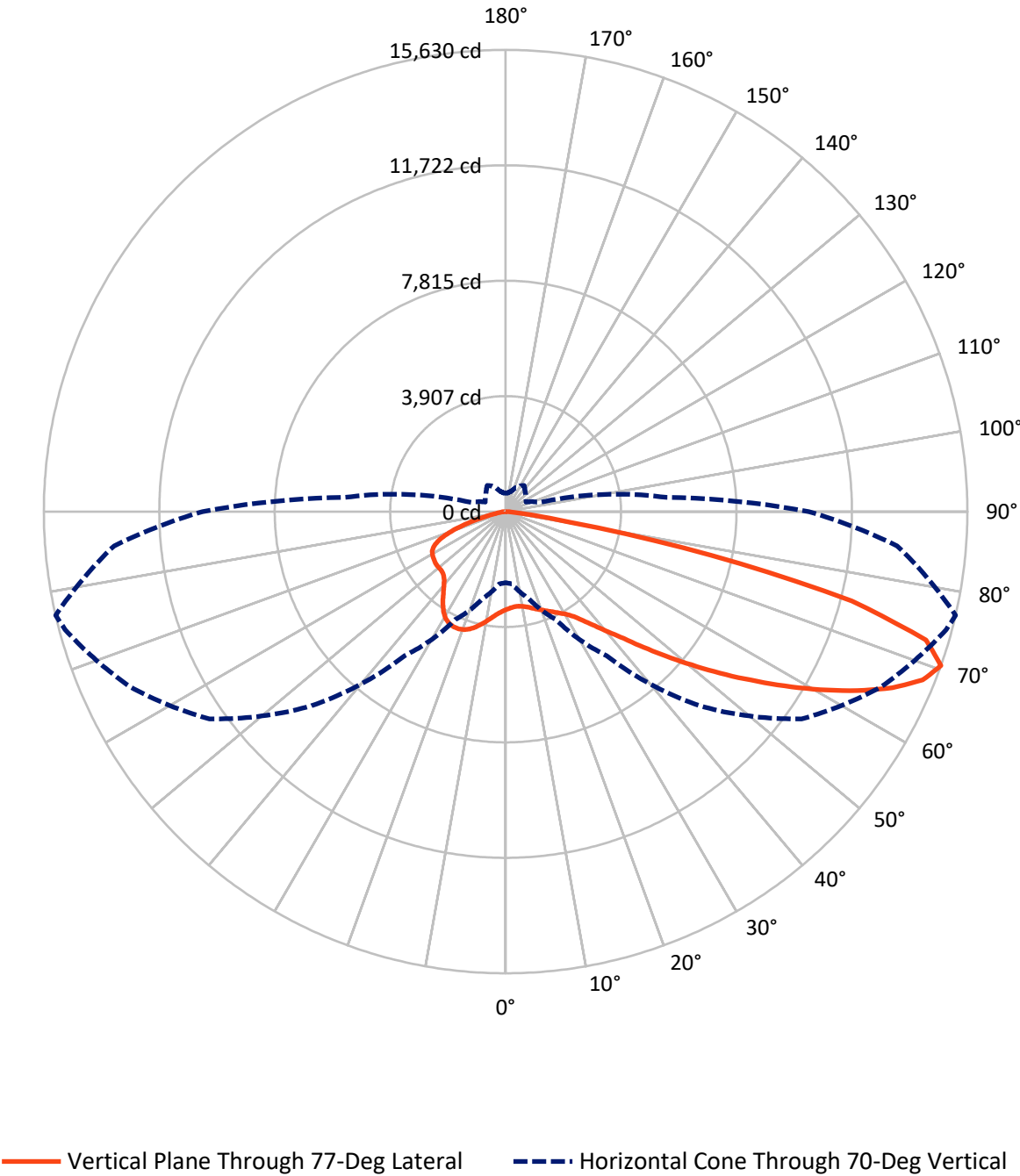
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.3 fc
Type III - Medium - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5200.3	0.0	5200.3
	% Fixture	21.9	0.0	21.9
Street Side	Lumens	18546.9	0.0	18546.9
	% Fixture	78.1	0.0	78.1
Total	Lumens	23747.2	0.0	23747.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	316.0	1.3
10°-20°	911.9	3.8
20°-30°	1559.5	6.6
30°-40°	2507.8	10.6
40°-50°	3915.4	16.5
50°-60°	5230.0	22.0
60°-70°	5574.4	23.5
70°-80°	3431.6	14.5
80°-90°	300.7	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°	23747.2	100.0
0°-180°	23747.2	100.0

Coefficient of Utilization



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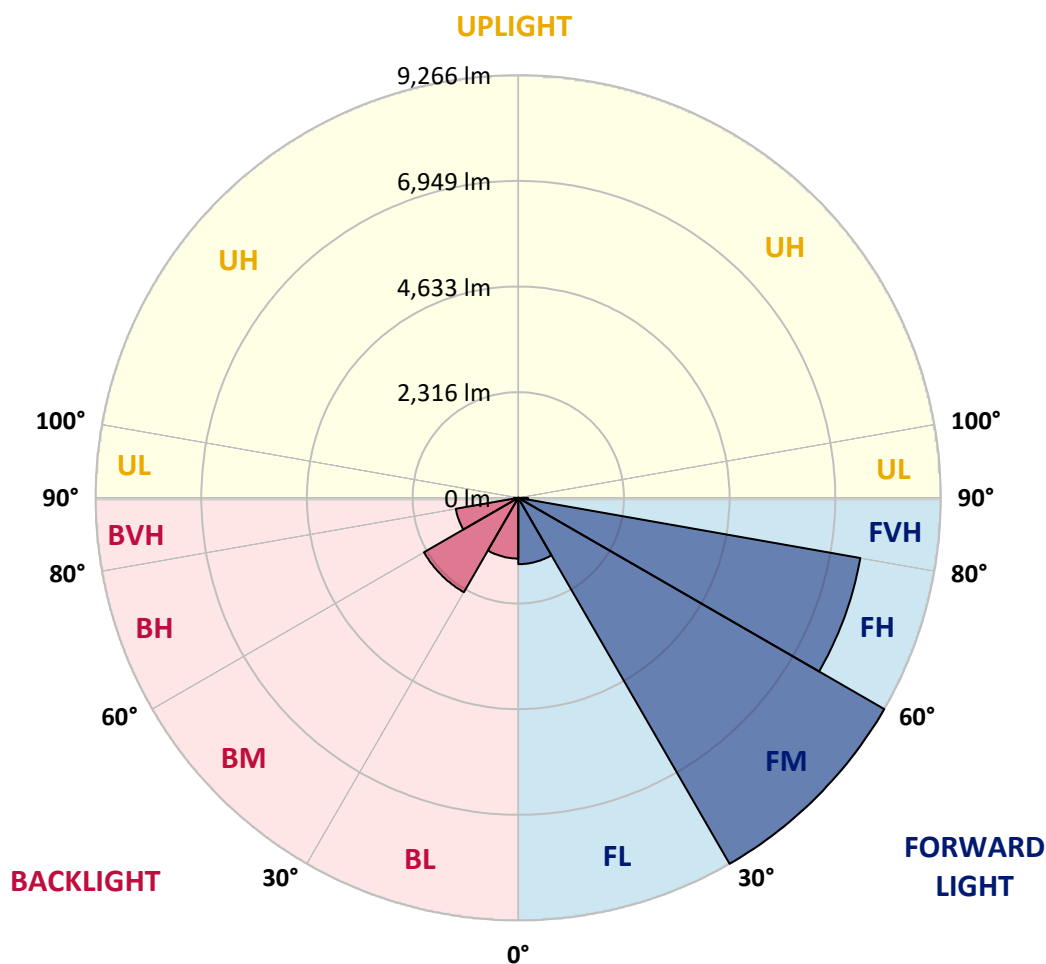
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1454.9	6.1			
FM	(30°-60°)	9265.6	39.0			
FH	(60°-80°)	7616.1	32.1			G4/12000
FVH	(80°-90°)	210.3	0.9			G2/225
BL	(0°-30°)	1332.5	5.6	B3/2500		
BM	(30°-60°)	2387.6	10.1	B2/2500		
BH	(60°-80°)	1389.8	5.9	B3/2500		G3/2500
BVH	(80°-90°)	90.4	0.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type III Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77°	85°
0°	3312.9	3312.9	3312.9	3312.9	3312.9	3312.9	3312.9	3312.9	3312.9	3312.9	3312.9
2.5°	3053.9	3052.7	3068.5	3073.4	3102.6	3123.2	3162.1	3203.5	3257.0	3263.1	3295.9
5°	2877.6	2877.6	2895.8	2915.2	2952.9	2994.3	3053.9	3125.6	3218.1	3232.6	3314.1
7.5°	2727.9	2737.7	2753.5	2791.2	2834.9	2894.6	2985.8	3087.9	3209.6	3232.6	3364.0
10°	2607.6	2618.5	2637.9	2668.4	2734.1	2816.7	2935.9	3067.3	3230.3	3266.8	3437.0
12.5°	2569.9	2580.7	2591.7	2614.9	2675.7	2772.9	2915.2	3077.0	3280.1	3316.6	3536.8
15°	2657.4	2670.8	2662.2	2656.2	2687.9	2776.6	2924.9	3112.3	3342.1	3394.4	3659.6
