

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: P967334

Luminaire Tested: **NAV-SB4D-827-U-T3R**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P967334
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-SB4D-827-U-T3R
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 2700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE III
ROADWAY OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 37317.2 lumens
Efficiency: N/A
Efficacy: 127.1 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): 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



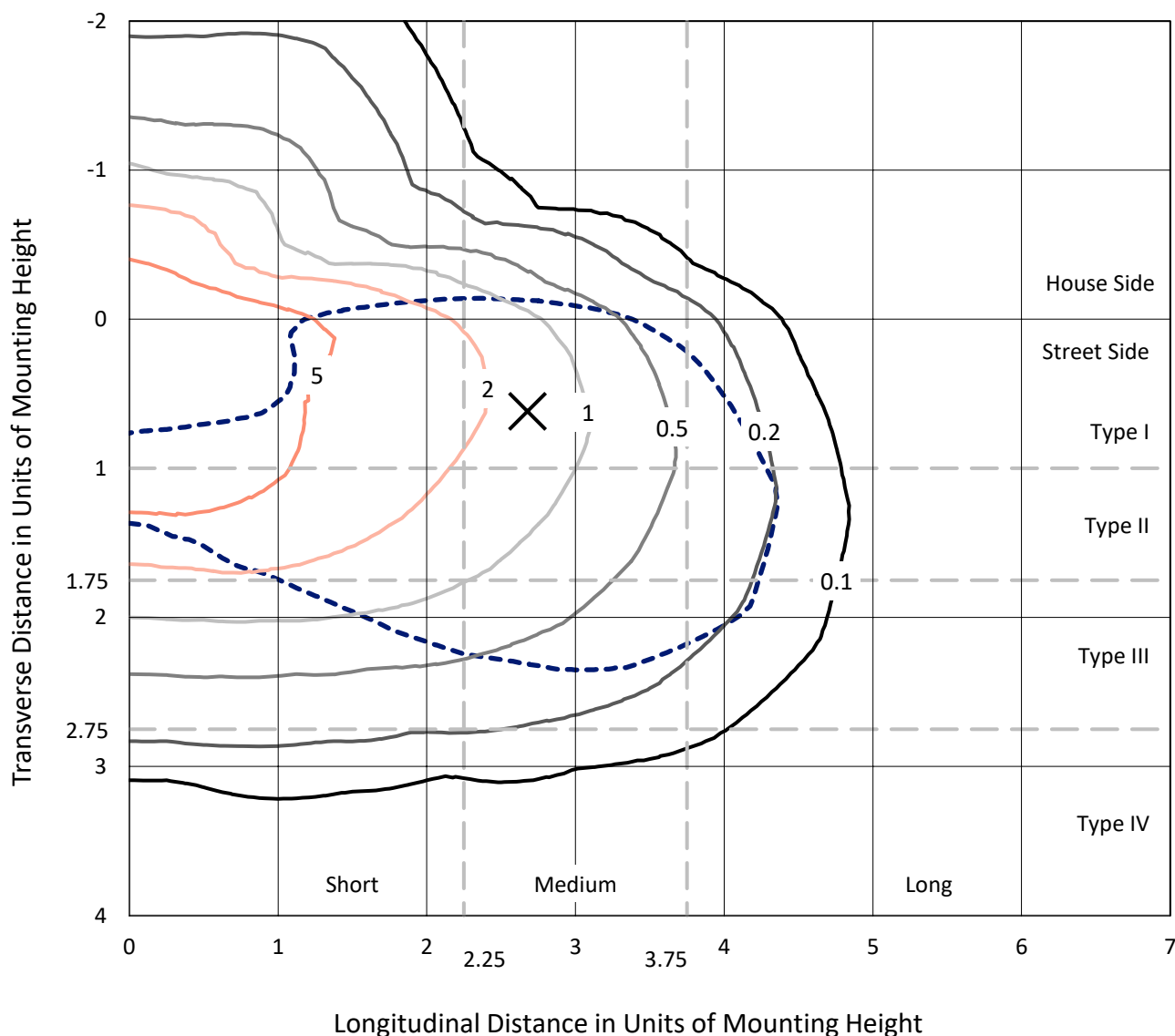
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

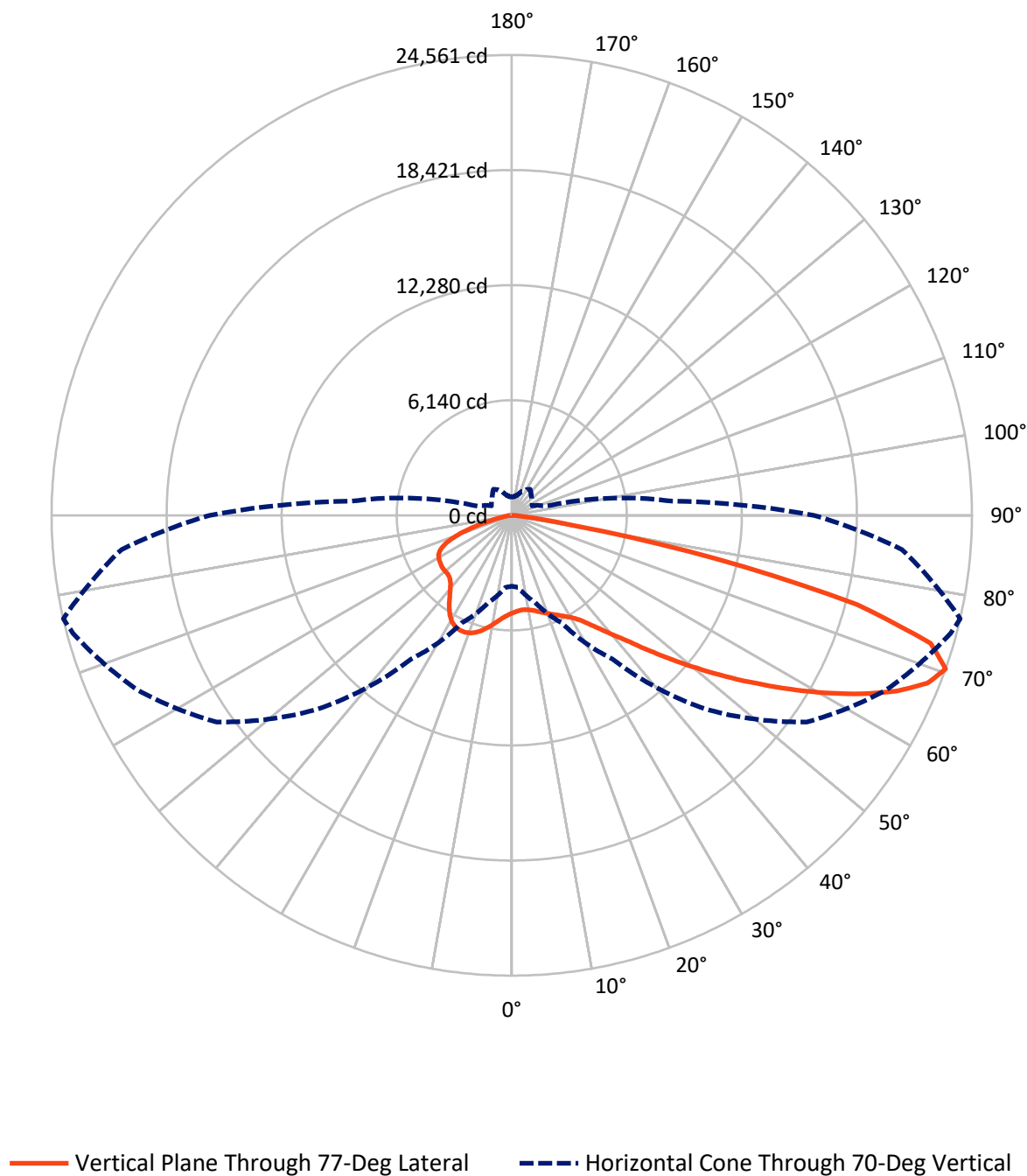


Based on 25 foot mounting height. Maximum calculated value = 9.9 fc

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	8171.9	0.0	8171.9
	% Fixture	21.9	0.0	21.9
Street Side	Lumens	29145.3	0.0	29145.3
	% Fixture	78.1	0.0	78.1
Total	Lumens	37317.2	0.0	37317.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	496.5	1.3
10°-20°	1433.0	3.8
20°-30°	2450.6	6.6
30°-40°	3940.9	10.6
40°-50°	6152.8	16.5
50°-60°	8218.6	22.0
60°-70°	8759.8	23.5
70°-80°	5392.5	14.5
80°-90°	472.5	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°	37317.2	100.0
0°-180°	37317.2	100.0

Coefficient of Utilization



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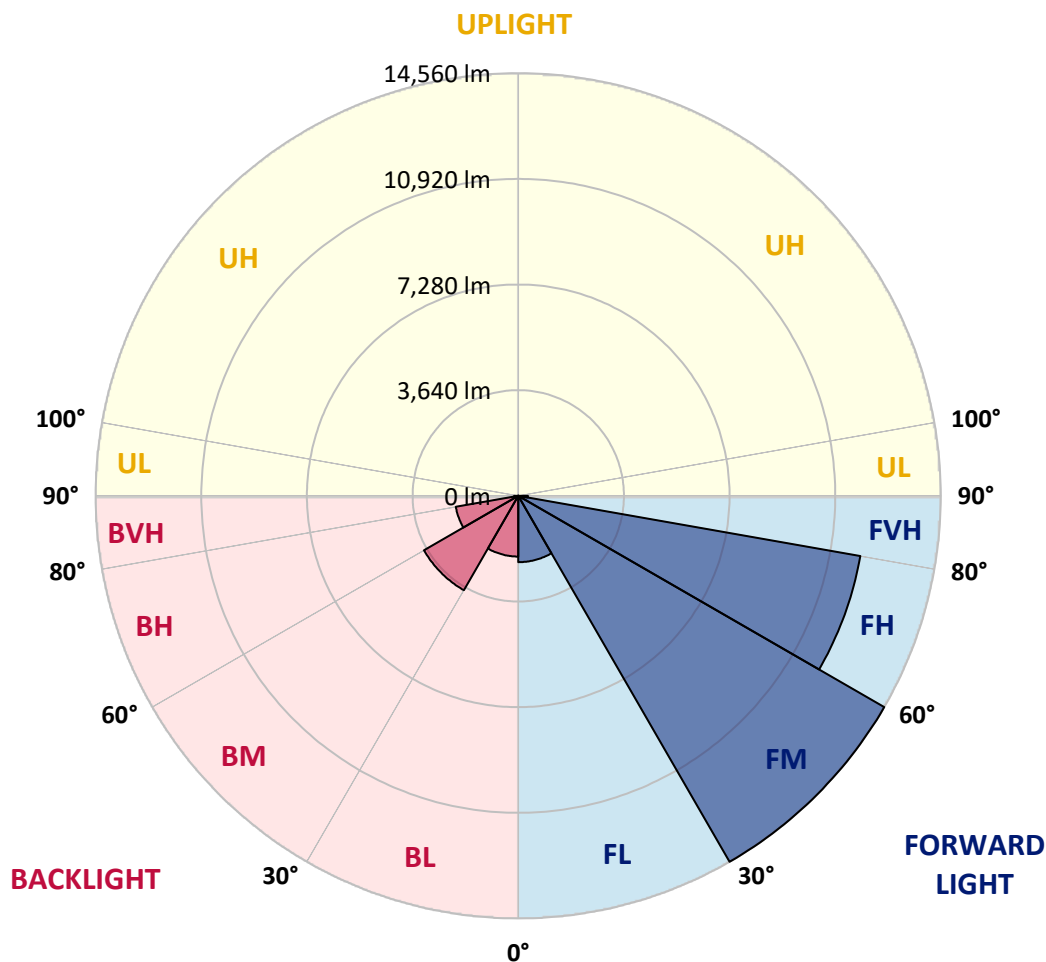
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2286.3	6.1			
FM	(30°-60°)	14560.4	39.0			
FH	(60°-80°)	11968.2	32.1			G4/12000
FVH	(80°-90°)	330.4	0.9			G3/500
