

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: P967388

Luminaire Tested: **NAV-SB4D-835-U-T2-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P967388
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-4)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4D-835-U-T2-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3500K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II
OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 28313.6 lumens
Efficiency: N/A
Efficacy: 96.4 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

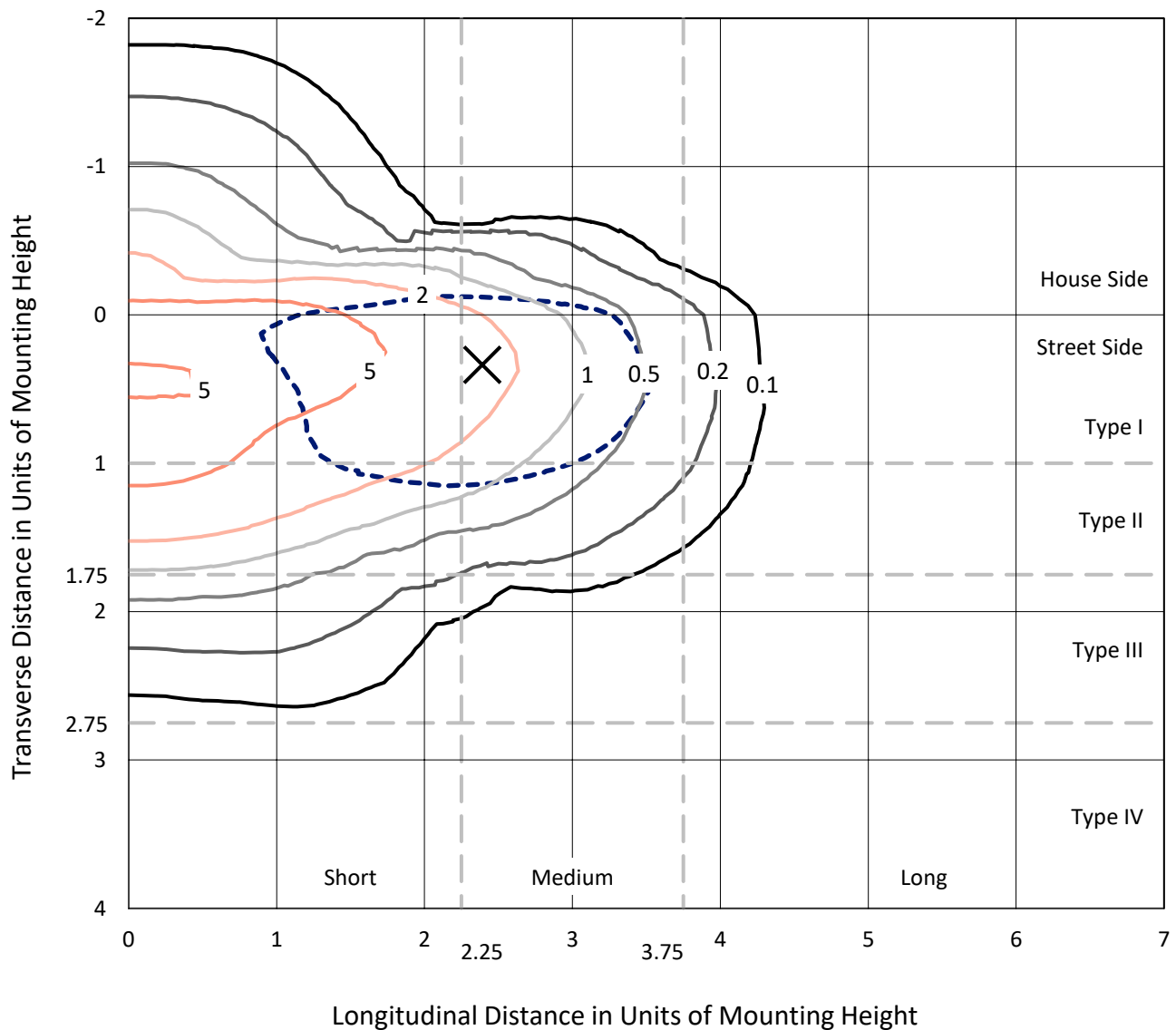


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Iso-Footcandle Lines of Horizontal Illumination

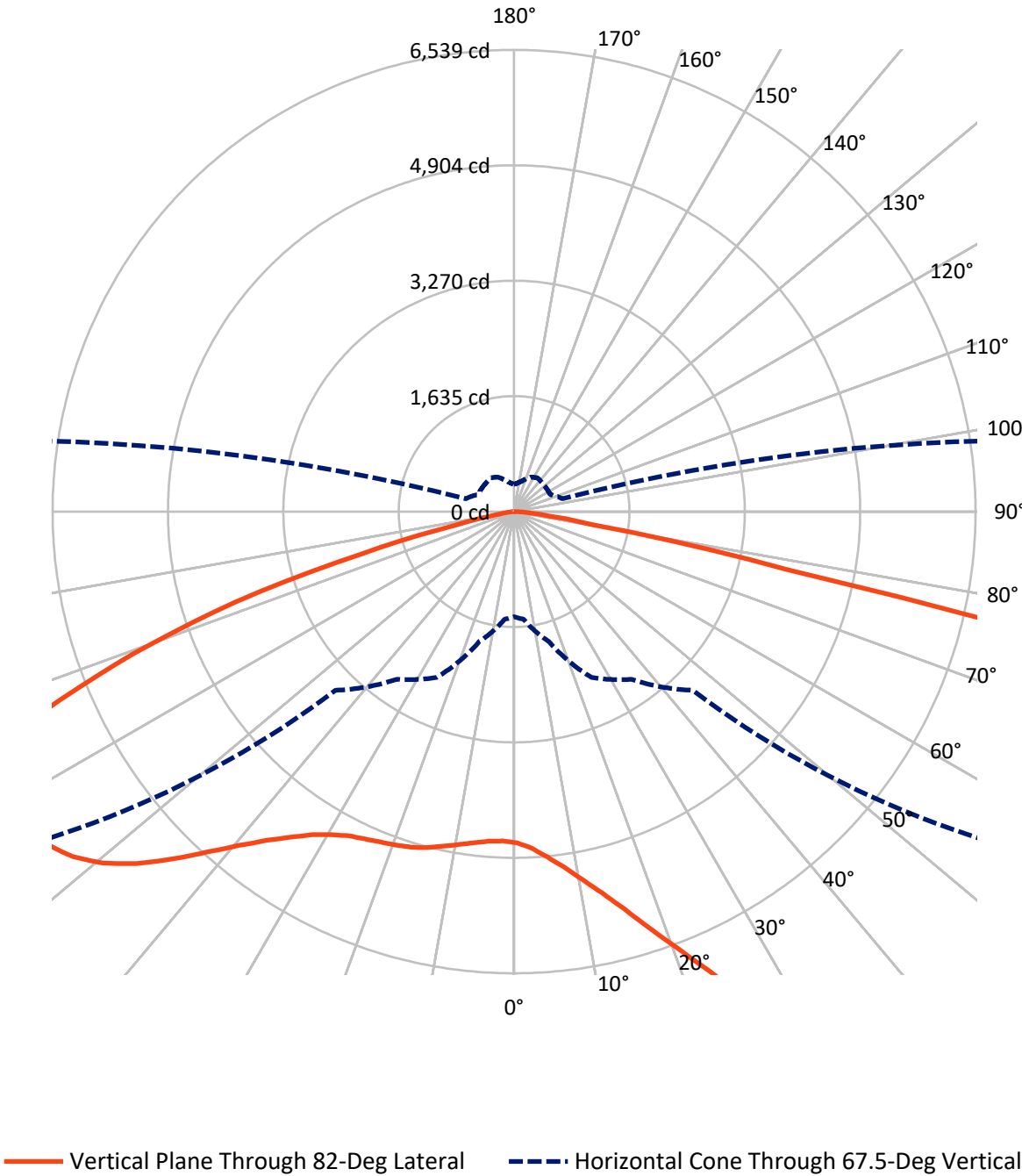
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.9 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	5128.7	0.0	5128.7
	% Fixture	18.1	0.0	18.1
Street Side	Lumens	23184.8	0.0	23184.8
	% Fixture	81.9	0.0	81.9
Total	Lumens	28313.6	0.0	28313.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	417.9	1.5
10°-20°	1086.0	3.8
20°-30°	1739.3	6.1
30°-40°	3075.7	10.9
40°-50°	5388.9	19.0
50°-60°	7187.3	25.4
60°-70°	6691.0	23.6
70°-80°	2568.0	9.1
80°-90°	159.5	0.6
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°	28313.6	100.0
0°-180°	28313.6	100.0

Coefficient of Utilization



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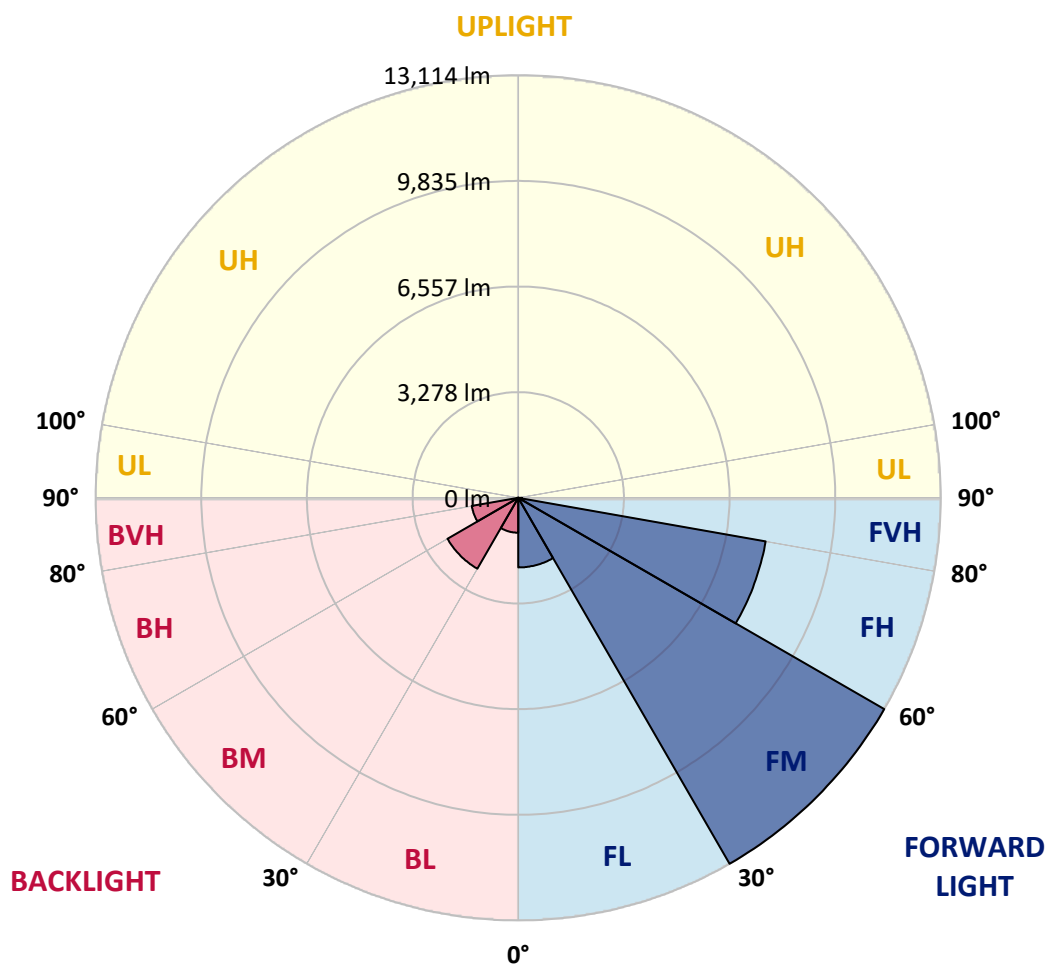
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2160.0	7.6			
FM	(30°-60°)	13113.7	46.3			
