

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: P967339

Luminaire Tested: **NAV-SB4D-827-U-T4W**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P967339
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-1)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4D-827-U-T4W
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 2700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 36278.9 lumens
Efficiency: N/A
Efficacy: 123.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G5

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



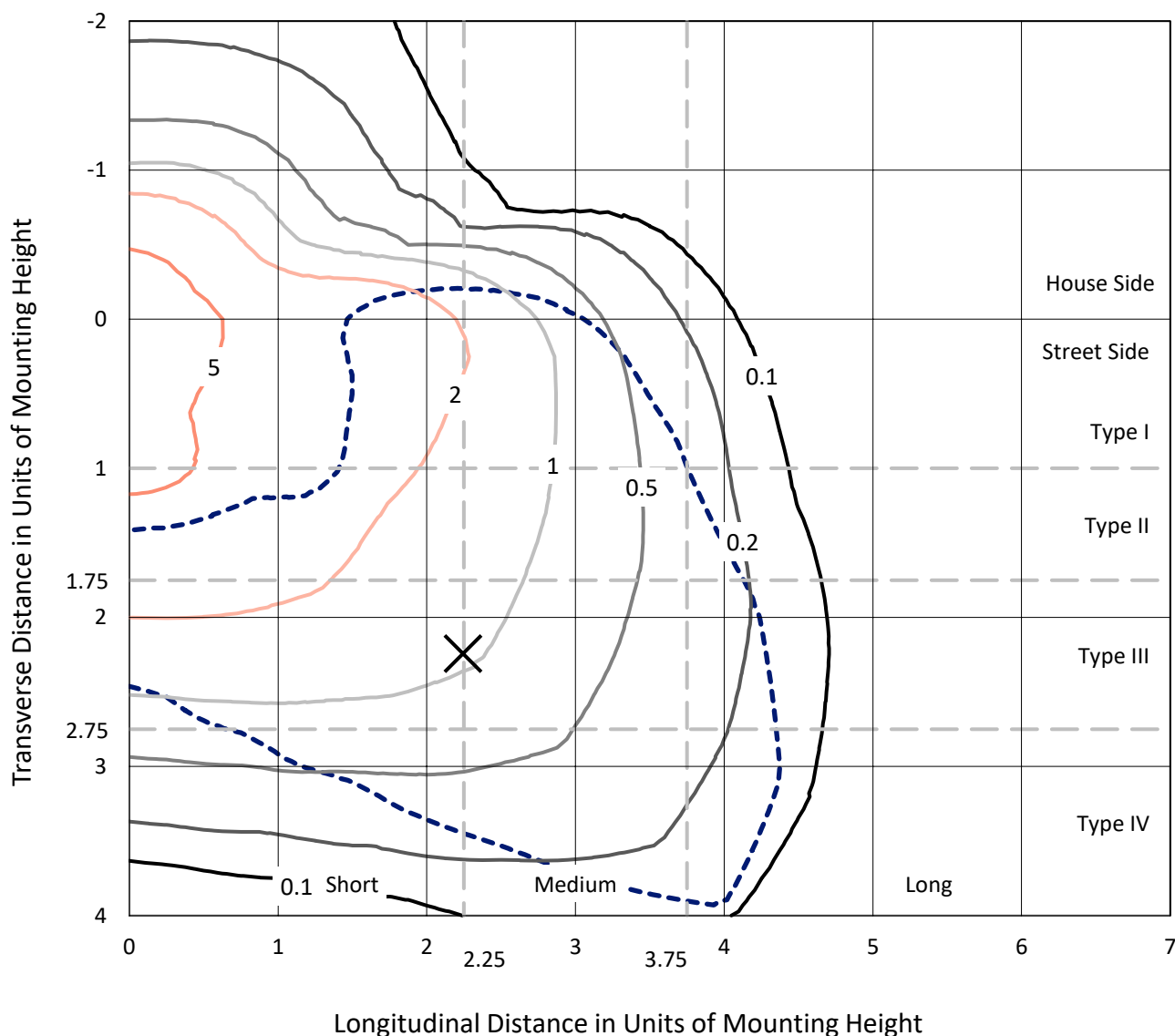
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

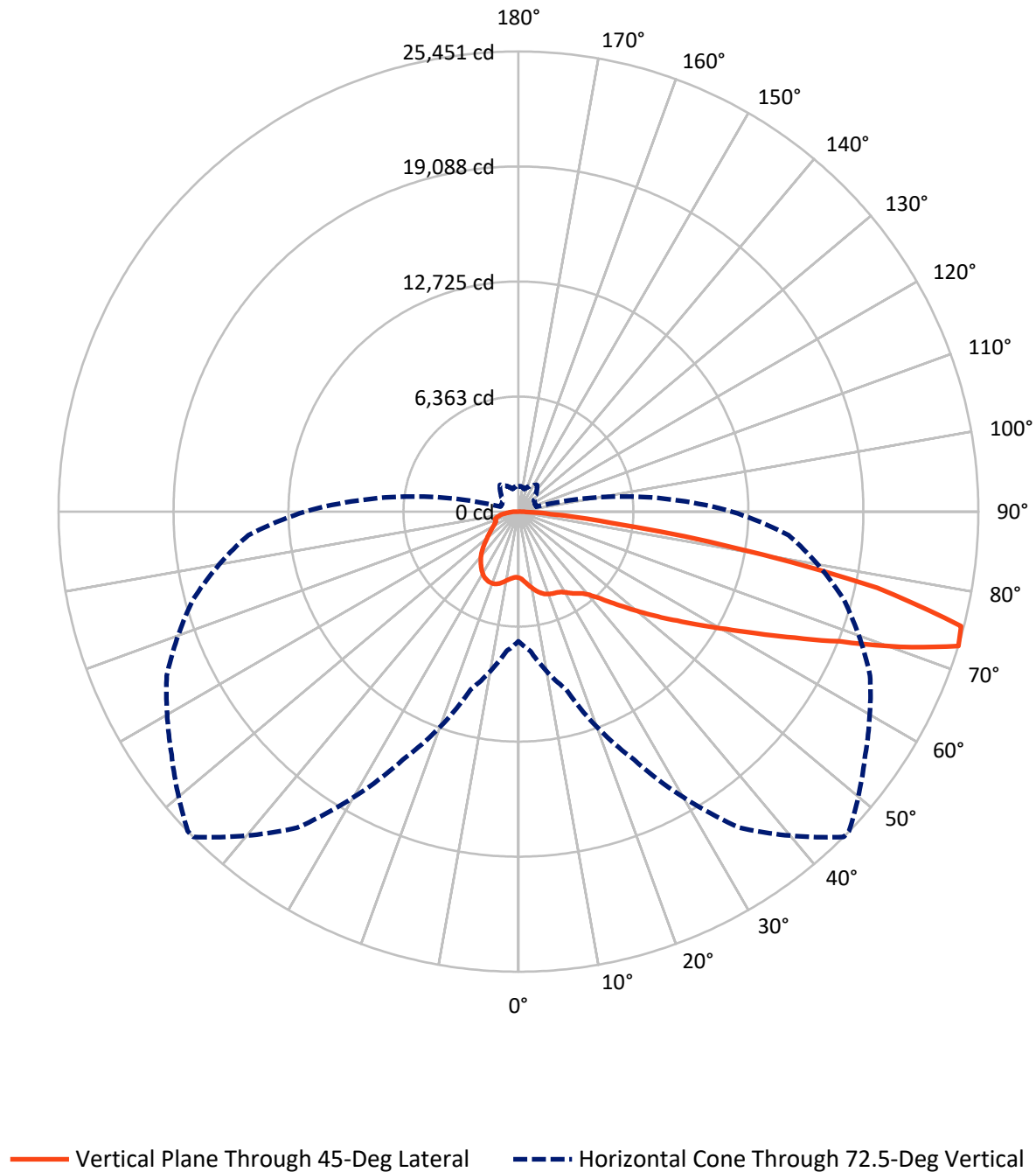


Based on 25 foot mounting height. Maximum calculated value = 7.3 fc

Type IV - Short - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8201.4	0.0	8201.4
	% Fixture	22.6	0.0	22.6
Street Side	Lumens	28077.5	0.0	28077.5
	% Fixture	77.4	0.0	77.4
Total	Lumens	36278.9	0.0	36278.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	372.5	1.0
10°-20°	1242.0	3.4
20°-30°	2160.5	6.0
30°-40°	3097.1	8.5
40°-50°	4360.9	12.0
50°-60°	6679.7	18.4
60°-70°	9676.5	26.7
70°-80°	7727.3	21.3
80°-90°	962.4	2.7
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°	36278.9	100.0
0°-180°	36278.9	100.0

Coefficient of Utilization



