

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: P969436

Luminaire Tested: **NAV-SB5D-827-U-T2R**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P969436
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-3)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB5D-827-U-T2R
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(5) 80 CRI, 2700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II
ROADWAY OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 46666.2 lumens
Efficiency: N/A
Efficacy: 127.9 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B3 - U0 - G4

Input Watts (W): 364.9
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

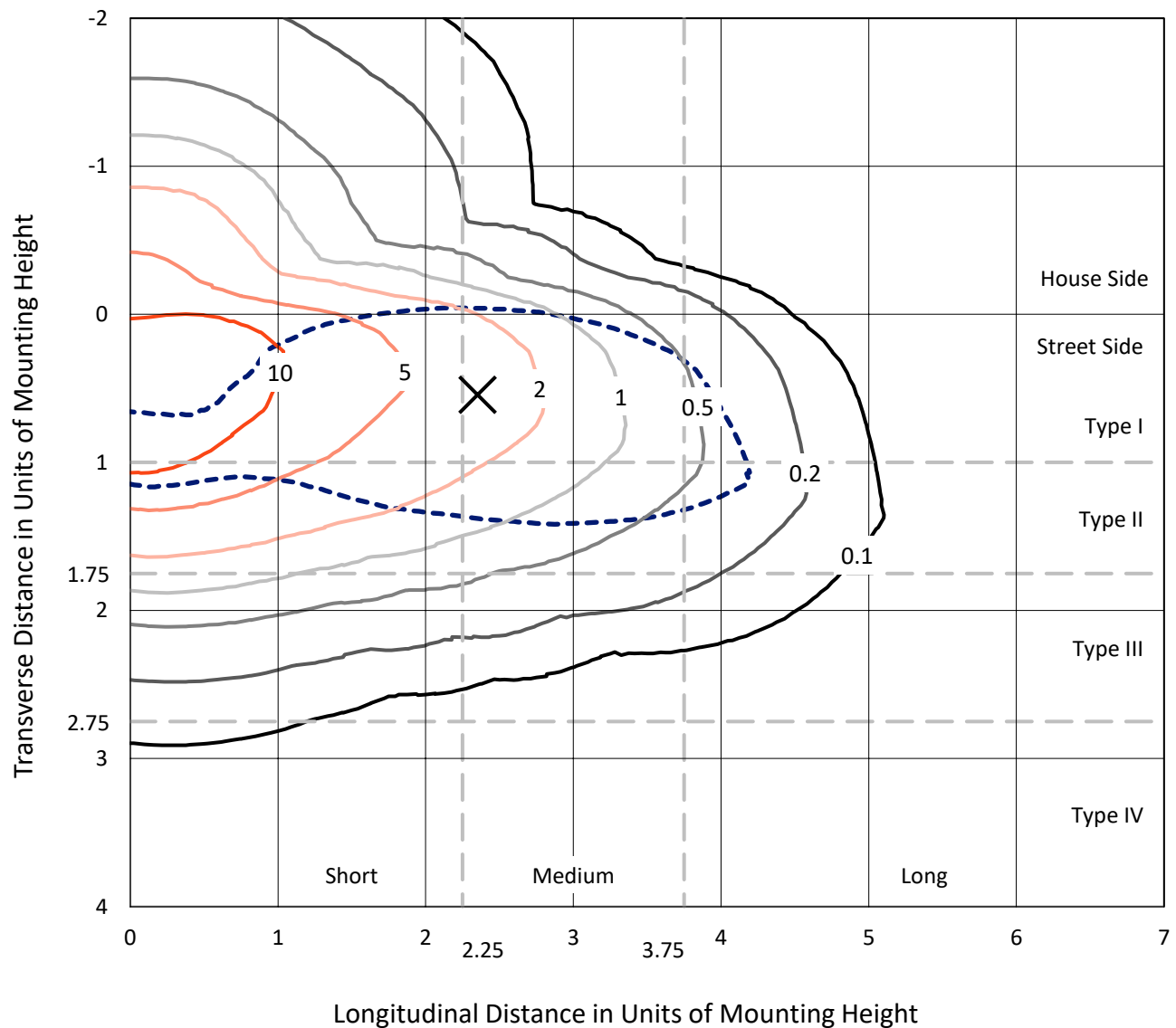


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Iso-Footcandle Lines of Horizontal Illumination

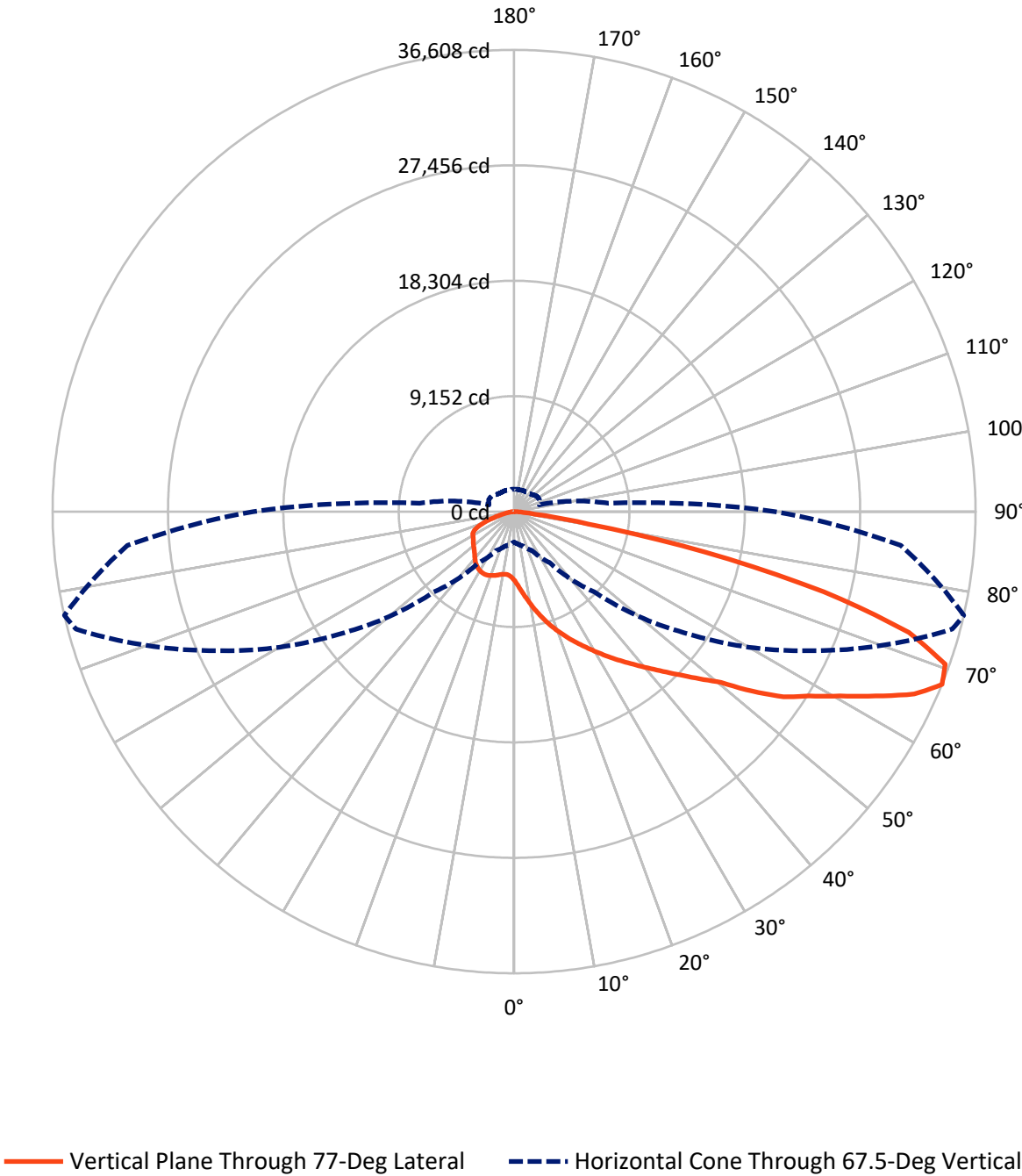
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 17.1 fc
Type II - Medium - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8827.4	0.0	8827.4
	% Fixture	18.9	0.0	18.9
Street Side	Lumens	37838.8	0.0	37838.8
	% Fixture	81.1	0.0	81.1
Total	Lumens	46666.2	0.0	46666.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	586.9	1.3
10°-20°	2108.5	4.5
20°-30°	3981.0	8.5
30°-40°	6413.3	13.7
40°-50°	8772.2	18.8
50°-60°	9895.1	21.2
60°-70°	9235.8	19.8
70°-80°	5062.8	10.8
