

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: P967359

Luminaire Tested: **NAV-SB4D-830-U-T2R**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P967359
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-SB4D-830-U-T2R
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II
ROADWAY OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 38259.1 lumens
Efficiency: N/A
Efficacy: 130.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B3 - U0 - G4

Input Watts (W): 293.6
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

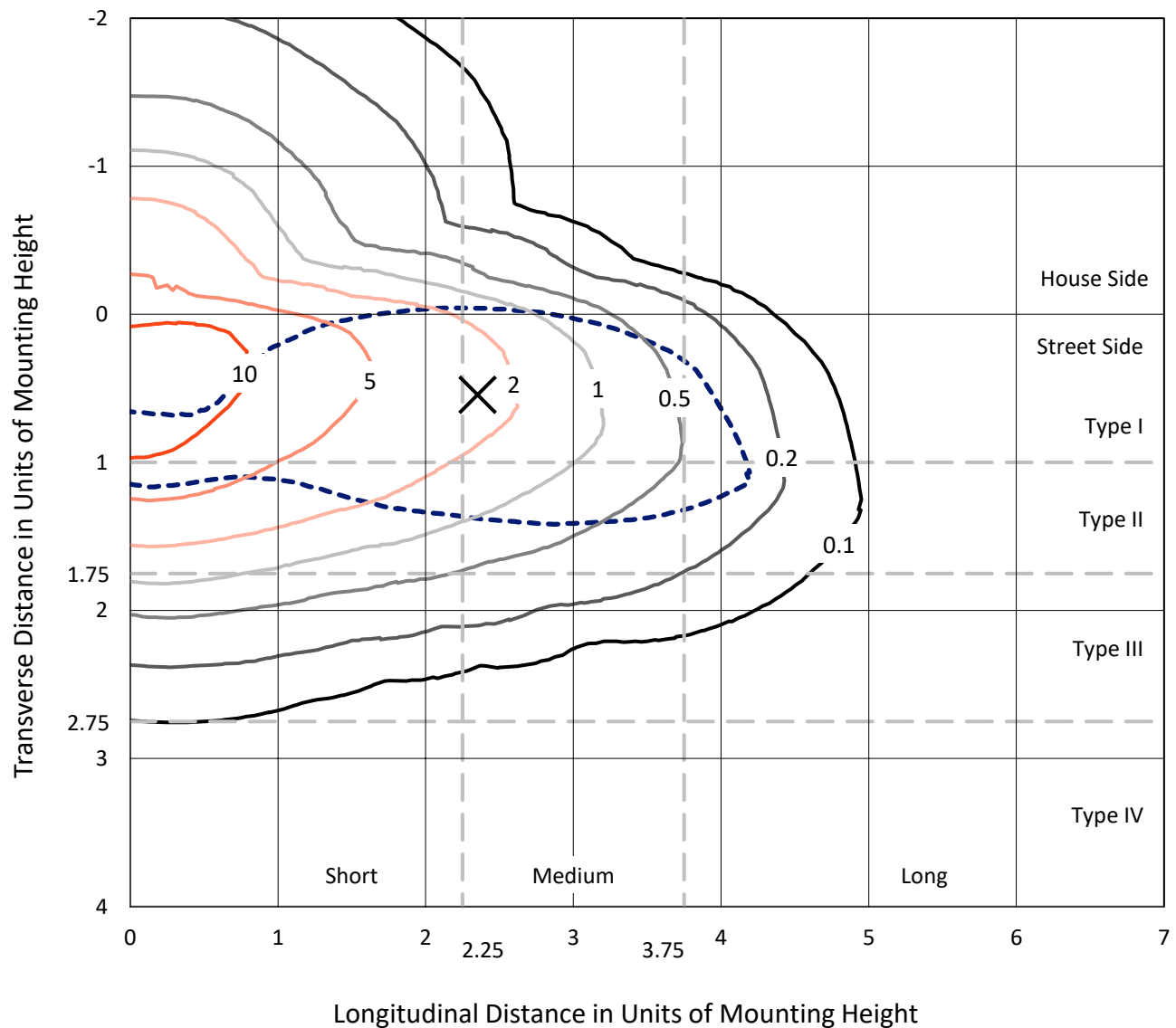


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Iso-Footcandle Lines of Horizontal Illumination

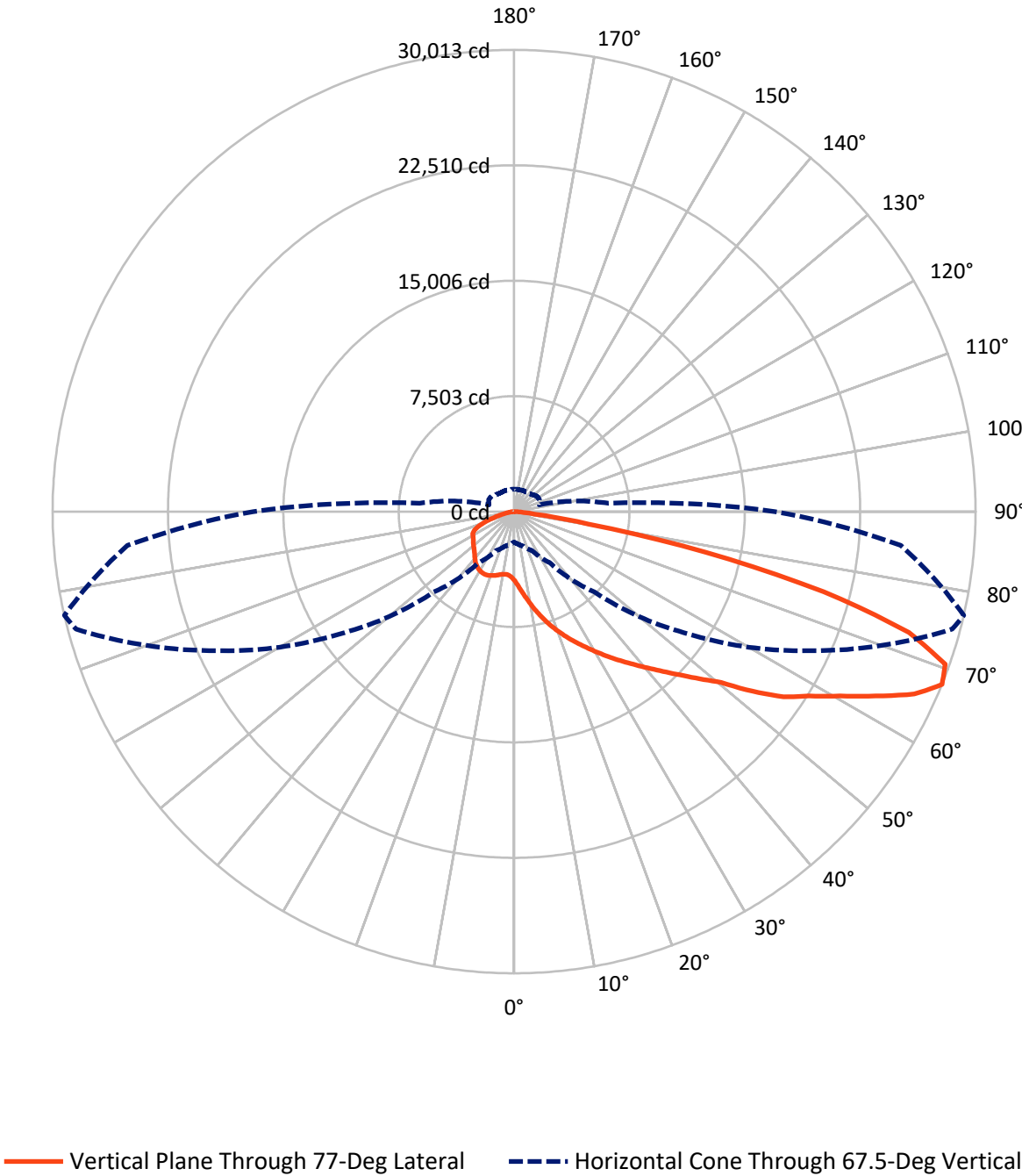
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 14 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	7237.1	0.0	7237.1
	% Fixture	18.9	0.0	18.9
Street Side	Lumens	31022.0	0.0	31022.0
	% Fixture	81.1	0.0	81.1
Total	Lumens	38259.1	0.0	38259.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	481.2	1.3
10°-20°	1728.6	4.5
20°-30°	3263.8	8.5
30°-40°	5257.9	13.7
40°-50°	7191.9	18.8
50°-60°	8112.5	21.2
60°-70°	7572.0	19.8
70°-80°	4150.7	10.8
80°-90°	500.7	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°	38259.1	100.0
0°-180°	38259.1	100.0

Coefficient of Utilization



