

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: P967235

Luminaire Tested: **NAV-SB4D-740-U-T2R**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P967235
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-740-U-T2R
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 4000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II
ROADWAY OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 45046.7 lumens
Efficiency: N/A
Efficacy: 153.4 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

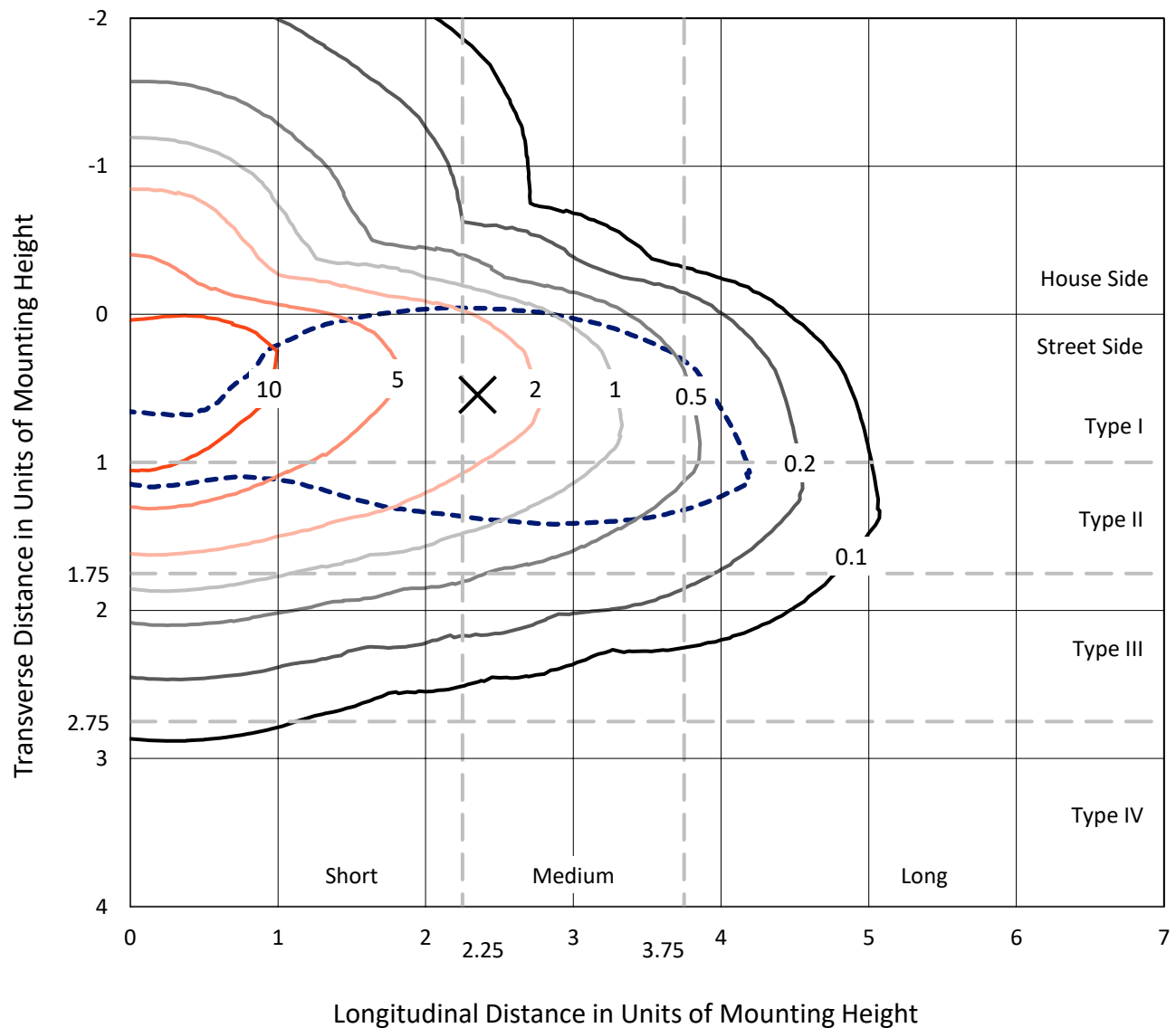


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Iso-Footcandle Lines of Horizontal Illumination