BL	(0°-30°)	2093.9	5.6	B3/2500		
BM	(30°-60°)	3751.9	10.1	B3/5000		
BH	(60°-80°)	2184.0	5.9	B3/2500		G3/2500
BVH	(80°-90°)	142.1	0.4			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 III Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77°	85°
0°	5206.1	5206.1	5206.1	5206.1	5206.1	5206.1	5206.1	5206.1	5206.1	5206.1	5206.1
2.5°	4799.0	4797.1	4821.9	4829.6	4875.4	4907.9	4969.1	5034.1	5118.1	5127.8	5179.3
5°	4521.9	4521.9	4550.6	4581.1	4640.4	4705.4	4799.0	4911.8	5057.0	5079.9	5208.0
7.5°	4286.8	4302.1	4326.9	4386.2	4455.0	4548.6	4691.9	4852.6	5043.6	5079.9	5286.3
10°	4097.6	4114.8	4145.4	4193.2	4296.4	4426.4	4613.6	4820.1	5076.1	5133.5	5401.0
12.5°	4038.4	4055.5	4072.7	4109.0	4204.7	4357.5	4581.1	4835.3	5154.5	5211.8	5557.8
15°	4176.0	4197.0	4183.6	4174.0	4223.7	4363.2	4596.4	4890.8	5252.0	5334.1	5750.8
17.5°	4493.2	4500.9	4470.2	4380.4	4372.9	4447.4	4669.1	4967.2	5374.3	5464.1	5945.7
20°	5005.4	4992.1	4928.9	4751.2	4649.9	4634.6	4793.3	5081.8	5500.5	5596.0	6155.9
22.5°	5701.0	5685.8	5559.7	5278.7	5053.1	4904.1	4972.9	5230.9	5641.8	5748.8	6360.4
25°	6568.8	6547.7	6362.4	5980.2	5630.3	5261.5	5217.6	5427.8	5815.7	5915.2	6574.5
27.5°	7581.7	7564.5	7363.8	6859.3	6354.7	5750.8	5521.5	5659.0	5997.3	6110.1	6815.3
30°	8671.1	8720.8	8365.3	7822.5	7184.1	6389.1	5930.4	5943.8	6232.4	6333.7	7107.8
32.5°	9951.6	10037.6	9609.5	8921.4	8049.9	7082.9	6446.4	6341.4	6574.5	6658.6	7476.6
35°	11220.6	11318.0	10962.6	10201.9	9198.6	7900.9	6985.4	6798.1	7029.3	7121.1	7965.9
37.5°	12317.6	12447.6	12264.1	11602.8	10427.4	8887.1	7688.7	7335.1	7589.3	7704.0	8623.3