17.5°	2859.3	2864.2	2844.7	2787.6	2782.7	2830.1	2971.2	3160.9	3420.0	3477.1	3783.6
20°	3185.3	3176.8	3136.6	3023.4	2959.1	2949.3	3050.3	3233.9	3500.3	3561.1	3917.4
22.5°	3628.0	3618.2	3538.0	3359.1	3215.6	3120.8	3164.6	3328.8	3590.3	3658.3	4047.5
25°	4180.2	4166.7	4048.7	3805.5	3583.0	3348.3	3320.3	3454.0	3701.0	3764.2	4183.7
27.5°	4824.7	4813.7	4686.1	4365.0	4043.9	3659.6	3513.6	3601.2	3816.5	3888.2	4337.0
30°	5518.0	5549.6	5323.3	4977.9	4571.7	4065.8	3773.8	3782.5	3966.0	4030.5	4523.1
32.5°	6332.8	6387.5	6115.0	5677.3	5122.6	4507.2	4102.3	4035.4	4183.7	4237.2	4757.8
35°	7140.4	7202.4	6976.2	6492.1	5853.6	5027.8	4445.2	4326.0	4473.2	4531.6	5069.1
37.5°	7838.5	7921.2	7804.5	7383.6	6635.6	5655.3	4892.8	4667.8	4829.6	4902.6	5487.5
40°	8389.4	8515.9	8507.4	8244.7	7557.5	6416.7	5460.8	5089.8	5272.3	5351.3	5994.7
42.5°	8836.9	8946.4	9041.3	9027.9	8519.5	7281.4	6128.5	5638.3	5777.0	5868.2	6565.1
45°	9145.9	9262.6	9467.0	9687.1	9445.1	8207.0	6893.4	6289.0	6415.5	6552.9	7244.9
47.5°	9422.0	9554.5	9819.7	10168.7	10230.7	9136.1	7731.5	7046.7	7162.3	7304.6	7927.2
50°	9446.3	9560.6	9971.7	10466.7	10788.9	10028.8	8631.4	7896.8	8005.0	8157.2	8658.2
52.5°	8858.9	9038.9	9756.5	10458.2	11045.6	10775.6	9525.3	8781.1	8902.6	9085.1	9414.6
55°	6876.4	7140.4	9125.2	10132.2	10954.4	11258.4	10375.5	9721.2	9876.8	10067.8	10176.0
57.5°	5923.0	6038.5	7243.8	9538.8	10538.4	11383.8	11093.1	10671.0	10921.6	11130.8	10981.1
60°	5323.3	5419.4	6132.2	8615.6	9991.2	11185.5	11647.6	11556.4	11989.4	12238.7	11804.5
62.5°	4681.2	4772.4	5420.6	7193.9	9290.6	10855.9	11997.9	12373.7	13083.9	13356.4	12580.4
65°	4043.9	4121.7	4743.2	6044.5	8400.4	10526.2	12179.2	13080.3	14097.0	14379.2	13225.1
67.5°	3333.6	3398.1	3985.5	5099.6	7317.9	10075.0	12269.1	13636.1	14978.8	15220.8	13543.7