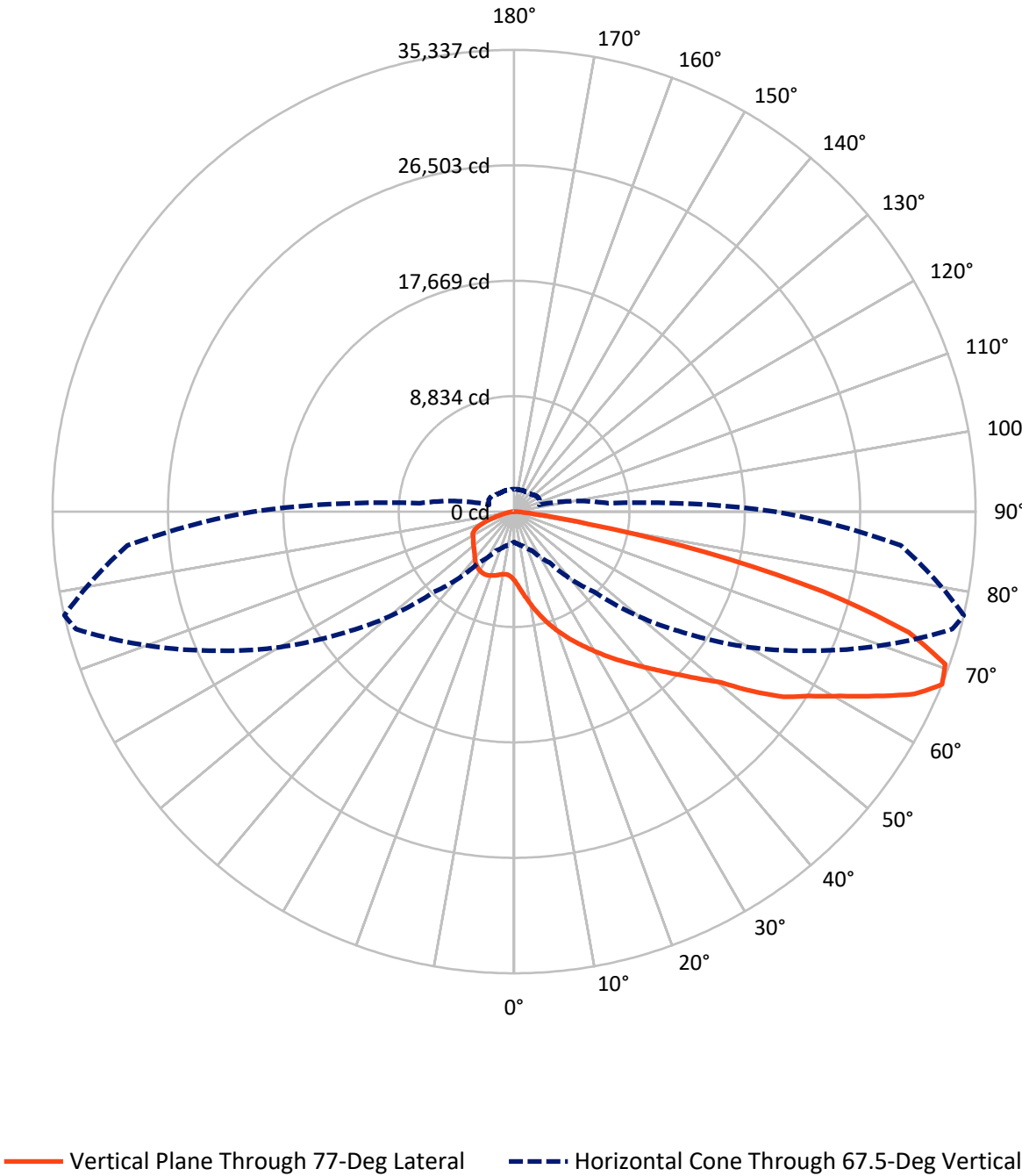
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 16.5 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	8521.0	0.0	8521.0
	% Fixture	18.9	0.0	18.9
Street Side	Lumens	36525.7	0.0	36525.7
	% Fixture	81.1	0.0	81.1
Total	Lumens	45046.7	0.0	45046.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	566.5	1.3
10°-20°	2035.3	4.5
20°-30°	3842.8	8.5
30°-40°	6190.7	13.7
40°-50°	8467.8	18.8
50°-60°	9551.7	21.2
60°-70°	8915.3	19.8
70°-80°	4887.1	10.8
80°-90°	589.5	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°	45046.7	100.0
0°-180°	45046.7	100.0