40°	13183.4	13382.2	13368.8	12956.0	11876.2	10083.4	8581.3	7998.4	8285.0	8409.2	9420.3
42.5°	13886.7	14058.7	14207.8	14186.8	13387.9	11442.3	9630.5	8860.3	9078.1	9221.5	10316.6
45°	14372.1	14555.6	14876.7	15222.7	14842.3	12896.8	10832.6	9882.7	10081.5	10297.5	11385.0
47.5°	14806.0	15014.3	15431.0	15979.4	16076.9	14356.9	12149.4	11073.5	11255.0	11478.7	12457.1
50°	14844.3	15023.8	15669.9	16447.8	16954.2	15759.7	13563.7	12409.4	12579.4	12818.3	13605.7
52.5°	13921.1	14203.9	15331.5	16434.3	17357.5	16933.2	14968.5	13798.8	13989.9	14276.6	14794.5
55°	10805.9	11220.6	14339.6	15922.1	17214.1	17691.9	16304.4	15276.2	15520.8	15820.9	15990.9
57.5°	9307.5	9489.0	11383.0	14989.5	16560.5	17888.7	17432.0	16768.8	17162.5	17491.2	17256.2
60°	8365.3	8516.3	9636.2	13538.9	15700.4	17577.2	18303.5	18160.1	18840.5	19232.3	18550.0
62.5°	7356.2	7499.5	8518.2	11304.7	14599.6	17059.3	18854.0	19444.5	20560.6	20988.7	19769.4
65°	6354.7	6477.1	7453.7	9498.6	13200.6	16541.3	19138.7	20554.8	22152.6	22596.0	20782.3
67.5°	5238.6	5339.8	6263.0	8013.7	11499.7	15832.4	19280.1	21428.2	23538.2	23918.6	21283.0
70°	3780.3	3858.7	4812.4	6337.5	9364.8	14613.0	19222.7	22047.5	24256.8	24560.7	20904.6
72.5°	1787.0	1857.7	2977.6	4114.8	6614.6	12239.3	18062.7	21556.4	23526.7	23375.7	18588.3
75°	953.7	1014.9	1710.5	2257.2	3493.6	8390.1	14781.1	18569.1	19756.0	19022.1	13737.7
77.5°	646.0	693.7	1058.8	1355.0	1595.8	3982.9	9500.5	12856.6	12369.2	11157.5	6880.3
80°	512.2	561.9	867.7	917.4	772.1	1439.1	3925.5	5951.5	4275.4	3419.1	1957.0
82.5°	393.7	449.2	730.1	665.1	420.5	590.6	1142.9	1882.5	1095.1	833.3	474.0
