

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: P967313

Luminaire Tested: **NAV-SB4D-827-U-AFL**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P967313
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-14)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4D-827-U-AFL
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 2700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND AUTOMOTIVE
FRONTLINE OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 36969.7 lumens
Efficiency: N/A
Efficacy: 125.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B3 - U0 - G3

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

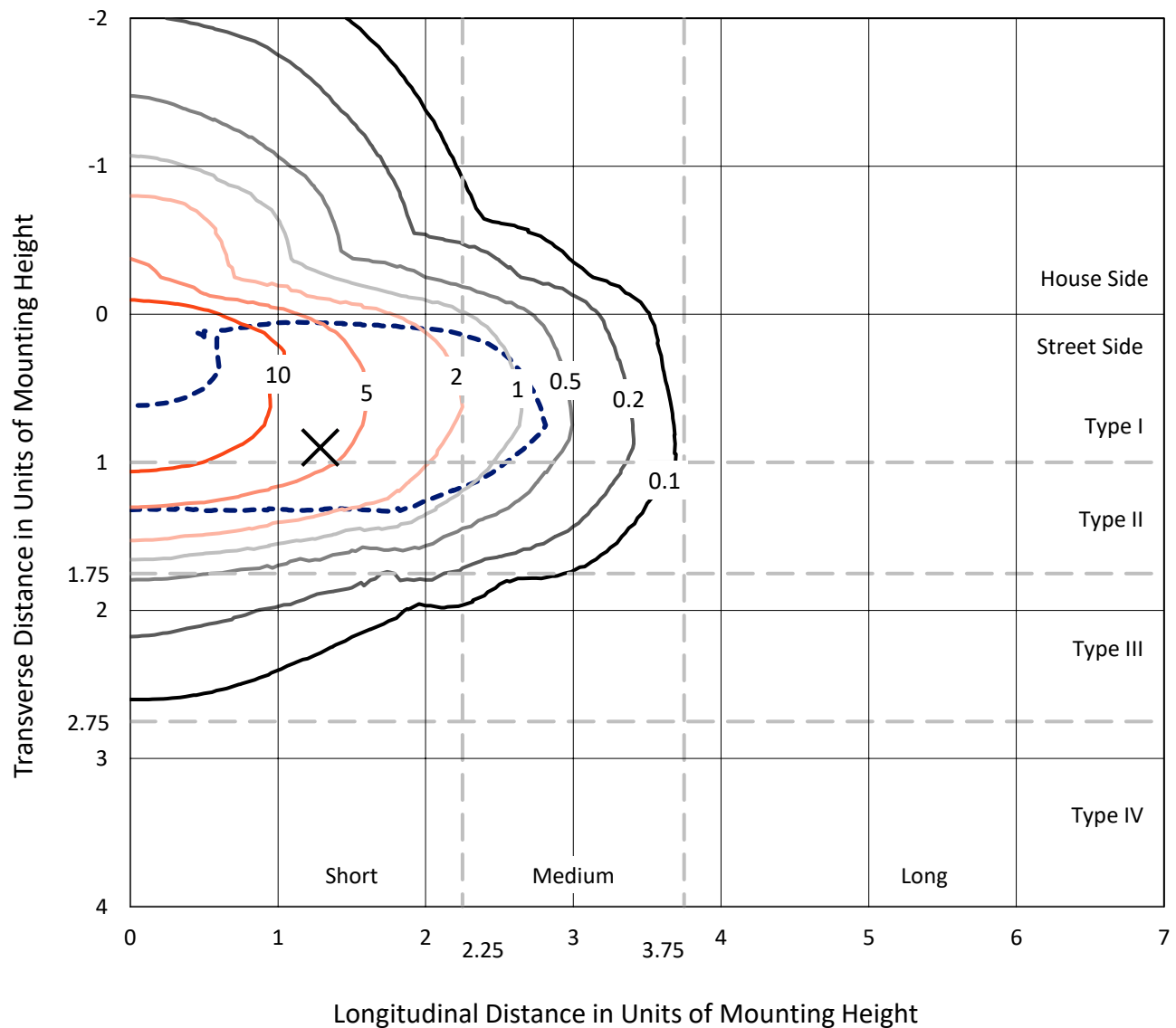


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Iso-Footcandle Lines of Horizontal Illumination