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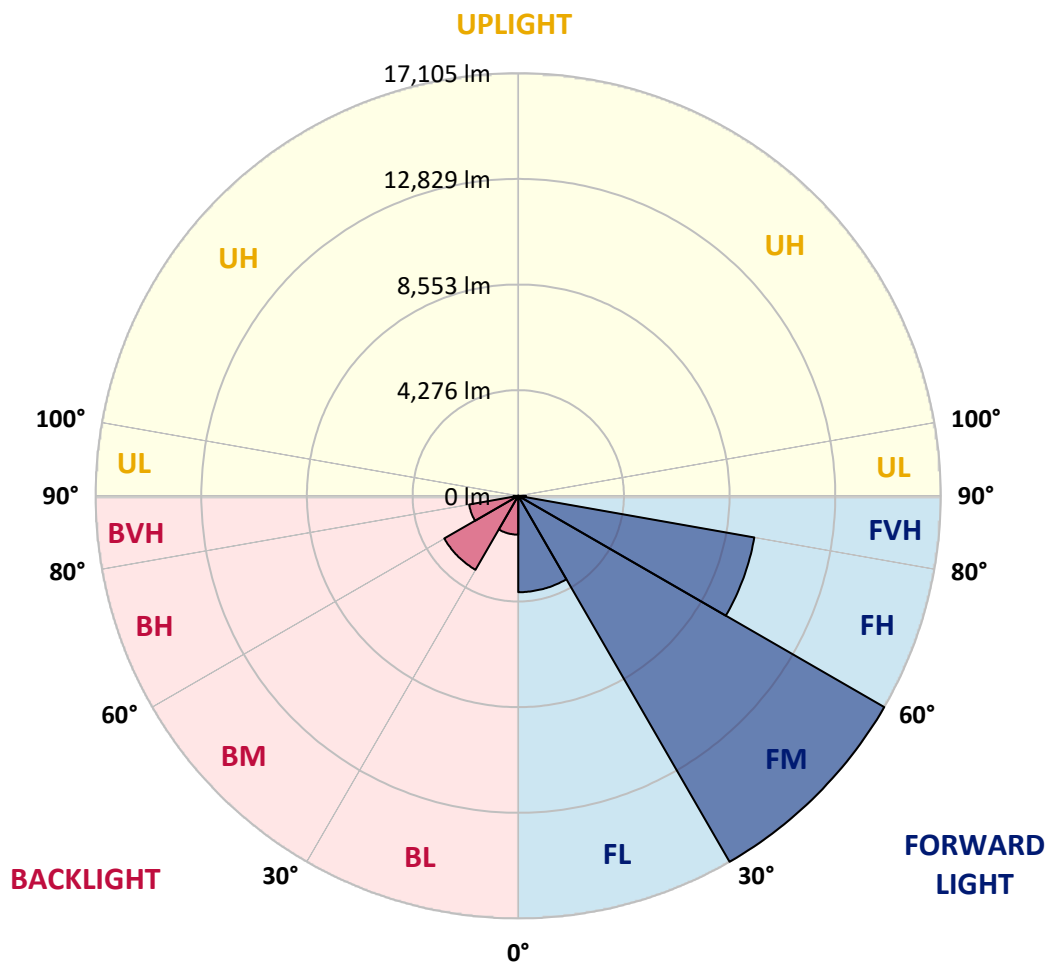
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3900.0	10.2			
FM	(30°-60°)	17105.2	44.7			
FH	(60°-80°)	9703.6	25.4			G4/12000
FVH	(80°-90°)	313.1	0.8			G3/500
BL	(0°-30°)	1573.5	4.1	B3/2500		
BM	(30°-60°)	3457.0	9.0	B3/5000		
BH	(60°-80°)	2019.0	5.3	B3/2500		G3/2500
BVH	(80°-90°)	187.6	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-G4

Type II Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77°	85°
0°	4489.0	4489.0	4489.0	4489.0	4489.0	4489.0	4489.0	4489.0	4489.0	4489.0	4489.0
2.5°	5620.6	5660.2	5610.7	5610.7	5444.8	5358.0	5192.0	5065.7	4838.5	4799.0	4649.0
5°	6643.6	6693.0	6623.9	6594.2	6398.8	6219.0	5940.6	5666.0	5261.2	5219.7	4866.2
7.5°	7435.6	7498.8	7437.5	7405.9	7232.2	7030.7	6704.8	6321.7	5751.0	5670.0	5158.5
10°	8081.4	8091.2	8071.5	8083.4	7947.0	7781.2	7447.4	7001.1	6288.2	6177.6	5512.0
12.5°	8446.7	8492.1	8531.7	8602.7	8579.0	8476.3	8176.1	7642.9	6856.9	6714.7	5897.1
15°	8618.5	8697.5	8786.4	8950.3	9082.6	9108.4	8879.3	8332.2	7435.6	7263.8	6286.1
17.5°	8679.8	8754.8	8895.1	9132.0	9416.4	9607.9	9505.2	9001.7	8008.3	7810.8	6695.0
20°	8989.9	9011.6	9096.5	9321.7	9629.7	9947.6	10024.7	9645.5	8575.0	8351.9	7117.6
22.5°	9653.3	9610.0	9633.7	9736.4	9957.6	10265.6	10441.4	10214.2	9157.7	8901.0	7544.2