85°	240.8	300.0	573.4	424.2	237.0	269.5	388.0	523.7	334.5	279.0	170.0
87.5°	122.3	172.0	290.5	154.8	107.0	63.0	103.2	103.2	87.9	76.5	44.0
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°	5206.1	5206.1	5206.1	5206.1	5206.1	5206.1	5206.1	5206.1	5206.1	5206.1	5206.1
2.5°	5225.2	5263.4	5328.4	5389.6	5437.3	5483.2	5529.1	5554.0	5561.5	5592.2	5609.3
5°	5286.3	5357.1	5483.2	5601.7	5676.2	5722.1	5754.6	5773.7	5777.5	5787.0	5802.4
7.5°	5399.1	5511.8	5687.7	5806.2	5861.7	5857.8	5844.4	5796.7	5777.5	5760.3	5764.2
10°	5557.8	5706.8	5922.8	6005.0	5970.5	5878.8	5760.3	5620.8	5555.8	5492.8	5473.6
12.5°	5754.6	5943.8	6155.9	6152.2	5982.0	5747.0	5471.8	5257.7	5122.0	5024.5	5001.6
15°	5993.5	6211.4	6373.9	6243.9	5871.2	5448.8	5045.6	4766.6	4644.2	4537.2	4525.7
17.5°	6240.0	6473.2	6547.7	6215.2	5592.2	5007.3	4550.6	4330.7	4210.4	4153.0	4170.2
20°	6480.9	6712.1	6650.9	6050.9	5167.8	4506.6	4099.5	3979.0	3954.2	3967.7	3961.9
22.5°	6735.1	6941.4	6671.9	5733.5	4627.0	3994.4	3770.8	3774.6	3830.0	3870.2	3879.7
25°	6995.0	7134.5	6616.6	5274.9	4046.0	3617.8	3562.5	3623.6	3732.5	3811.0	3832.0
27.5°	7245.3	7306.5	6496.1	4707.3	3547.2	3348.4	3358.0	3484.1	3648.5	3757.4	3784.2
30°	7528.2	7459.3	6264.9	4068.9	3201.3	3117.1	3197.4	3344.6	3509.0	3606.5	3629.3
32.5°	7847.4	7591.3	5898.0	3478.3	2956.6	2931.8	3063.6	3159.2	3231.8	3260.5	3275.8
35°	8244.9	7776.7	5427.8	3063.6	2736.9	2796.1	2922.2	2874.4	2845.8	2830.4	2845.8
37.5°	8760.9	8027.0	4877.4	2794.1	2559.1	2698.6	2750.2	2601.1	2488.4	2432.9	2446.4
40°	9382.0	8393.9	4347.9	2585.9	2446.4	2614.5	2524.7	2345.0	2201.7	2123.3	2129.0
