

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: P967390

Luminaire Tested: **NAV-SB4D-835-U-T2R**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P967390
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-835-U-T2R
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3500K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II
ROADWAY OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 39493.2 lumens
Efficiency: N/A
Efficacy: 134.5 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

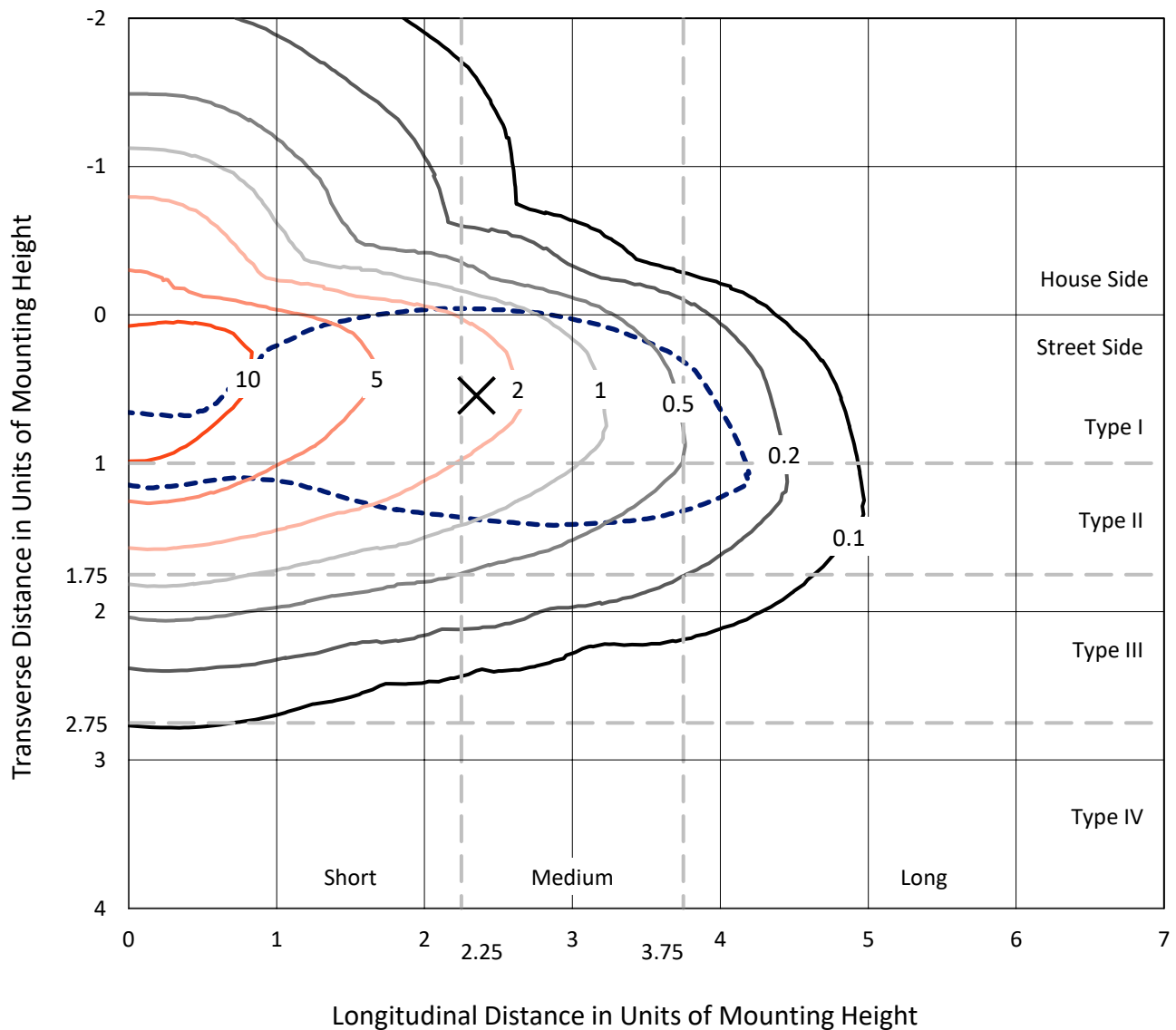


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Iso-Footcandle Lines of Horizontal Illumination

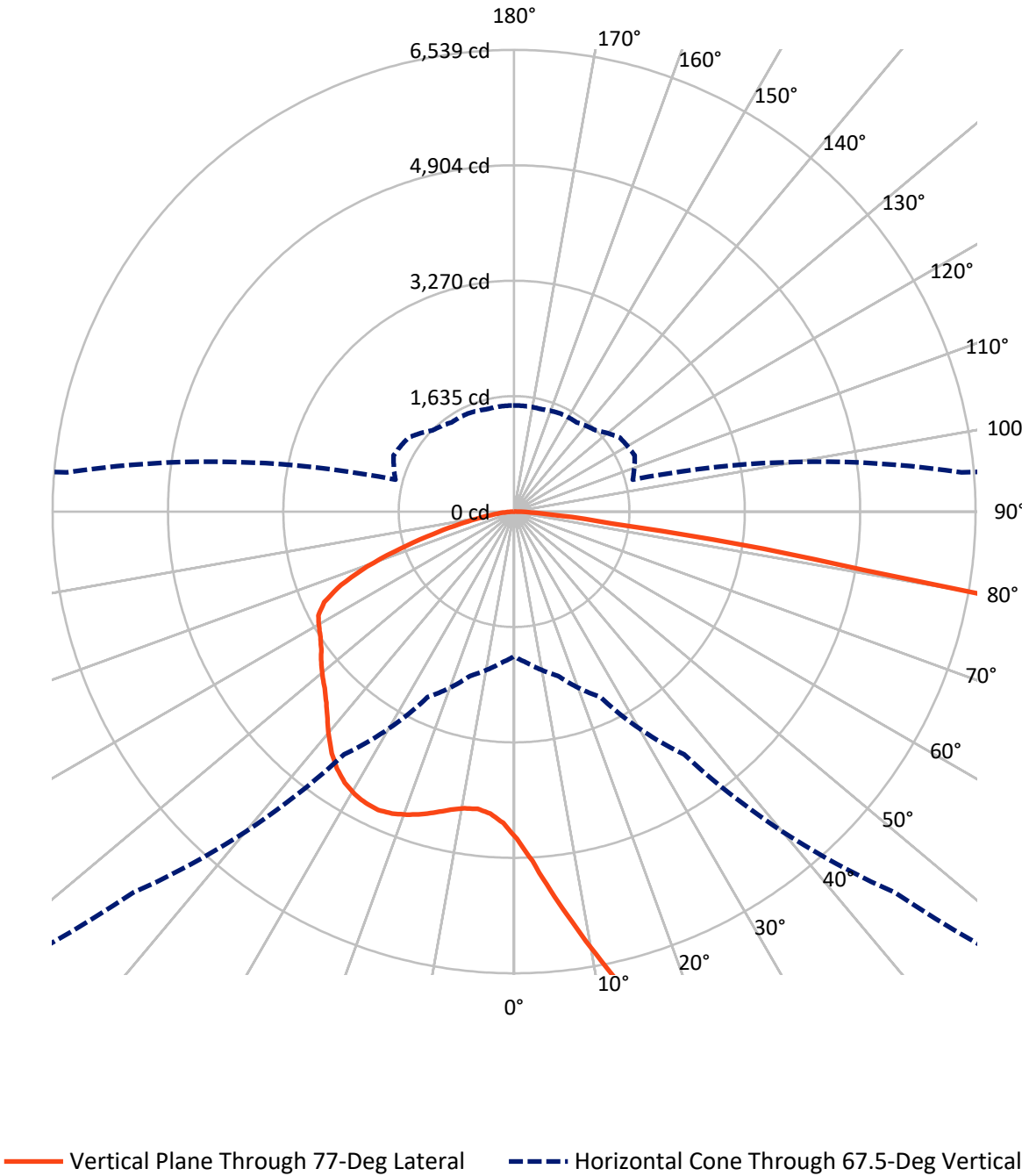
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 14.5 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	7470.5	0.0	7470.5
	% Fixture	18.9	0.0	18.9
Street Side	Lumens	32022.7	0.0	32022.7
	% Fixture	81.1	0.0	81.1
Total	Lumens	39493.2	0.0	39493.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	496.7	1.3
10°-20°	1784.4	4.5
20°-30°	3369.1	8.5
30°-40°	5427.5	13.7
40°-50°	7423.8	18.8
50°-60°	8374.1	21.2
60°-70°	7816.2	19.8
70°-80°	4284.6	10.8
80°-90°	516.8	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°	39493.2	100.0
0°-180°	39493.2	100.0

Coefficient of Utilization



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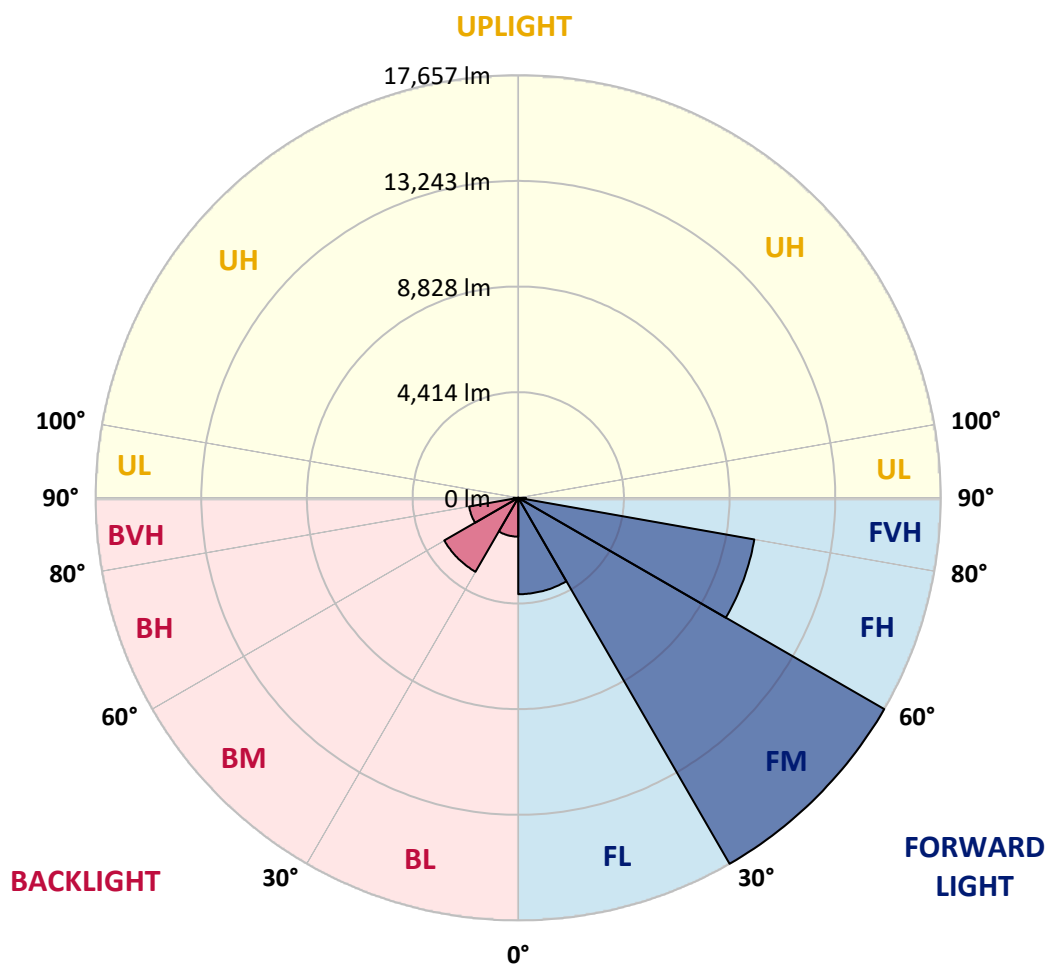
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	4025.8	10.2			
FM	(30°-60°)	17657.0	44.7			
FH	(60°-80°)	10016.7	25.4			G4/12000
FVH	(80°-90°)	323.2	0.8			G3/500
BL	(0°-30°)	1624.3	4.1	B3/2500		