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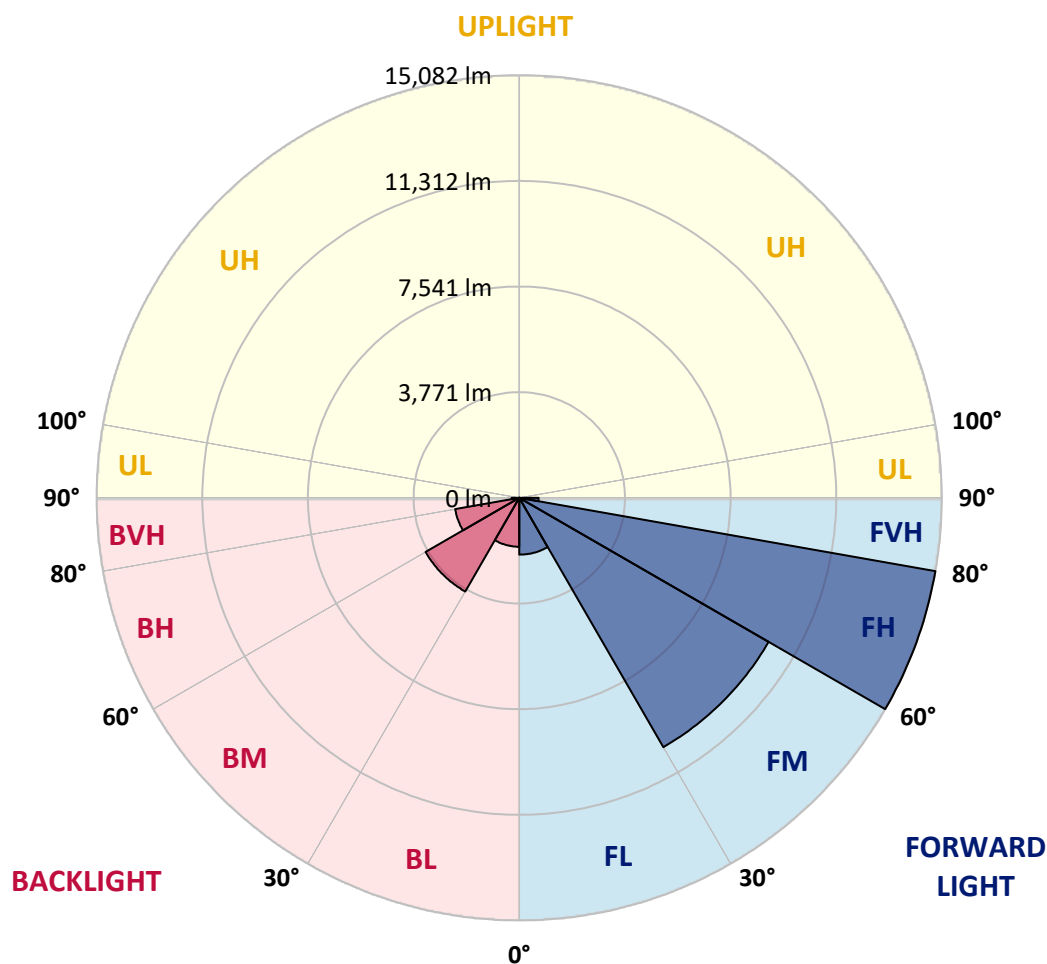
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2028.8	5.6			
FM	(30°-60°)	10276.1	28.3			
FH	(60°-80°)	15082.2	41.6			G5
FVH	(80°-90°)	690.4	1.9			G4/750
BL	(0°-30°)	1746.1	4.8	B3/2500		
BM	(30°-60°)	3861.7	10.6	B3/5000		
BH	(60°-80°)	2321.6	6.4	B3/2500		G3/2500
BVH	(80°-90°)	272.0	0.7			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G5

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
0°	3659.9	3659.9	3659.9	3659.9	3659.9	3659.9	3659.9	3659.9	3659.9	3659.9	3659.9
2.5°	3803.2	3828.0	3805.1	3784.1	3774.5	3749.7	3747.7	3732.4	3722.9	3696.2	3688.5
5°	4068.8	4101.3	4063.1	4021.1	3982.8	3921.6	3914.0	3870.1	3820.4	3763.1	3730.6
7.5°	4368.9	4397.6	4353.6	4290.5	4223.6	4122.3	4120.4	4040.1	3961.8	3864.4	3808.9
10°	4630.6	4668.9	4609.6	4523.6	4439.6	4324.9	4311.6	4219.8	4120.4	3994.3	3910.2
12.5°	4862.0	4888.7	4831.3	4726.3	4628.8	4514.1	4496.9	4395.6	4284.8	4141.4	4034.4
15°	5045.4	5079.8	5003.3	4890.6	4787.4	4674.6	4659.3	4567.6	4456.8	4305.8	4168.2
17.5°	5165.8	5194.5	5116.1	4990.0	4890.6	4797.0	4785.5	4709.1	4611.6	4458.6	4311.6
20°	5211.7	5242.3	5160.1	5032.0	4940.3	4867.6	4862.0	4806.5	4739.6	4600.1	4451.1
22.5°	5257.5	5286.2	5179.2	5045.4	4965.1	4919.3	4917.3	4881.0	4854.3	4739.6	4594.4