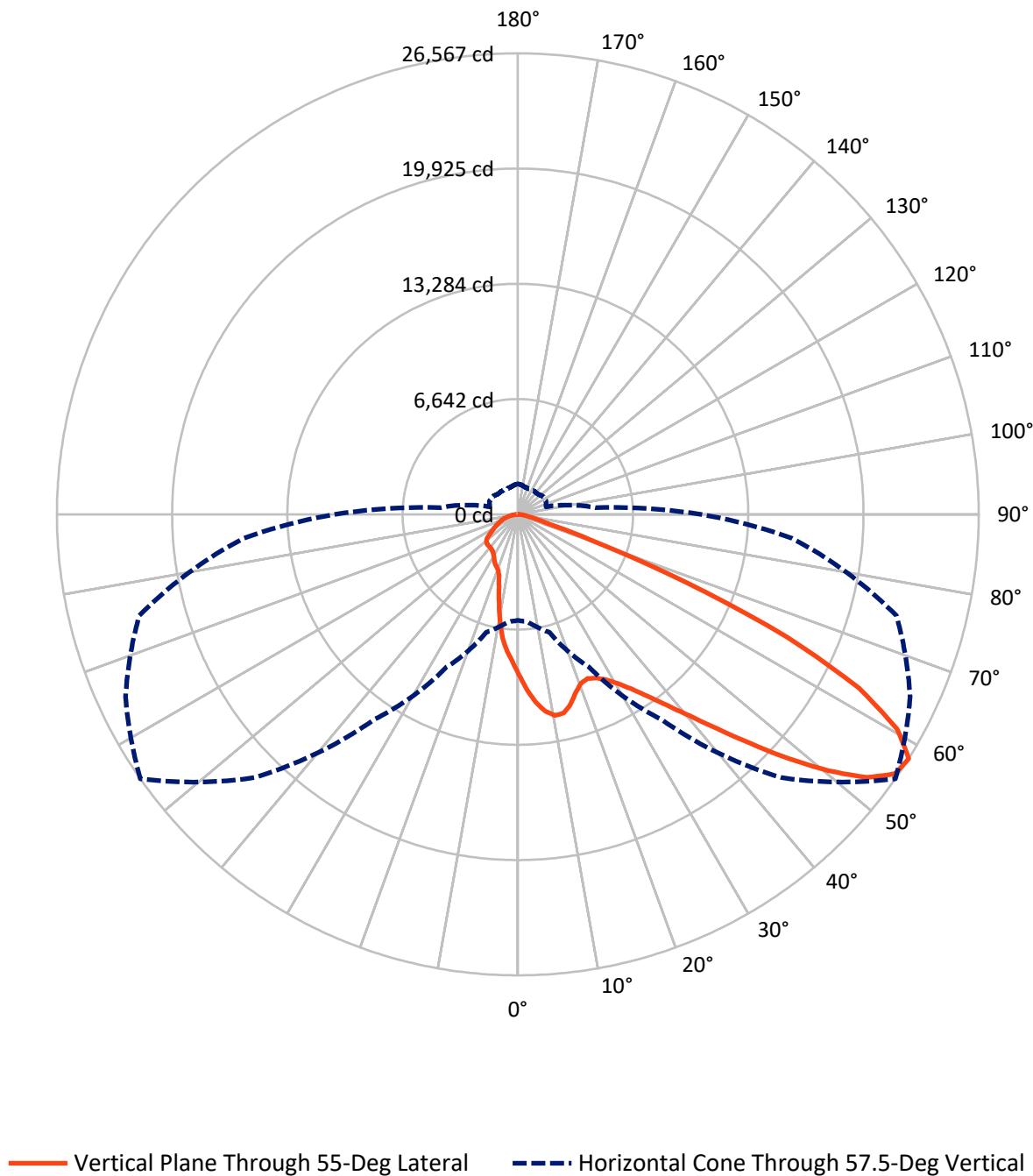
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 17.9 fc
Type II - Short - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6689.5	0.0	6689.5
	% Fixture	18.1	0.0	18.1
Street Side	Lumens	30280.2	0.0	30280.2
	% Fixture	81.9	0.0	81.9
Total	Lumens	36969.7	0.0	36969.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	859.6	2.3
10°-20°	2169.6	5.9
20°-30°	3462.1	9.4
30°-40°	5481.4	14.8
40°-50°	8389.9	22.7
50°-60°	8986.3	24.3
60°-70°	5653.3	15.3
70°-80°	1671.8	4.5
80°-90°	295.6	0.8
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°	36969.7	100.0
0°-180°	36969.7	100.0