BM	(30°-60°)	3568.5	9.0	B3/5000		
BH	(60°-80°)	2084.2	5.3	B3/2500		G3/2500
BVH	(80°-90°)	193.6	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°	4633.8	4633.8	4633.8	4633.8	4633.8	4633.8	4633.8	4633.8	4633.8	4633.8	4633.8
2.5°	5801.9	5842.7	5791.8	5791.8	5620.5	5530.8	5359.5	5229.0	4994.6	4953.8	4798.9
5°	6858.0	6908.9	6837.6	6806.9	6605.1	6419.6	6132.2	5848.8	5430.9	5388.1	5023.1
7.5°	7675.4	7740.6	7677.5	7644.9	7465.4	7257.5	6921.1	6525.7	5936.5	5852.9	5324.9
10°	8342.1	8352.2	8331.8	8344.1	8203.4	8032.2	7687.6	7226.9	6491.0	6376.8	5689.8
12.5°	8719.2	8766.1	8806.8	8880.2	8855.8	8749.8	8439.8	7889.4	7078.1	6931.4	6087.4
15°	8896.6	8978.1	9069.8	9239.0	9375.6	9402.1	9165.7	8601.0	7675.4	7498.1	6489.0
17.5°	8959.7	9037.2	9181.9	9426.6	9720.2	9917.9	9811.9	9292.0	8266.6	8062.8	6911.0
20°	9279.8	9302.2	9389.9	9622.3	9940.3	10268.6	10348.0	9956.6	8851.7	8621.4	7347.2
22.5°	9964.7	9919.9	9944.3	10050.4	10278.7	10596.8	10778.2	10543.8	9453.1	9188.1	7787.5
25°	11096.2	10965.8	10835.3	10713.0	10829.1	11008.6	11214.4	11130.9	10083.0	9746.6	8232.0
27.5°	12525.3	12366.3	12078.8	11677.2	11536.6	11599.7	11691.5	11675.2	10666.0	10325.6	8690.7
30°	13931.9	13746.4	13403.9	12823.0	12451.9	12284.7	12215.4	12168.5	11300.1	10937.2	9153.5
32.5°	15055.2	14908.4	14572.0	13921.8	13383.5	13098.2	12867.7	12700.6	11962.7	11599.7	9642.7
35°	16037.9	15901.2	15515.9	14806.5	14221.5	13917.7	13616.0	13259.2	12651.7	12284.7	10168.6
37.5°	16934.8	16798.2	16270.2	15532.2	14943.1	14733.1	14464.0	13858.5	13342.7	12996.2	10725.2