FH	(60°-80°)	7795.2	27.5			G4/12000
FVH	(80°-90°)	116.0	0.4			G2/225
BL	(0°-30°)	1083.2	3.8	B3/2500		
BM	(30°-60°)	2538.2	9.0	B3/5000		
BH	(60°-80°)	1463.8	5.2	B3/2500		G3/2500
BVH	(80°-90°)	43.5	0.2			G1/100
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°	82°	85°
0°	4690.6	4690.6	4690.6	4690.6	4690.6	4690.6	4690.6	4690.6	4690.6	4690.6	4690.6
2.5°	4957.6	4986.2	4969.9	4961.7	4947.5	4927.1	4910.8	4859.8	4806.8	4772.1	4759.9
5°	5057.6	5086.0	5084.0	5092.2	5102.3	5108.5	5104.4	5047.3	4971.9	4912.8	4878.2
7.5°	4971.9	5004.6	5031.0	5071.8	5143.1	5218.6	5255.3	5243.1	5165.6	5084.0	5041.3
10°	4729.3	4764.0	4827.1	4923.0	5073.9	5236.9	5373.5	5436.7	5387.8	5298.1	5239.0
12.5°	4284.9	4319.6	4444.0	4651.9	4904.6	5188.0	5448.9	5618.1	5630.3	5540.6	5471.3
15°	3785.5	3820.2	3952.7	4213.6	4598.9	5053.5	5489.7	5809.7	5917.7	5840.3	5756.7
17.5°	3475.7	3506.2	3606.2	3816.1	4217.7	4784.4	5475.4	6013.6	6260.3	6199.1	6099.2
20°	3381.9	3408.3	3455.3	3602.1	3936.3	4505.1	5381.7	6205.2	6629.2	6594.5	6482.4
22.5°	3481.7	3506.2	3520.5	3585.8	3795.7	4321.6	5263.4	6400.9	7057.3	7061.4	6924.8
25°	3712.1	3736.5	3720.2	3761.0	3852.8	4264.5	5218.6	6631.2	7595.5	7640.4	7485.4
27.5°	4091.3	4093.3	4054.6	4052.5	4066.8	4350.2	5265.4	6878.0	8274.3	8357.8	8166.3
30°	4851.6	4821.1	4672.3	4511.2	4437.8	4607.1	5395.9	7169.5	9075.5	9224.3	8983.7
32.5°	6023.8	5978.9	5705.8	5320.5	4933.2	5020.9	5630.3	7501.7	9947.9	10217.0	9923.4
35°	7295.8	7283.5	6998.2	6425.4	5748.6	5609.9	6011.5	7937.9	10899.8	11328.0	10979.4
37.5°	8478.2	8472.0	8309.0	7634.2	6810.6	6431.5	6623.1	8508.7	11919.1	12538.8	12127.1