25°	5443.0	5450.5	5307.2	5114.2	4999.5	4959.4	4957.5	4955.6	4967.0	4877.3	4749.1
27.5°	5603.5	5601.5	5479.2	5297.7	5120.0	5035.8	5034.0	5053.0	5089.3	5014.8	4909.8
30°	5838.5	5817.5	5672.2	5483.0	5320.6	5190.7	5179.2	5162.0	5190.7	5131.5	5070.3
32.5°	6337.4	6270.4	6035.4	5699.0	5486.9	5387.5	5372.2	5265.2	5276.7	5240.3	5209.8
35°	7052.1	6964.2	6650.7	6108.0	5693.3	5551.8	5544.2	5408.5	5385.6	5353.1	5364.5
37.5°	7902.5	7793.6	7428.6	6700.4	6048.7	5743.0	5731.5	5609.2	5515.5	5481.2	5546.2
40°	8756.9	8619.2	8317.3	7422.8	6572.4	6062.2	6025.8	5840.4	5733.4	5676.0	5813.7
42.5°	9586.3	9471.6	9213.6	8233.2	7218.4	6528.4	6448.2	6130.9	6050.7	5997.2	6245.6
45°	10320.1	10217.0	10027.8	9098.9	7975.2	7162.9	7084.6	6566.7	6541.9	6541.9	6901.1
47.5°	10916.5	10893.5	10692.8	9981.9	8867.7	7885.3	7749.6	7172.5	7239.4	7342.6	7831.8
50°	11577.7	11514.6	11300.5	10851.5	9916.9	8712.9	8602.0	7916.0	8166.3	8449.2	9177.2
52.5°	12185.4	12219.8	11980.9	11757.4	11101.8	9635.9	9441.1	8793.2	9334.0	9802.2	10754.0
55°	12810.3	12812.3	12745.4	12714.8	12344.1	10656.5	10442.5	9848.1	10708.1	11289.1	12592.5
57.5°	13397.1	13401.0	13500.3	13769.7	13785.0	11833.7	11591.0	11143.8	12235.1	12827.6	14488.4
60°	13920.7	13947.5	14218.9	14849.6	15052.1	13183.0	12953.7	12674.6	13813.7	14410.0	16481.7