Coefficient of Utilization



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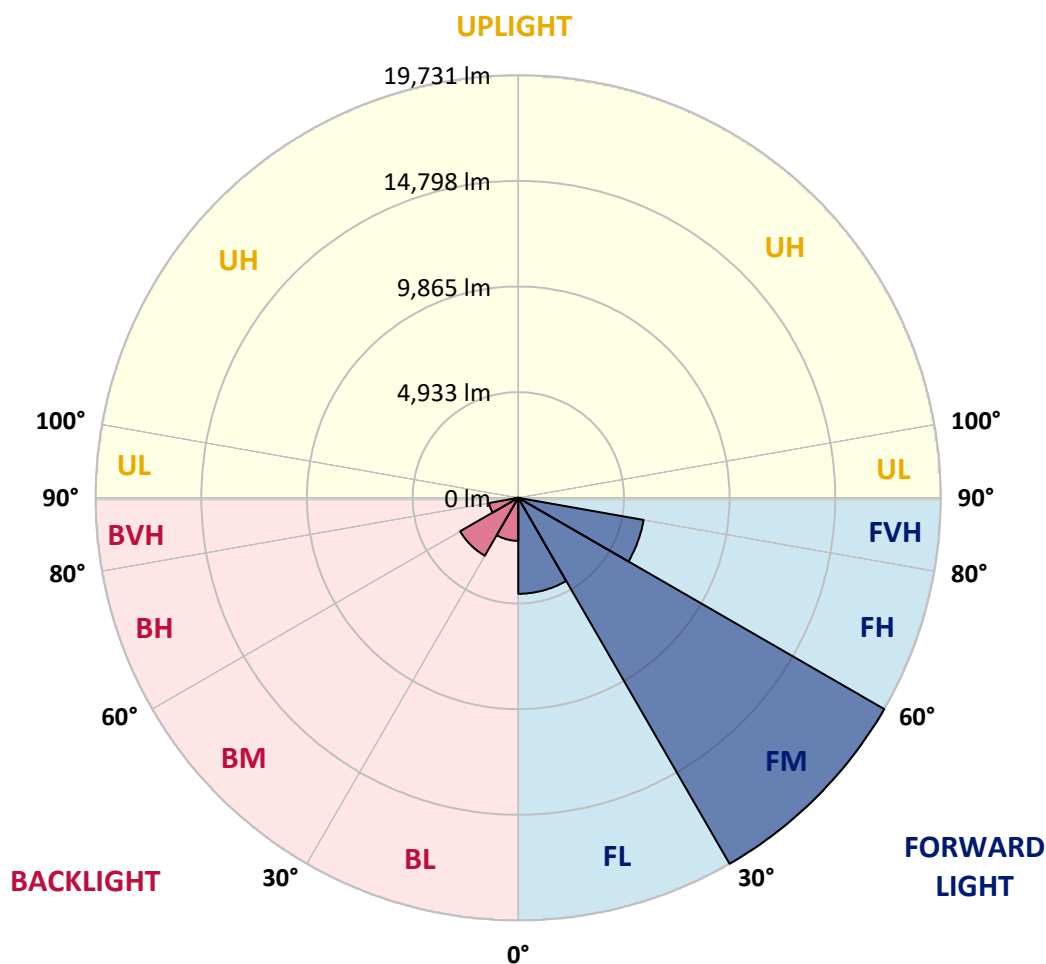
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	4480.7	12.1			
FM	(30°-60°)	19731.0	53.4			
FH	(60°-80°)	5943.6	16.1			G3/7500
FVH	(80°-90°)	124.9	0.3			G2/225
BL	(0°-30°)	2010.6	5.4	B3/2500		
BM	(30°-60°)	3126.6	8.5	B3/5000		
BH	(60°-80°)	1381.5	3.7	B3/2500		G3/2500
BVH	(80°-90°)	170.7	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-G3