25°	10749.5	10623.1	10496.7	10378.2	10490.8	10664.5	10864.0	10783.0	9767.9	9442.1	7974.7
27.5°	12133.8	11979.9	11701.4	11312.3	11176.1	11237.3	11326.1	11310.4	10332.7	10003.0	8419.0
30°	13496.6	13316.9	12985.1	12422.2	12062.8	11900.9	11833.7	11788.3	10947.0	10595.4	8867.4
32.5°	14584.7	14442.6	14116.7	13486.7	12965.3	12688.9	12465.6	12303.7	11588.9	11237.3	9341.3
35°	15536.6	15404.3	15031.1	14343.8	13777.0	13482.7	13190.5	12844.9	12256.3	11900.9	9850.9
37.5°	16405.6	16273.3	15761.8	15046.9	14476.2	14272.7	14012.1	13425.4	12925.9	12590.1	10390.0
40°	16954.6	16925.0	16447.1	15637.4	15045.0	14944.2	14857.3	14099.0	13668.4	13356.4	10982.5
42.5°	17094.8	17160.0	16780.9	16115.4	15550.5	15469.5	15673.0	14861.3	14501.8	14203.6	11653.9
45°	16757.2	16944.8	16695.9	16243.7	15909.9	15866.5	16395.8	15694.7	15424.1	15151.6	12463.7
47.5°	15902.1	16220.0	16117.3	16054.1	16006.7	16194.3	17031.7	16579.5	16468.9	16231.8	13387.9
50°	14176.0	14778.3	14958.0	15357.0	15815.1	16449.1	17610.3	17545.1	17689.3	17450.4	14513.7
52.5°	11191.9	12021.3	13064.0	14063.4	15226.6	16364.1	18246.2	18931.5	19539.8	19409.5	16302.9
55°	9238.6	9611.9	10413.7	12246.5	14085.1	16006.7	18532.6	20051.4	21376.5	21259.9	17659.7
57.5°	7737.7	8071.5	8565.2	10095.7	12359.0	15195.0	18710.4	20734.6	22634.6	22622.7	18998.7