62.5°	14096.5	14194.0	14797.9	15694.3	16304.0	14838.1	14612.6	14446.2	15472.6	16026.8	18148.1
65°	13798.4	14022.0	15189.7	16391.8	17592.1	16804.7	16581.0	16399.5	17196.4	17718.1	19516.5
67.5°	13066.5	13355.0	15166.8	17123.8	19155.3	19170.7	18962.3	18536.1	19044.5	19245.2	19961.9
70°	11138.2	11570.0	13830.9	17397.1	20949.9	22406.2	22205.5	21108.5	20888.8	19917.9	18708.1
72.5°	7176.3	7757.3	10184.5	15147.7	21349.3	25450.6	25439.2	23430.6	21471.6	18610.6	15004.4
75°	2618.3	2973.7	4732.0	9507.9	17920.8	25295.9	25370.4	23033.1	19600.7	14375.6	9347.4
77.5°	953.7	1043.4	1544.2	3654.1	11021.5	20296.3	20451.1	18413.8	13951.3	7214.6	3703.7
80°	500.7	550.4	791.2	1418.1	4722.4	12053.6	12296.3	10943.2	6557.1	2173.0	1110.4
82.5°	277.2	300.0	443.4	770.2	2127.1	5154.3	5299.6	4323.0	2306.8	921.2	458.7
85°	149.0	158.7	208.3	420.5	1039.7	1786.9	1827.1	1291.9	919.2	540.9	221.7
87.5°	44.0	53.5	68.8	133.8	407.0	401.4	410.9	256.0	363.2	273.3	72.7
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°	3659.9	3659.9	3659.9	3659.9	3659.9	3659.9	3659.9	3659.9	3659.9	3659.9	3659.9
2.5°	3677.0	3671.3	3650.2	3640.7	3629.2	3627.4	3636.9	3638.9	3640.7	3642.6	3650.2
5°	3711.4	3692.4	3673.2	3661.7	3665.6	3667.4	3686.6	3699.9	3709.5	3717.2	3721.0
7.5°	3778.4	3763.1	3730.6	3728.6	3734.4	3751.6	3776.4	3807.0	3824.2	3837.6	3841.4