Coefficient of Utilization



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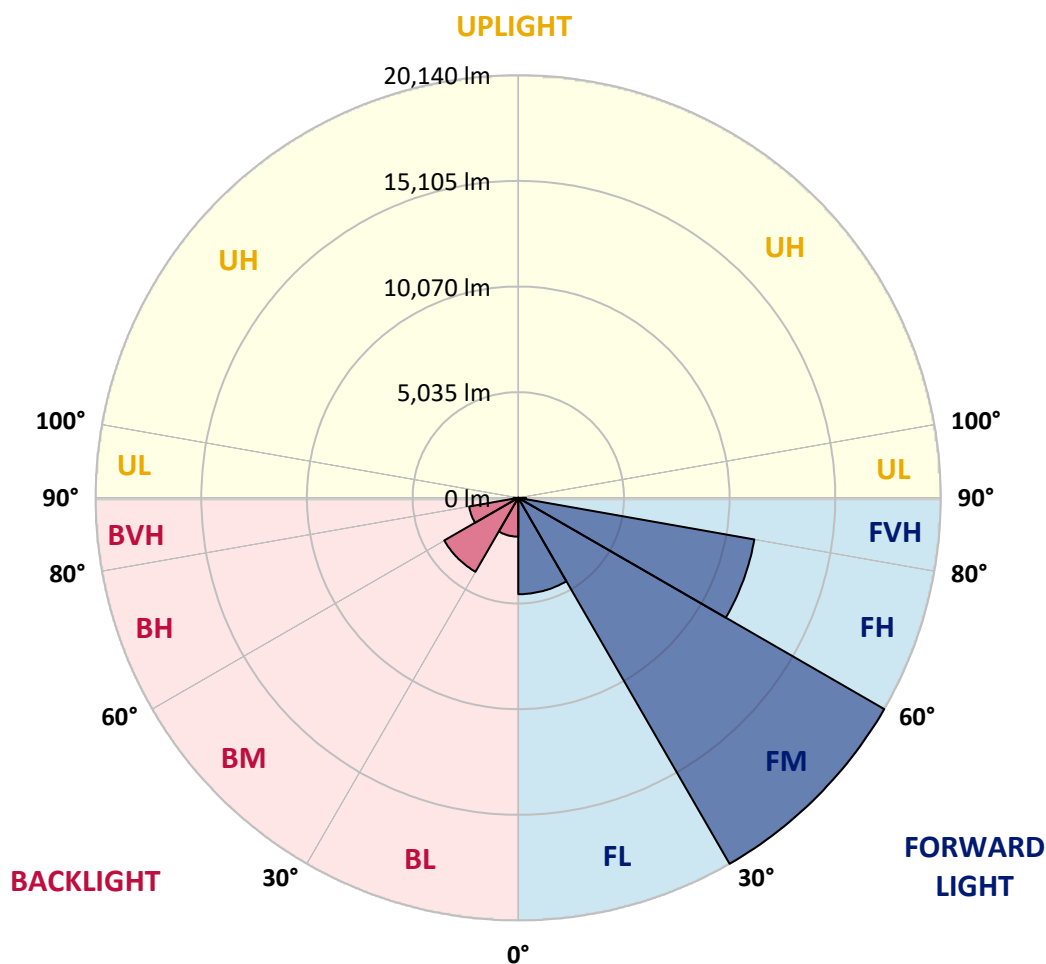
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	4591.9	10.2			
FM	(30°-60°)	20139.9	44.7			
FH	(60°-80°)	11425.2	25.4			G4/12000
FVH	(80°-90°)	368.7	0.8			G3/500
BL	(0°-30°)	1852.7	4.1	B3/2500		
BM	(30°-60°)	4070.3	9.0	B3/5000		
BH	(60°-80°)	2377.2	5.3	B3/2500		G3/2500
BVH	(80°-90°)	220.8	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°	5285.4	5285.4	5285.4	5285.4	5285.4	5285.4	5285.4	5285.4	5285.4	5285.4	5285.4
2.5°	6617.8	6664.2	6606.1	6606.1	6410.9	6308.5	6113.2	5964.4	5697.0	5650.4	5473.7
5°	7822.3	7880.4	7799.0	7764.2	7534.0	7322.3	6994.5	6671.2	6194.6	6145.7	5729.5
7.5°	8754.7	8829.1	8757.0	8719.8	8515.2	8278.0	7894.3	7443.2	6771.3	6675.9	6073.6
10°	9515.1	9526.7	9503.5	9517.4	9356.9	9161.7	8768.7	8243.2	7403.7	7273.5	6489.9
12.5°	9945.3	9998.8	10045.2	10128.9	10101.1	9980.1	9626.7	8998.9	8073.4	7905.9	6943.4
15°	10147.6	10240.6	10345.2	10538.2	10694.0	10724.3	10454.5	9810.4	8754.7	8552.4	7401.4
17.5°	10219.7	10308.0	10473.1	10752.1	11087.0	11312.5	11191.6	10598.7	9429.1	9196.5	7882.8
20°	10584.7	10610.3	10710.2	10975.4	11338.1	11712.5	11803.2	11356.7	10096.4	9833.6	8380.3
22.5°	11366.0	11314.9	11342.8	11463.7	11724.1	12086.8	12293.7	12026.4	10782.4	10480.1	8882.5
25°	12656.5	12507.8	12358.9	12219.3	12352.0	12556.6	12791.4	12696.1	11500.9	11117.2	9389.5
27.5°	14286.6	14105.2	13777.3	13319.3	13158.8	13230.9	13335.6	13316.9	12165.9	11777.6	9912.7
30°	15891.0	15679.4	15288.8	14626.0	14202.8	14012.2	13933.1	13879.6	12889.1	12475.2	10440.5
32.5°	17172.2	17004.9	16621.2	15879.4	15265.5	14940.0	14677.2	14486.5	13644.8	13230.9	10998.6
35°	18293.1	18137.3	17697.8	16888.5	16221.2	15874.7	15530.6	15123.7	14430.8	14012.2	11598.5
37.5°	19316.1	19160.3	18558.1	17716.4	17044.3	16804.9	16497.9	15807.3	15219.0	14823.8	12233.4
40°	19962.6	19927.7	19365.0	18411.7	17714.0	17595.5	17493.2	16600.2	16093.3	15726.0	12930.9