80°-90°	610.7	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°	46666.2	100.0
0°-180°	46666.2	100.0

Coefficient of Utilization



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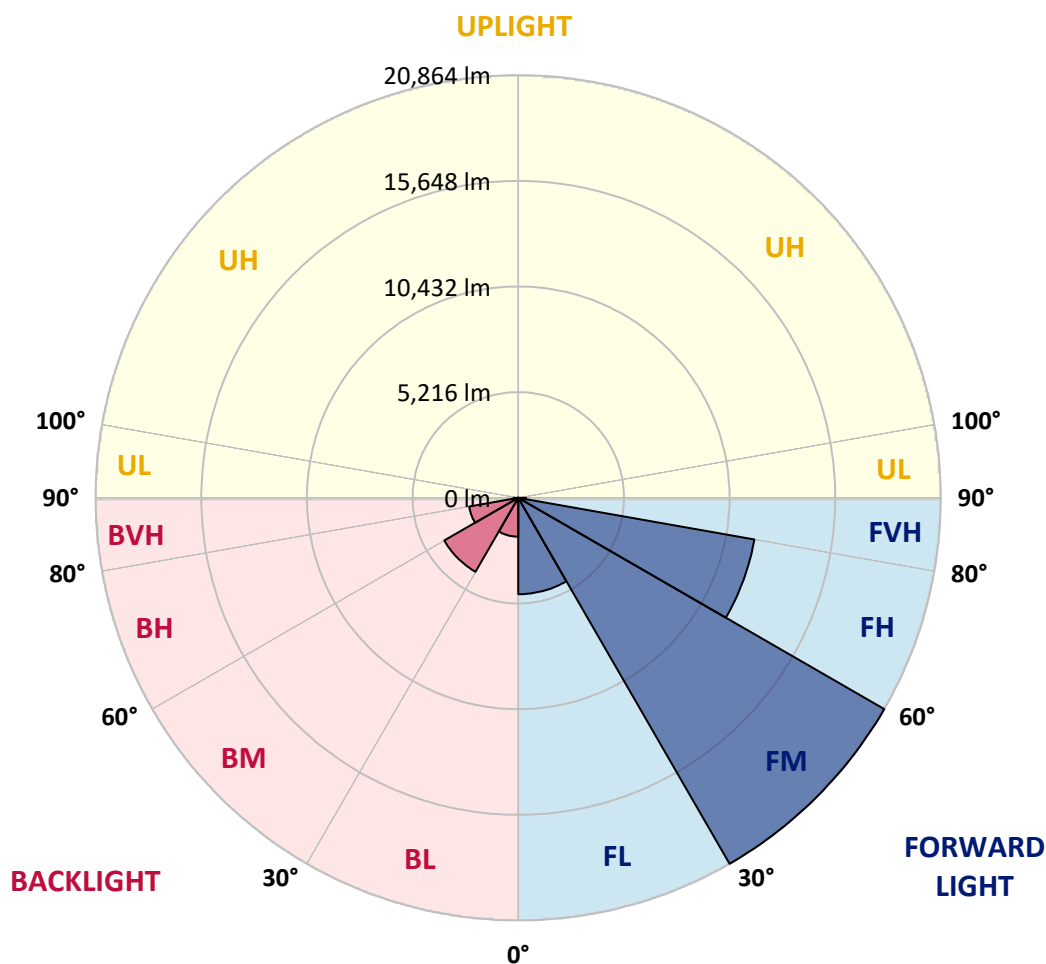
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	4757.0	10.2			
FM	(30°-60°)	20863.9	44.7			
FH	(60°-80°)	11835.9	25.4			G4/12000
FVH	(80°-90°)	381.9	0.8			G3/500
BL	(0°-30°)	1919.3	4.1	B3/2500		
BM	(30°-60°)	4216.6	9.0	B3/5000		
BH	(60°-80°)	2462.7	5.3	B3/2500		G3/2500
BVH	(80°-90°)	228.8	0.5			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type II Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77°	85°
0°	5475.3	5475.3	5475.3	5475.3	5475.3	5475.3	5475.3	5475.3	5475.3	5475.3	5475.3
2.5°	6855.7	6903.9	6843.6	6843.6	6641.3	6535.3	6333.0	6178.8	5901.7	5853.6	5670.5
5°	8103.4	8163.7	8079.4	8043.3	7804.8	7585.6	7245.9	6911.1	6417.3	6366.7	5935.5
7.5°	9069.4	9146.5	9071.9	9033.3	8821.4	8575.7	8178.2	7710.9	7014.7	6915.9	6292.0
10°	9857.1	9869.2	9845.1	9859.6	9693.3	9491.0	9083.9	8539.5	7669.9	7535.0	6723.2
12.5°	10302.8	10358.2	10406.4	10493.1	10464.2	10339.0	9972.7	9322.4	8363.7	8190.2	7192.9
15°	10512.4	10608.7	10717.1	10917.1	11078.5	11109.8	10830.4	10163.1	9069.4	8859.9	7667.5
17.5°	10587.0	10678.6	10849.6	11138.7	11485.5	11719.2	11594.0	10979.7	9768.0	9527.2	8166.1
20°	10965.2	10991.7	11095.3	11369.9	11745.7	12133.5	12227.5	11764.9	10459.4	10187.2	8681.6