40°	17501.6	17471.0	16977.6	16141.8	15530.2	15426.2	15336.6	14553.7	14109.3	13787.2	11336.8
42.5°	17646.3	17713.5	17322.2	16635.1	16052.1	15968.5	16178.5	15340.7	14969.6	14661.8	12029.9
45°	17297.7	17491.3	17234.5	16767.7	16423.2	16378.3	16924.6	16200.9	15921.6	15640.3	12865.7
47.5°	16415.0	16743.2	16637.2	16572.0	16523.0	16716.7	17581.1	17114.2	17000.0	16755.5	13819.8
50°	14633.2	15255.0	15440.5	15852.3	16325.3	16979.6	18178.4	18111.1	18260.0	18013.2	14981.8
52.5°	11552.9	12409.1	13485.5	14517.0	15717.8	16892.0	18834.8	19542.2	20170.2	20035.6	16828.9
55°	9536.7	9922.0	10749.7	12641.5	14539.4	16523.0	19130.4	20698.1	22066.0	21945.8	18229.3
57.5°	7987.3	8331.8	8841.5	10421.4	12757.7	15685.2	19313.9	21403.4	23364.7	23352.4	19611.5
60°	6325.9	6690.8	7212.6	8331.8	10676.3	14237.8	19273.1	22206.7	25022.0	25124.0	21297.4
62.5°	4450.3	4851.9	5430.9	6474.6	8549.9	12362.2	18441.4	22787.7	26973.0	27250.2	23325.9
65°	2925.5	3190.4	3626.8	4527.7	6370.7	9950.5	16853.3	22863.1	29060.5	29529.4	25230.0
67.5°	2050.8	2152.8	2409.7	2898.9	4199.5	7630.5	14323.4	22082.3	30453.0	30980.9	26055.6
70°	1600.3	1651.3	1781.8	1977.4	2637.9	5131.3	10975.9	20051.9	30155.3	30705.7	25193.3
72.5°	1382.2	1431.1	1480.0	1504.5	1769.6	3168.0	7434.8	16765.6	27352.1	27725.2	21905.0
75°	1253.8	1266.0	1306.8	1298.6	1349.6	2054.9	4291.3	12215.4	21580.9	21452.4	16170.3
77.5°	1054.0	1070.3	1137.5	1127.4	1198.7	1404.7	2228.2	7883.4	13991.0	13118.6	9000.5
80°	892.9	901.1	974.5	962.3	1041.7	1017.3	1137.5	4018.1	5934.4	5027.2	2595.2
82.5°	309.9	383.2	744.0	766.5	795.1	615.6	656.4	1639.1	1812.3	1388.3	544.3