10°	3877.7	3849.1	3810.8	3816.6	3828.0	3852.9	3904.4	3929.3	3957.9	3982.8	3977.1
12.5°	3978.9	3954.1	3910.2	3914.0	3933.1	3977.1	4026.8	4057.4	4076.4	4095.6	4103.2
15°	4110.9	4066.9	4019.1	4019.1	4053.6	4101.3	4124.2	4149.1	4160.6	4181.6	4189.2
17.5°	4246.6	4189.2	4126.1	4122.3	4164.4	4187.3	4200.7	4204.5	4208.3	4231.3	4238.9
20°	4382.3	4319.1	4229.4	4221.7	4231.3	4227.4	4225.6	4221.7	4227.4	4256.1	4267.6
22.5°	4516.0	4443.4	4319.1	4284.8	4258.1	4221.7	4219.8	4217.9	4221.7	4250.4	4269.4
25°	4672.8	4584.8	4418.6	4315.4	4225.6	4175.8	4181.6	4183.4	4187.3	4210.2	4240.8
27.5°	4842.8	4745.3	4510.3	4305.8	4143.4	4108.9	4099.4	4105.1	4118.6	4154.8	4191.1
30°	5012.9	4898.3	4594.4	4267.6	4040.1	3992.4	3961.8	3975.2	4017.2	4053.6	4093.6
32.5°	5167.7	5053.0	4661.3	4183.4	3908.3	3833.7	3793.6	3810.8	3852.9	3866.2	3914.0
35°	5349.3	5219.3	4689.9	4049.7	3764.9	3650.2	3596.7	3571.9	3592.9	3579.6	3621.6
37.5°	5551.8	5416.2	4686.1	3873.9	3596.7	3464.9	3390.4	3296.7	3252.7	3206.9	3235.5
40°	5851.9	5657.0	4640.3	3661.7	3388.4	3268.0	3134.2	2975.7	2876.3	2786.5	2792.2
42.5°	6260.9	5991.4	4556.1	3428.6	3153.4	3040.7	2859.0	2673.7	2517.0	2367.9	2354.5
45°	6870.6	6429.1	4451.1	3180.2	2899.2	2788.3	2591.5	2383.2	2205.5	2014.3	1991.4
47.5°	7749.6	7017.7	4351.6	2897.3	2631.7	2530.3	2352.6	2159.6	1949.3	1764.0	1742.9