22.5°	11774.6	11721.6	11750.5	11875.8	12145.6	12521.4	12735.7	12458.8	11170.0	10856.8	9201.9
25°	13111.6	12957.4	12803.2	12658.6	12796.0	13008.0	13251.3	13152.5	11914.4	11516.9	9727.0
27.5°	14800.2	14612.3	14272.6	13798.1	13631.9	13706.5	13815.0	13795.7	12603.3	12201.0	10269.1
30°	16462.3	16243.1	15838.4	15151.9	14713.5	14515.9	14434.0	14378.6	13352.5	12923.7	10815.9
32.5°	17789.6	17616.2	17218.7	16450.2	15814.3	15477.1	15204.8	15007.3	14135.4	13706.5	11394.0
35°	18950.7	18789.3	18334.1	17495.7	16804.4	16445.4	16088.9	15667.4	14949.5	14515.9	12015.6
37.5°	20010.6	19849.2	19225.3	18353.3	17657.2	17409.0	17091.1	16375.6	15766.1	15356.7	12673.1
40°	20680.3	20644.1	20061.2	19073.5	18350.9	18228.0	18122.0	17197.0	16671.9	16291.2	13395.8
42.5°	20851.3	20930.8	20468.3	19656.5	18967.5	18868.8	19116.9	18126.8	17688.4	17324.7	14214.8
45°	20439.4	20668.2	20364.7	19813.0	19406.0	19353.0	19998.6	19143.4	18813.4	18481.0	15202.5
47.5°	19396.4	19784.1	19658.9	19581.8	19524.0	19752.9	20774.2	20222.6	20087.6	19798.6	16329.8
50°	17290.9	18025.6	18244.9	18731.5	19290.4	20063.6	21480.0	21400.6	21576.4	21284.9	17702.9
52.5°	13651.2	14662.9	15934.8	17153.7	18572.5	19960.0	22255.7	23091.6	23833.5	23674.5	19885.3
55°	11268.7	11724.1	12702.0	14937.5	17180.1	19524.0	22604.9	24457.4	26073.7	25931.7	21540.3