60°	6128.2	6481.7	6987.2	8071.5	10342.7	13792.8	18670.9	21512.8	24240.1	24338.8	20631.9
62.5°	4311.3	4700.3	5261.2	6272.4	8282.8	11975.9	17865.1	22075.6	26130.1	26398.7	22597.0
65°	2834.0	3090.8	3513.4	4386.3	6171.6	9639.6	16326.6	22148.7	28152.4	28606.7	24441.5
67.5°	1986.8	2085.5	2334.3	2808.3	4068.3	7392.1	13875.7	21392.3	29501.3	30012.8	25241.4
70°	1550.3	1599.7	1726.1	1915.6	2555.5	4970.8	10632.9	19425.3	29213.0	29746.2	24406.1
72.5°	1339.0	1386.4	1433.8	1457.4	1714.2	3069.1	7202.6	16241.7	26497.5	26858.9	21220.5
75°	1214.6	1226.4	1265.9	1258.0	1307.4	1990.8	4157.2	11833.7	20906.5	20782.1	15665.1
77.5°	1021.0	1036.8	1102.0	1092.1	1161.2	1360.7	2158.5	7637.0	13553.9	12708.6	8719.3
80°	865.0	872.9	944.0	932.1	1009.2	985.4	1102.0	3892.5	5749.0	4870.2	2514.1
82.5°	300.2	371.3	720.9	742.6	770.2	596.4	635.9	1587.8	1755.7	1344.9	527.3
85°	146.2	156.0	367.4	521.4	519.4	300.2	310.1	566.8	553.0	434.5	175.8
87.5°	23.7	29.6	43.5	203.5	162.0	79.0	106.6	110.6	114.6	98.7	39.5
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°	4489.0	4489.0	4489.0	4489.0	4489.0	4489.0	4489.0	4489.0	4489.0	4489.0	4489.0
2.5°	4538.4	4439.6	4232.2	4040.7	3890.6	3746.4	3665.4	3596.3	3556.9	3549.0	3549.0
5°	4660.8	4457.4	4080.2	3762.3	3554.8	3400.8	3319.9	3268.5	3242.8	3227.0	3225.1
7.5°	4836.6	4538.4	4001.2	3639.8	3422.6	3312.0	3270.5	3262.6	3260.6	3262.6	3268.5