40°	9558.5	9576.9	9413.8	8810.4	7980.8	7485.4	7454.8	9214.0	13052.6	13857.8	13368.6
42.5°	10492.2	10512.6	10347.5	9901.0	9136.5	8651.4	8476.1	10078.4	14159.5	15274.6	14695.6
45°	11126.2	11252.6	11228.1	10871.4	10323.0	9819.5	9703.3	11162.9	15421.3	16776.9	16098.0
47.5°	11305.5	11421.8	11605.3	11654.1	11319.8	10824.5	10963.1	12469.5	16697.4	18281.3	17508.7
50°	10863.2	10971.2	11352.4	11860.1	12092.4	11939.5	12188.3	13870.0	18004.1	19781.7	18892.9
52.5°	9990.7	10100.8	10581.9	11385.1	12333.0	12814.0	13417.5	15250.1	19270.0	21202.5	20203.7
55°	8728.9	8845.0	9462.7	10371.9	11874.3	13174.8	14442.8	16628.1	20429.9	22480.6	21386.0
57.5°	7012.4	7098.1	7740.2	9012.2	10720.5	12816.1	15199.1	18132.6	21522.5	23736.3	22558.1
60°	4570.4	4645.7	5391.8	6810.6	8808.3	11617.5	15350.0	19810.2	22973.9	25369.2	24137.9
62.5°	3039.4	3090.4	3532.8	4574.4	6203.2	9316.0	14467.3	21149.5	25102.1	28210.9	26847.1
65°	2085.4	2136.3	2578.7	3304.4	4007.7	6162.4	11929.4	20972.1	27030.6	30467.5	28855.1
67.5°	1488.1	1530.9	1906.0	2590.9	2900.7	3579.6	8086.7	18705.3	26753.3	30553.1	28963.1
70°	1066.1	1090.6	1400.5	2018.1	2305.5	2150.7	4497.0	14306.2	23424.4	28212.9	26757.4
72.5°	746.1	754.3	972.4	1537.0	1857.1	1569.7	2140.4	9538.1	17716.6	22144.3	20743.8
75°	505.5	515.8	654.4	1127.3	1490.1	1198.6	1133.4	5114.6	10400.5	12257.6	10987.6
77.5°	309.9	314.0	422.0	770.6	1115.1	913.3	729.8	2167.0	4024.0	3950.7	3367.6
80°	175.3	175.3	269.1	479.1	760.3	589.2	511.7	921.4	1274.1	1119.1	986.7