57.5°	9438.0	9845.1	10447.3	12314.2	15074.8	18533.9	22821.7	25290.8	27608.3	27593.8	23173.5
60°	7474.8	7905.9	8522.7	9845.1	12615.3	16823.6	22773.6	26240.0	29566.6	29687.1	25165.6
62.5°	5258.6	5733.1	6417.3	7650.6	10102.9	14607.5	21790.8	26926.5	31872.0	32199.6	27562.5
65°	3456.7	3770.0	4285.4	5350.1	7527.8	11757.8	19914.2	27015.6	34338.6	34892.7	29812.3
67.5°	2423.3	2543.7	2847.3	3425.4	4962.3	9016.4	16924.8	26093.0	35984.0	36607.8	30787.9
70°	1891.0	1951.2	2105.4	2336.6	3117.1	6063.2	12969.4	23693.8	35632.2	36282.6	29769.0
72.5°	1633.2	1691.0	1748.9	1777.8	2090.9	3743.4	8785.2	19810.7	32320.0	32760.8	25883.5
75°	1481.4	1495.9	1544.1	1534.4	1594.7	2428.1	5070.7	14434.0	25500.5	25348.7	19107.2
77.5°	1245.4	1264.6	1344.2	1332.1	1416.4	1659.7	2632.9	9315.2	16532.2	15501.2	10635.2
80°	1055.1	1064.8	1151.5	1137.0	1230.9	1202.0	1344.2	4747.9	7012.2	5940.3	3066.5
82.5°	366.1	452.8	879.2	905.7	939.5	727.4	775.6	1936.7	2141.5	1640.4	643.2
85°	178.2	190.3	448.0	635.9	633.6	366.1	378.2	691.4	674.4	529.9	214.4
87.5°	28.9	36.2	53.0	248.2	197.5	96.4	130.1	134.9	139.7	120.4	48.2
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5475.3	5475.3	5475.3	5475.3	5475.3	5475.3	5475.3	5475.3	5475.3	5475.3	5475.3
2.5°	5535.6	5415.2	5162.2	4928.6	4745.5	4569.7	4470.8	4386.6	4338.4	4328.8	4328.8
5°	5685.0	5436.8	4976.8	4588.9	4336.0	4148.1	4049.4	3986.7	3955.4	3936.1	3933.7