10°	5079.5	4670.7	3993.3	3610.2	3428.4	3367.2	3365.3	3367.2	3375.1	3377.1	3379.1
12.5°	5342.2	4806.9	4024.9	3635.8	3503.6	3469.9	3464.0	3462.0	3468.0	3471.9	3473.9
15°	5628.5	4986.6	4078.2	3691.1	3586.5	3550.9	3545.0	3533.2	3531.1	3529.2	3527.2
17.5°	5922.8	5164.4	4137.4	3750.4	3639.8	3590.4	3568.6	3541.1	3519.3	3513.4	3519.3
20°	6221.0	5340.1	4178.9	3780.0	3643.8	3574.6	3531.1	3483.8	3446.3	3424.5	3432.4
22.5°	6539.0	5523.8	4204.5	3772.1	3608.2	3513.4	3434.4	3379.1	3321.8	3284.3	3286.3
25°	6849.0	5683.8	4202.6	3730.6	3539.0	3418.6	3317.8	3246.8	3167.8	3128.3	3128.3
27.5°	7147.2	5827.9	4153.3	3657.5	3440.3	3306.0	3185.5	3100.6	3023.6	2986.0	2984.1
30°	7455.3	5948.5	4076.2	3550.9	3323.8	3175.7	3043.3	2970.2	2901.2	2865.6	2863.6
32.5°	7761.4	6059.1	3967.6	3418.6	3189.5	3047.3	2916.9	2849.8	2808.3	2808.3	2810.3
35°	8085.3	6136.1	3823.5	3264.5	3047.3	2911.0	2808.3	2768.8	2764.8	2741.2	2735.2
37.5°	8426.9	6185.5	3647.7	3106.6	2907.1	2778.7	2747.1	2699.7	2660.2	2608.8	2600.9
40°	8786.4	6234.8	3436.3	2942.7	2759.0	2687.9	2674.0	2610.9	2498.2	2371.8	2354.1
42.5°	9222.8	6268.4	3217.2	2778.7	2603.0	2579.2	2599.0	2490.3	2310.7	2215.8	2217.8
45°	9728.5	6323.6	3015.7	2616.7	2443.0	2443.0	2525.9	2383.7	2235.6	2176.4	2186.2
47.5°	10384.1	6452.1	2828.1	2439.0	2294.9	2334.3	2364.0	2255.3	2172.4	2099.3	2097.4