42.5°	10072.0	8778.1	3902.7	2429.1	2383.2	2545.7	2358.4	2144.4	1913.1	1888.3	1913.1
45°	10796.3	9173.8	3598.8	2308.7	2352.7	2486.4	2262.9	1917.0	1752.5	1853.8	1907.3
47.5°	11520.7	9536.8	3415.3	2218.9	2337.4	2419.6	2178.7	1790.8	1674.2	1821.3	1890.2
50°	12327.2	9861.7	3333.1	2153.9	2320.2	2392.9	2052.7	1758.3	1592.0	1689.5	1762.1
52.5°	13128.0	10114.0	3272.0	2089.0	2295.4	2371.7	1991.5	1720.1	1492.6	1498.3	1538.5
55°	13926.9	10278.4	3205.1	2003.0	2239.9	2325.9	1985.7	1678.0	1418.1	1391.3	1410.5
57.5°	14779.3	10372.1	3122.9	1907.3	2144.4	2209.4	1980.0	1645.5	1395.1	1351.3	1356.9
60°	15646.9	10509.6	3015.9	1790.8	2016.3	2069.8	1966.7	1634.1	1381.8	1307.3	1313.0
62.5°	16424.8	10557.4	2887.8	1680.0	1852.0	1932.2	1938.0	1624.5	1345.5	1217.4	1217.4
65°	16935.0	10351.1	2664.2	1553.8	1674.2	1790.8	1882.5	1592.0	1280.5	1152.4	1152.4
67.5°	16914.0	9762.4	2314.4	1391.3	1502.2	1634.1	1802.3	1536.6	1202.1	1072.1	1077.9
70°	16126.6	8600.4	1871.0	1202.1	1313.0	1465.9	1699.0	1454.4	1108.5	984.3	995.7
72.5°	13831.2	6731.2	1358.8	980.4	1093.2	1292.0	1565.3	1355.0	1012.9	905.9	900.2
75°	9880.9	4260.0	921.2	753.0	850.4	1095.1	1399.0	1238.4	925.1	909.7	858.1
77.5°	5047.4	2035.4	609.7	550.4	592.4	863.9	1175.4	1106.6	938.4	751.1	668.9
80°	1641.7	751.1	384.2	374.6	393.7	575.2	909.7	907.8	710.9	510.2	451.0
82.5°	523.7	323.0	250.4	240.8	231.2	361.2	634.5	718.6	479.7	323.0	321.0
85°	208.3	193.0	147.2	135.7	97.5	170.0	332.5	477.8	357.4	233.2	238.9
87.5°	76.5	76.5	40.2	28.7	21.0	57.3	89.8	143.3	204.5	120.4	118.5
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)