70°	2405.7	2455.5	3062.4	4033.0	5959.5	9299.1	12232.7	14030.2	15436.1	15629.5	13302.9
72.5°	1137.1	1182.1	1894.8	2618.5	4209.3	7788.6	11494.3	13717.6	14971.6	14875.4	11828.8
75°	606.9	645.9	1088.6	1436.3	2223.2	5339.1	9406.1	11816.7	12571.9	12104.9	8742.1
77.5°	411.1	441.5	673.7	862.3	1015.6	2534.6	6045.8	8181.4	7871.3	7100.2	4378.4
80°	326.0	357.5	552.2	583.7	491.4	915.8	2498.1	3787.3	2720.7	2175.8	1245.4
82.5°	250.5	285.8	464.6	423.2	267.5	375.8	727.3	1197.9	696.9	530.2	301.7
85°	153.2	191.0	364.9	270.0	150.8	171.5	246.9	333.2	212.8	177.5	108.2
87.5°	77.8	109.5	184.9	98.5	68.1	40.2	65.7	65.7	56.0	48.7	28.0
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°	3312.9	3312.9	3312.9	3312.9	3312.9	3312.9	3312.9	3312.9	3312.9	3312.9	3312.9
2.5°	3325.1	3349.4	3390.8	3429.8	3460.1	3489.3	3518.5	3534.3	3539.1	3558.6	3569.6
5°	3364.0	3409.0	3489.3	3564.7	3612.1	3641.3	3662.0	3674.2	3676.6	3682.7	3692.4
7.5°	3435.8	3507.6	3619.5	3694.8	3730.1	3727.7	3719.2	3688.8	3676.6	3665.6	3668.1
10°	3536.8	3631.6	3769.0	3821.3	3799.5	3741.0	3665.6	3576.8	3535.5	3495.4	3483.3
12.5°	3662.0	3782.5	3917.4	3915.0	3806.7	3657.1	3482.0	3345.8	3259.4	3197.4	3182.8
15°	3814.0	3952.7	4056.0	3973.3	3736.2	3467.4	3210.8	3033.2	2955.4	2887.3	2879.9
17.5°	3971.0	4119.3	4166.7	3955.1	3558.6	3186.4	2895.8	2755.9	2679.4	2642.9	2653.7
20°	4124.2	4271.3	4232.4	3850.5	3288.6	2867.8	2608.7	2532.2	2516.4	2524.9	2521.2
22.5°	4285.9	4417.2	4245.8	3648.6	2944.4	2541.9	2399.6	2402.0	2437.2	2462.9	2468.9
25°	4451.4	4540.1	4210.5	3356.8	2574.7	2302.3	2267.0	2305.9	2375.2	2425.1	2438.5
27.5°	4610.7	4649.6	4133.9	2995.6	2257.3	2130.8	2136.9	2217.2	2321.7	2391.0	2408.1
30°	4790.6	4746.9	3986.7	2589.4	2037.2	1983.7	2034.7	2128.4	2233.0	2295.0	2309.5
32.5°	4993.8	4830.8	3753.2	2213.5	1881.5	1865.7	1949.5	2010.4	2056.6	2074.8	2084.5