7.5°	5899.4	5535.6	4880.4	4439.6	4174.6	4039.7	3989.1	3979.5	3977.1	3979.5	3986.7
10°	6195.6	5697.1	4870.8	4403.4	4181.8	4107.2	4104.7	4107.2	4116.8	4119.2	4121.6
12.5°	6516.0	5863.2	4909.3	4434.8	4273.3	4232.4	4225.2	4222.8	4230.0	4234.8	4237.2
15°	6865.3	6082.5	4974.3	4502.2	4374.5	4331.1	4324.0	4309.5	4307.0	4304.7	4302.2
17.5°	7224.2	6299.2	5046.6	4574.5	4439.6	4379.3	4352.9	4319.1	4292.6	4285.4	4292.6
20°	7588.0	6513.7	5097.2	4610.7	4444.4	4360.0	4307.0	4249.2	4203.5	4177.0	4186.6
22.5°	7975.8	6737.6	5128.5	4601.0	4401.0	4285.4	4189.1	4121.6	4051.7	4006.0	4008.4
25°	8354.1	6932.8	5126.1	4550.4	4316.7	4169.8	4046.9	3960.2	3863.8	3815.7	3815.7
27.5°	8717.7	7108.6	5065.9	4461.2	4196.2	4032.5	3885.6	3781.9	3688.1	3642.2	3639.8
30°	9093.5	7255.6	4972.0	4331.1	4054.2	3873.5	3712.1	3623.0	3538.6	3495.2	3492.9
32.5°	9466.9	7390.5	4839.4	4169.8	3890.4	3717.0	3557.9	3476.0	3425.4	3425.4	3427.8
35°	9861.9	7484.4	4663.6	3981.9	3717.0	3550.7	3425.4	3377.3	3372.5	3343.6	3336.3
37.5°	10278.7	7544.6	4449.2	3789.2	3545.9	3389.3	3350.7	3292.9	3244.7	3182.1	3172.5
40°	10717.1	7604.9	4191.4	3589.2	3365.2	3278.5	3261.7	3184.6	3047.2	2893.1	2871.4
42.5°	11249.5	7645.8	3924.1	3389.3	3174.9	3146.0	3170.1	3037.6	2818.4	2702.7	2705.2
45°	11866.1	7713.2	3678.4	3191.7	2979.8	2979.8	3080.9	2907.5	2726.8	2654.5	2666.6
47.5°	12665.9	7869.8	3449.5	2975.0	2799.2	2847.3	2883.4	2751.0	2649.7	2560.7	2558.2