50°	11332.1	6760.2	2634.6	2259.3	2182.3	2261.3	2219.8	2156.6	2059.8	2000.6	1994.6
52.5°	12509.1	6941.8	2462.8	2097.4	2085.5	2164.5	2105.2	2046.0	1972.9	1894.0	1878.1
55°	13311.0	6975.4	2318.5	1978.9	2020.4	2012.5	1990.8	1937.4	1897.9	1793.2	1795.2
57.5°	14207.5	7042.6	2200.1	1907.7	1978.9	1891.9	1884.1	1838.6	1787.3	1716.2	1692.5
60°	15280.0	7147.2	2097.4	1880.2	1943.3	1813.0	1773.5	1755.7	1704.4	1668.8	1678.6
62.5°	16449.1	7242.0	1992.7	1884.1	1901.9	1735.9	1676.7	1670.7	1639.2	1627.3	1627.3
65°	17247.0	6983.3	1862.3	1880.2	1836.7	1656.9	1581.9	1579.9	1554.3	1550.3	1548.4
67.5°	16968.5	6163.7	1686.5	1824.8	1769.6	1578.0	1495.0	1487.1	1453.6	1455.5	1455.5
70°	15574.2	4994.5	1443.7	1688.6	1686.5	1506.9	1404.1	1378.5	1333.1	1341.0	1348.9
72.5°	12959.4	3701.0	1117.8	1461.4	1554.3	1441.7	1299.5	1258.0	1200.8	1208.7	1206.6
75°	9359.2	2516.1	813.6	1111.9	1352.8	1364.7	1196.8	1125.7	1056.6	1068.5	1072.4
77.5°	4789.2	1425.9	598.4	766.3	1062.5	1240.2	1104.0	1009.2	993.4	1104.0	1088.1
80°	1562.2	714.9	414.7	537.2	697.1	1015.1	967.7	859.1	855.2	880.8	756.3
82.5°	466.1	302.2	266.6	353.5	385.1	778.1	835.4	649.7	558.9	588.6	608.2
85°	160.0	146.2	152.1	175.8	183.7	456.2	584.6	430.5	406.8	448.3	442.4
87.5°	37.5	51.4	43.5	39.5	39.5	110.6	227.1	179.7	248.9	165.8	160.0
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)