50°	8957.5	7862.5	4259.9	2622.1	2367.9	2291.5	2150.0	1953.1	1741.1	1591.9	1582.4
52.5°	10494.1	9011.0	4221.7	2356.5	2121.3	2092.7	1979.9	1796.5	1595.8	1469.6	1460.1
55°	12258.1	10385.1	4221.7	2102.3	1905.4	1915.0	1836.6	1666.5	1492.6	1379.9	1368.4
57.5°	14058.3	11776.4	4145.3	1867.1	1721.9	1762.1	1712.4	1563.3	1406.6	1290.1	1270.9
60°	15717.2	12942.3	3835.7	1653.1	1559.5	1622.6	1590.1	1462.1	1270.9	1173.4	1158.1
62.5°	16991.9	13599.7	3239.4	1483.1	1425.7	1498.3	1481.1	1328.2	1246.1	1205.9	1192.6
65°	17630.2	13492.6	2476.8	1332.1	1312.9	1425.7	1389.4	1383.6	1318.7	1272.8	1257.6
67.5°	17238.4	12571.4	1796.5	1221.2	1247.9	1358.8	1498.3	1521.3	1400.9	1311.1	1295.7
70°	15520.3	10905.0	1337.8	1116.1	1165.8	1360.7	1708.6	1591.9	1374.1	1268.9	1251.8
72.5°	11807.0	8131.9	1037.7	1005.2	1058.7	1370.3	1802.2	1559.5	1297.6	1402.8	1391.3
75°	6752.1	4464.4	833.2	869.6	925.0	1280.4	1754.4	1475.4	1238.4	1288.1	1288.1
77.5°	2574.3	1716.2	688.0	735.7	743.4	1118.0	1678.0	1469.6	1179.2	1150.5	1049.2
80°	892.5	670.8	569.5	584.8	575.2	993.8	1609.1	1278.6	965.1	863.9	835.2
82.5°	365.0	334.5	451.0	431.9	409.0	772.1	1299.6	1045.4	789.2	697.6	689.9
85°	158.7	212.2	298.2	261.8	237.0	535.2	1041.6	884.9	667.0	575.2	573.4
87.5°	32.5	80.3	126.2	118.5	122.3	357.4	739.6	628.7	472.0	353.5	277.2
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)