35°	5246.8	4948.7	3454.0	1949.5	1741.6	1779.3	1859.6	1829.2	1811.0	1801.2	1811.0
37.5°	5575.1	5108.1	3103.8	1778.1	1628.5	1717.3	1750.1	1655.3	1583.5	1548.3	1556.8
40°	5970.3	5341.6	2766.9	1645.5	1556.8	1663.8	1606.6	1492.3	1401.1	1351.3	1354.8
42.5°	6409.4	5586.0	2483.5	1545.8	1516.6	1620.0	1500.8	1364.6	1217.4	1201.6	1217.4
45°	6870.4	5837.8	2290.2	1469.1	1497.1	1582.3	1440.0	1219.9	1115.3	1179.7	1213.8
47.5°	7331.3	6068.9	2173.4	1412.0	1487.4	1539.8	1386.5	1139.6	1065.4	1159.1	1202.8
50°	7844.5	6275.7	2121.0	1370.6	1476.5	1522.7	1306.2	1118.9	1013.1	1075.1	1121.4
52.5°	8354.2	6436.2	2082.2	1329.3	1460.6	1509.3	1267.3	1094.6	949.9	953.6	979.1
55°	8862.6	6540.7	2039.5	1274.6	1425.4	1480.1	1263.6	1067.8	902.4	885.4	897.6
57.5°	9404.9	6600.4	1987.3	1213.8	1364.6	1405.9	1260.0	1047.1	887.9	859.9	863.5
60°	9957.1	6687.9	1919.2	1139.6	1283.1	1317.1	1251.5	1039.9	879.3	831.9	835.6
62.5°	10452.1	6718.4	1837.7	1069.1	1178.5	1229.6	1233.3	1033.8	856.2	774.7	774.7
65°	10776.8	6587.0	1695.4	988.8	1065.4	1139.6	1197.9	1013.1	814.9	733.4	733.4
67.5°	10763.4	6212.4	1472.8	885.4	955.9	1039.9	1146.9	977.8	765.0	682.3	685.9
70°	10262.4	5473.0	1190.6	765.0	835.6	932.9	1081.2	925.6	705.4	626.4	633.7
72.5°	8801.7	4283.5	864.7	623.9	695.7	822.2	996.1	862.3	644.6	576.5	572.9
75°	6287.8	2710.9	586.2	479.2	541.2	696.9	890.3	788.1	588.7	578.9	546.1
77.5°	3212.0	1295.3	388.0	350.2	377.0	549.7	747.9	704.2	597.2	478.0	425.7
80°	1044.7	478.0	244.5	238.4	250.5	366.0	578.9	577.7	452.4	324.7	287.0
82.5°	333.2	205.5	159.3	153.2	147.2	229.9	403.7	457.3	305.2	205.5	204.3
85°	132.5	122.8	93.7	86.3	62.0	108.2	211.7	304.0	227.4	148.4	152.0
87.5°	48.7	48.7	25.5	18.2	13.4	36.5	57.2	91.2	130.2	76.7	75.4
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)