Type II Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	9263.4	9263.4	9263.4	9263.4	9263.4	9263.4	9263.4	9263.4	9263.4	9263.4	9263.4
2.5°	10628.0	10620.3	10662.4	10519.1	10421.6	10289.7	10115.8	9894.1	9655.2	9402.9	9294.0
5°	11585.5	11518.5	11562.5	11455.5	11348.5	11149.7	10891.8	10530.5	10089.1	9586.4	9318.8
7.5°	11434.5	11388.6	11501.4	11597.0	11677.2	11652.4	11463.2	11084.8	10515.2	9785.2	9397.2
10°	10217.1	10165.4	10324.1	10654.8	11140.2	11562.5	11791.9	11556.8	10951.0	10003.1	9473.7
12.5°	9143.0	9118.2	9223.3	9490.9	10029.8	10840.1	11749.8	11969.6	11403.9	10261.1	9576.9
15°	8684.3	8653.8	8720.6	8856.3	9200.3	9955.2	11367.6	12252.4	11849.2	10559.1	9741.2
17.5°	8583.0	8548.6	8577.3	8648.0	8869.7	9445.0	10790.4	12391.9	12313.6	10891.8	9878.8
20°	8770.3	8741.6	8745.5	8741.6	8896.5	9353.2	10389.1	12338.4	12718.8	11197.5	10012.6
22.5°	9223.3	9175.5	9177.4	9076.1	9160.2	9513.7	10283.9	12195.1	13080.0	11465.0	10113.9
25°	9960.9	9875.0	9892.2	9634.2	9611.2	9873.1	10448.3	12084.2	13439.3	11679.2	10132.9
27.5°	10970.1	10872.6	10821.0	10436.9	10253.4	10383.4	10782.8	12122.5	13779.5	11864.5	10085.2
30°	12231.4	12112.9	12007.9	11463.2	11130.6	11082.8	11302.6	12374.8	14180.9	12059.4	10003.1
32.5°	13777.5	13640.0	13448.8	12726.4	12258.2	12007.9	11975.4	12823.9	14650.9	12307.9	9960.9
35°	15618.0	15438.3	15167.0	14232.4	13640.0	13127.8	12862.1	13471.8	15295.0	12682.4	10008.7
37.5°	17513.9	17311.3	17062.9	15950.5	15222.4	14467.5	13943.9	14350.9	16153.2	13190.8	10134.9
40°	19262.6	19035.2	18803.9	17814.0	17032.3	16122.5	15268.3	15463.3	17202.4	13798.6	10348.9
42.5°	20294.6	20126.5	20038.5	19503.4	18899.5	17976.3	16915.7	16781.9	18381.5	14498.1	10593.6
45°	20248.8	20180.0	20451.3	20673.0	20529.7	20017.5	18846.0	18240.2	19564.6	15103.9	10819.1
47.5°	19167.1	19212.9	19818.8	21064.9	21613.4	21880.9	21043.9	19671.6	20592.8	15556.8	10920.3
50°	16223.9	16262.0	17664.8	20352.0	21892.4	23400.2	23224.4	21068.7	21389.7	15834.0	10897.5
52.5°	13894.2	13919.0	14521.0	18238.2	20971.2	24164.8	25189.2	22385.5	21972.6	15910.5	10769.4
55°	10465.6	10551.6	11226.2	14308.9	18574.6	23558.9	26385.6	23742.4	22341.5	15918.0	10635.6
57.5°	6113.8	6207.5	7040.7	9712.5	14436.9	21447.1	26567.1	24946.4	22591.8	15857.0	10555.3
60°	2994.7	3034.9	3398.1	5104.7	8902.2	17378.2	25107.0	25529.3	22731.3	15824.5	10551.6
62.5°	2018.2	2012.5	2027.8	2518.9	4386.1	11165.0	22064.4	24508.8	22656.8	15700.2	10513.3
65°	1735.3	1714.3	1657.0	1767.8	2272.3	5106.7	17047.6	21462.4	22089.3	15388.7	10251.4
67.5°	1500.3	1502.1	1504.1	1469.6	1622.6	2356.5	10417.8	16906.1	20052.0	13913.2	9242.4
70°	1242.3	1259.4	1267.1	1267.1	1322.6	1546.1	4447.3	11587.4	15816.8	10908.9	7444.0
72.5°	1131.4	1095.1	1098.9	1079.8	1079.8	1177.3	1790.8	6568.7	9964.8	6136.8	4542.8
75°	923.1	946.1	949.9	936.4	892.5	898.2	1062.6	2755.9	4263.8	2545.7	2245.6
77.5°	796.9	796.9	804.6	795.1	760.7	672.7	709.0	1068.4	1450.6	1043.4	1121.9
80°	640.2	638.4	670.9	689.9	636.4	496.9	452.9	590.5	644.1	458.7	582.9