82.5°	97.9	99.9	195.7	297.7	503.5	348.6	281.4	426.1	550.4	487.2	424.0
85°	40.8	44.9	120.2	140.6	240.6	173.2	114.2	179.4	203.9	181.4	132.5
87.5°	4.1	6.1	36.7	26.5	28.5	34.6	16.3	34.6	28.5	28.5	20.4
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°	4690.6	4690.6	4690.6	4690.6	4690.6	4690.6	4690.6	4690.6	4690.6	4690.6	4690.6
2.5°	4721.2	4690.6	4613.1	4523.4	4405.2	4348.2	4270.7	4217.7	4172.8	4176.9	4136.1
5°	4812.9	4735.4	4562.2	4346.1	4077.0	3885.4	3681.5	3540.9	3426.7	3402.3	3347.2
7.5°	4939.3	4817.0	4513.3	4123.9	3669.3	3324.8	3017.0	2819.3	2678.6	2633.7	2588.9
10°	5102.3	4925.0	4450.0	3844.7	3190.2	2752.0	2421.8	2266.8	2171.1	2138.4	2114.0
12.5°	5292.0	5049.4	4366.5	3504.2	2697.0	2275.0	2065.0	1987.6	1956.9	1946.8	1940.6
15°	5530.5	5204.3	4240.1	3100.5	2279.1	1983.5	1893.8	1883.5	1887.6	1883.5	1881.5
17.5°	5813.8	5373.5	4034.2	2684.7	1997.7	1834.6	1802.1	1810.2	1820.4	1818.4	1814.2
20°	6123.7	5540.6	3771.3	2315.8	1806.2	1728.7	1710.3	1718.4	1726.6	1722.5	1720.5
22.5°	6476.4	5720.0	3479.8	2028.3	1677.7	1630.8	1610.4	1612.4	1612.4	1604.3	1600.2
25°	6898.4	5917.7	3173.9	1824.5	1579.8	1543.1	1518.6	1510.5	1498.3	1473.8	1469.7
27.5°	7401.8	6127.8	2880.5	1681.7	1502.3	1467.7	1439.2	1418.8	1388.3	1347.5	1343.4
30°	7968.6	6382.6	2631.7	1592.0	1441.3	1406.6	1373.9	1343.4	1298.6	1247.5	1243.5
32.5°	8635.1	6655.7	2450.3	1533.0	1386.2	1349.5	1310.8	1274.1	1225.2	1174.1	1176.2
35°	9430.1	6986.0	2344.3	1492.2	1343.4	1294.5	1251.6	1210.8	1174.1	1129.3	1125.2
37.5°	10292.4	7336.5	2311.7	1471.8	1314.9	1239.4	1190.5	1161.9	1157.8	1131.4	1129.3