50°	13822.2	8245.6	3213.5	2755.8	2661.8	2758.2	2707.5	2630.5	2512.5	2440.2	2432.9
52.5°	15257.8	8467.2	3003.9	2558.2	2543.7	2640.1	2567.8	2495.6	2406.5	2310.1	2290.9
55°	16235.9	8508.2	2828.1	2413.7	2464.3	2454.7	2428.1	2363.1	2315.0	2187.2	2189.7
57.5°	17329.5	8590.1	2683.4	2327.0	2413.7	2307.7	2298.0	2242.7	2180.1	2093.4	2064.5
60°	18637.6	8717.7	2558.2	2293.2	2370.3	2211.3	2163.2	2141.5	2078.9	2035.5	2047.5
62.5°	20063.6	8833.3	2430.6	2298.0	2319.8	2117.4	2045.2	2037.9	1999.4	1984.9	1984.9
65°	21036.8	8517.9	2271.6	2293.2	2240.2	2021.1	1929.6	1927.1	1895.8	1891.0	1888.6
67.5°	20697.1	7518.2	2057.2	2225.8	2158.3	1924.7	1823.5	1813.8	1772.9	1775.3	1775.3
70°	18996.4	6092.1	1760.8	2059.6	2057.2	1838.0	1712.7	1681.4	1626.0	1635.6	1645.2
72.5°	15807.1	4514.2	1363.5	1782.6	1895.8	1758.5	1585.1	1534.4	1464.6	1474.3	1471.8
75°	11415.7	3069.0	992.5	1356.2	1650.0	1664.5	1459.8	1373.1	1288.7	1303.2	1308.0
77.5°	5841.6	1739.2	729.9	934.7	1296.0	1512.8	1346.5	1230.9	1211.7	1346.5	1327.3
80°	1905.5	872.0	505.8	655.2	850.3	1238.2	1180.4	1047.9	1043.0	1074.4	922.6
82.5°	568.5	368.6	325.2	431.2	469.8	949.1	1019.0	792.5	681.7	717.8	741.9
85°	195.2	178.2	185.5	214.4	224.1	556.5	713.0	525.1	496.2	546.8	539.6
87.5°	45.8	62.6	53.0	48.2	48.2	134.9	277.1	219.2	303.5	202.3	195.2
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)