82.5°	311.5	330.7	460.6	525.6	483.5	359.3	277.2	367.0	344.0	202.5	261.8
85°	181.5	172.0	206.4	292.4	277.2	198.7	133.8	191.2	179.7	103.2	105.2
87.5°	57.3	53.5	42.0	99.4	80.3	55.5	36.3	55.5	49.7	23.0	23.0
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	9263.4	9263.4	9263.4	9263.4	9263.4	9263.4	9263.4	9263.4	9263.4	9263.4
2.5°	9158.3	8932.8	8709.2	8504.6	8380.4	8300.1	8219.9	8130.1	8095.7	8044.1
5°	9066.5	8630.8	8242.8	7908.4	7604.5	7365.6	7124.8	6929.9	6842.0	6901.2
7.5°	9013.0	8382.3	7784.2	7170.7	6580.1	6108.1	5697.2	5408.6	5278.6	5311.1
10°	8965.3	8101.4	7189.8	6220.8	5372.2	4787.5	4367.0	4147.3	4065.0	4082.3
12.5°	8921.3	7786.1	6473.1	5198.4	4296.3	3910.3	3789.8	3791.8	3807.1	3818.5
15°	8913.7	7405.7	5672.3	4304.0	3715.3	3690.4	3820.4	3902.6	3946.6	3959.9
17.5°	8902.2	6950.9	4856.2	3694.3	3573.9	3742.1	3862.5	3916.0	3950.3	3952.3
20°	8856.3	6373.8	4103.3	3403.8	3543.3	3688.6	3763.1	3805.1	3833.8	3843.3
22.5°	8714.9	5731.6	3516.6	3273.8	3420.9	3537.6	3625.4	3673.3	3690.4	3701.9
25°	8460.8	5013.0	3111.4	3149.6	3250.9	3398.1	3468.8	3478.3	3472.6	3489.8
27.5°	8128.1	4242.8	2859.1	2981.4	3111.4	3237.5	3275.7	3270.0	3258.6	3277.6
30°	7726.9	3550.9	2698.5	2792.2	2969.9	3084.6	3119.0	3105.6	3082.7	3103.7
32.5°	7302.5	2985.2	2566.7	2660.4	2853.4	2966.1	3000.5	2987.2	2969.9	2987.2
35°	6907.0	2589.7	2444.4	2572.4	2761.7	2872.5	2916.4	2918.4	2918.4	2939.4
37.5°	6543.8	2358.4	2343.0	2517.0	2698.5	2797.9	2861.0	2864.9	2782.7	2788.4
40°	6207.5	2260.9	2297.2	2480.7	2637.4	2733.0	2736.7	2522.7	2371.7	2368.0
42.5°	5932.3	2241.8	2310.6	2476.9	2593.5	2597.2	2327.8	2161.5	2119.5	2121.3
45°	5674.2	2236.0	2341.2	2476.9	2528.5	2243.7	2062.1	2018.2	2022.0	2037.3
47.5°	5385.7	2213.1	2346.9	2442.5	2341.2	1995.3	1941.8	1922.6	1915.0	1918.8
50°	5070.3	2131.0	2274.3	2373.7	2020.1	1888.3	1821.3	1815.6	1825.1	1830.9
52.5°	4737.8	1997.2	2150.0	2249.5	1873.0	1794.6	1720.1	1733.4	1775.5	1788.8
55°	4519.9	1840.5	1985.7	2001.0	1769.8	1706.6	1643.6	1674.1	1752.5	1777.4
57.5°	4462.5	1674.1	1798.4	1781.2	1637.8	1630.3	1592.0	1618.8	1718.1	1754.5
60°	4445.3	1525.1	1614.9	1601.6	1509.8	1546.1	1536.6	1549.9	1584.3	1595.8
62.5°	4311.6	1406.6	1450.6	1431.4	1395.1	1458.3	1481.1	1452.5	1479.3	1492.6
65°	3971.4	1311.1	1290.1	1276.6	1291.9	1349.3	1395.1	1337.8	1362.6	1400.9
67.5°	3409.6	1181.1	1123.8	1139.1	1186.8	1217.4	1276.6	1211.7	1232.7	1297.6
70°	2757.8	1016.7	965.1	1009.1	1054.9	1118.1	1127.6	1083.6	1133.3	1205.9
72.5°	1951.3	850.4	814.2	903.9	919.2	1001.4	980.4	959.4	1028.2	1053.1
75°	1353.1	686.1	665.1	733.9	789.4	860.0	844.7	869.6	1014.9	1026.3
77.5°	856.2	533.2	519.9	563.8	640.2	718.6	743.4	1026.3	1733.4	1802.3
80°	496.9	397.5	382.2	416.7	483.5	556.2	716.7	1259.4	1142.9	1129.4
82.5°	277.2	273.3	254.2	263.7	323.0	401.4	1012.9	886.8	720.5	743.4
85°	130.0	160.5	137.6	131.9	181.5	470.2	676.6	506.5	336.4	328.7
87.5°	34.4	30.5	30.5	34.4	76.5	405.2	269.5	216.0	128.0	124.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)