85°	150.9	161.0	379.1	538.2	536.2	309.9	320.1	585.1	570.8	448.5	181.4
87.5°	24.5	30.5	44.9	210.0	167.2	81.6	110.1	114.2	118.3	101.9	40.8
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°	4633.8	4633.8	4633.8	4633.8	4633.8	4633.8	4633.8	4633.8	4633.8	4633.8	4633.8
2.5°	4684.8	4582.8	4368.8	4171.0	4016.1	3867.2	3783.7	3712.3	3671.6	3663.5	3663.5
5°	4811.1	4601.1	4211.8	3883.6	3669.5	3510.5	3426.9	3373.9	3347.4	3331.1	3329.1
7.5°	4992.6	4684.8	4130.2	3757.1	3533.0	3418.8	3375.9	3367.8	3365.8	3367.8	3373.9
10°	5243.3	4821.3	4122.1	3726.6	3539.0	3475.9	3473.8	3475.9	3484.0	3486.0	3488.1
12.5°	5514.5	4962.0	4154.7	3753.1	3616.5	3581.9	3575.7	3573.7	3579.8	3583.9	3586.0
15°	5810.1	5147.5	4209.8	3810.2	3702.1	3665.4	3659.4	3647.1	3645.1	3643.1	3641.0
17.5°	6113.8	5331.0	4270.9	3871.3	3757.1	3706.2	3683.7	3655.3	3632.8	3626.8	3632.8
20°	6421.6	5512.4	4313.7	3902.0	3761.2	3689.9	3645.1	3596.1	3557.4	3534.9	3543.1
22.5°	6749.8	5702.0	4340.3	3893.8	3724.5	3626.8	3545.2	3488.1	3428.9	3390.2	3392.2
25°	7069.9	5867.1	4338.2	3850.9	3653.2	3528.9	3424.8	3351.4	3270.0	3229.2	3229.2
27.5°	7377.7	6015.9	4287.3	3775.5	3551.3	3412.6	3288.3	3200.7	3121.1	3082.4	3080.3
30°	7695.8	6140.4	4207.7	3665.4	3431.0	3278.1	3141.5	3066.1	2994.7	2958.0	2956.0
32.5°	8011.8	6254.4	4095.6	3528.9	3292.4	3145.6	3011.0	2941.7	2898.9	2898.9	2901.0
35°	8346.1	6334.0	3946.8	3369.8	3145.6	3004.9	2898.9	2858.1	2854.1	2829.6	2823.5
37.5°	8698.8	6384.9	3765.3	3206.7	3000.9	2868.4	2835.8	2786.8	2746.0	2693.0	2684.9
40°	9069.8	6436.0	3547.2	3037.6	2848.0	2774.6	2760.3	2695.0	2578.9	2448.4	2430.1