40°	11236.3	7752.5	2336.1	1459.6	1284.2	1186.4	1133.4	1127.3	1137.4	1090.6	1092.6
42.5°	12235.1	8245.7	2376.9	1445.2	1241.5	1133.4	1082.4	1082.4	1074.3	1009.0	1009.0
45°	13315.5	8814.5	2417.7	1410.6	1190.5	1080.5	1041.7	1027.4	992.7	929.6	927.5
47.5°	14404.1	9393.4	2448.2	1347.5	1129.3	1035.6	1000.9	968.3	917.4	860.3	858.2
50°	15437.6	9913.3	2415.6	1253.7	1060.1	992.7	956.0	911.2	856.2	817.4	811.3
52.5°	16361.0	10363.8	2277.0	1143.6	986.7	947.9	915.3	868.4	823.6	782.8	778.7
55°	17164.2	10728.7	2032.4	1039.7	921.4	909.2	876.6	817.4	756.2	721.6	717.6
57.5°	17934.7	11005.9	1726.6	954.1	862.3	866.3	817.4	764.4	707.4	670.7	666.6
60°	18960.1	11376.9	1416.8	874.5	799.1	811.3	758.3	719.6	648.2	601.4	595.2
62.5°	20599.1	11953.8	1125.2	776.6	725.7	729.8	707.4	660.5	574.8	519.8	515.8
65°	21899.6	11741.8	886.7	670.7	642.2	648.2	648.2	597.3	505.5	442.4	436.2
67.5°	21752.9	10053.9	707.4	566.7	562.6	566.7	581.0	538.1	448.4	397.5	389.4
70°	20038.5	7997.0	566.7	470.9	489.2	479.1	519.8	491.3	403.6	352.7	346.6
72.5°	16350.9	5760.8	432.1	389.4	375.0	391.3	468.8	442.4	336.3	279.3	273.2
75°	9554.4	3074.1	322.1	307.8	271.1	326.2	415.8	377.1	256.9	205.9	199.8
77.5°	3110.8	1072.3	236.5	226.3	201.8	263.0	354.6	318.1	209.9	163.1	156.9
80°	833.7	324.1	161.0	148.8	130.5	195.7	281.4	252.8	150.9	106.0	103.9
82.5°	334.4	136.5	93.8	83.5	71.3	134.6	222.2	203.9	112.1	67.2	67.2
85°	108.0	44.9	34.6	26.5	32.6	83.5	132.5	138.6	79.5	34.6	26.5
87.5°	14.2	6.1	6.1	8.2	6.1	14.2	40.8	38.7	22.4	4.1	0.0
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)