42.5°	9520.4	6470.6	3320.9	2868.4	2686.9	2662.4	2682.8	2570.7	2385.2	2287.3	2289.3
45°	10042.2	6527.7	3112.9	2701.2	2521.8	2521.8	2607.4	2460.6	2307.7	2246.6	2256.7
47.5°	10719.0	6660.1	2919.3	2517.7	2368.9	2409.7	2440.2	2328.1	2242.5	2167.1	2165.0
50°	11697.6	6978.2	2719.5	2332.2	2252.6	2334.2	2291.4	2226.2	2126.3	2065.2	2059.0
52.5°	12912.6	7165.8	2542.2	2165.0	2152.8	2234.3	2173.2	2112.0	2036.6	1955.1	1938.7
55°	13740.3	7200.4	2393.4	2042.7	2085.5	2077.4	2054.9	1999.9	1959.1	1851.0	1853.1
57.5°	14665.8	7269.7	2271.0	1969.3	2042.7	1953.0	1944.8	1898.0	1845.0	1771.6	1747.1
60°	15772.8	7377.7	2165.0	1940.7	2006.0	1871.4	1830.6	1812.3	1759.3	1722.6	1732.9
62.5°	16979.6	7475.6	2057.0	1944.8	1963.2	1791.9	1730.8	1724.7	1692.1	1679.9	1679.9
65°	17803.2	7208.5	1922.4	1940.7	1895.9	1710.4	1632.9	1630.9	1604.4	1600.3	1598.3
67.5°	17515.8	6362.6	1741.0	1883.6	1826.7	1628.8	1543.2	1535.0	1500.4	1502.4	1502.4
70°	16076.6	5155.6	1490.2	1743.0	1741.0	1555.4	1449.5	1423.0	1376.1	1384.3	1392.4
72.5°	13377.5	3820.4	1153.8	1508.6	1604.4	1488.2	1341.4	1298.6	1239.5	1247.6	1245.6
75°	9661.0	2597.2	839.9	1147.7	1396.5	1408.7	1235.4	1162.0	1090.7	1102.9	1107.0
77.5°	4943.7	1471.9	617.7	791.0	1096.8	1280.2	1139.6	1041.7	1025.4	1139.6	1123.3
80°	1612.5	738.0	428.1	554.5	719.7	1047.9	999.0	886.8	882.7	909.2	780.7
82.5°	481.1	311.9	275.2	364.9	397.5	803.2	862.3	670.7	577.0	607.5	627.9
85°	165.1	150.9	156.9	181.4	189.6	470.9	603.4	444.4	419.9	462.8	456.6
87.5°	38.7	53.0	44.9	40.8	40.8	114.2	234.4	185.5	256.9	171.3	165.1
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)