42.5°	20127.7	20204.4	19758.0	18974.4	18309.3	18213.9	18453.5	17497.8	17074.6	16723.5	13721.5
45°	19730.0	19951.0	19658.0	19125.5	18732.5	18681.3	19304.5	18479.0	18160.5	17839.6	14674.9
47.5°	18723.2	19097.6	18976.6	18902.2	18846.5	19067.4	20053.3	19520.8	19390.5	19111.5	15763.2
50°	16690.9	17400.1	17611.8	18081.4	18620.9	19367.3	20734.6	20657.8	20827.6	20546.2	17088.5
52.5°	13177.4	14154.0	15381.8	16558.4	17928.0	19267.3	21483.3	22290.2	23006.4	22852.9	19195.3
55°	10877.7	11317.1	12261.3	14419.1	16584.0	18846.5	21820.5	23608.6	25168.9	25031.7	20792.7
57.5°	9110.5	9503.5	10084.8	11886.8	14551.6	17890.8	22029.8	24413.1	26650.1	26636.2	22369.3
60°	7215.4	7631.6	8226.9	9503.5	12177.5	16239.8	21983.3	25329.4	28540.6	28656.8	24292.3
62.5°	5076.1	5534.2	6194.6	7385.1	9752.3	14100.5	21034.5	25992.1	30765.9	31082.1	26605.9
65°	3336.8	3639.1	4136.7	5164.5	7266.5	11349.7	19223.2	26078.0	33147.0	33681.8	28777.8
67.5°	2339.3	2455.5	2748.5	3306.5	4790.1	8703.6	16337.5	25187.5	34735.1	35337.4	29719.5
70°	1825.3	1883.4	2032.3	2255.5	3008.9	5852.7	12519.3	22871.5	34395.6	35023.4	28735.9
72.5°	1576.6	1632.3	1688.2	1716.1	2018.3	3613.5	8480.3	19123.1	31198.3	31623.9	24985.2
75°	1430.1	1444.0	1490.6	1481.2	1539.3	2343.9	4894.7	13933.1	24615.5	24469.0	18444.2
77.5°	1202.2	1220.8	1297.5	1285.9	1367.2	1602.1	2541.5	8991.9	15958.4	14963.3	10266.1
80°	1018.4	1027.8	1111.5	1097.6	1188.2	1160.3	1297.5	4583.2	6768.9	5734.2	2960.1
82.5°	353.4	437.2	848.7	874.3	906.8	702.2	748.8	1869.5	2067.2	1583.5	620.8
85°	172.1	183.7	432.6	613.9	611.5	353.4	365.1	667.4	651.1	511.6	206.9
87.5°	27.9	34.8	51.1	239.5	190.6	93.0	125.6	130.2	134.9	116.2	46.5
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°	5285.4	5285.4	5285.4	5285.4	5285.4	5285.4	5285.4	5285.4	5285.4	5285.4	5285.4
2.5°	5343.5	5227.3	4983.1	4757.5	4580.8	4411.1	4315.8	4234.4	4187.8	4178.5	4178.5
5°	5487.6	5248.2	4804.1	4429.6	4185.5	4004.2	3908.8	3848.4	3818.1	3799.5	3797.2
7.5°	5694.6	5343.5	4711.0	4285.5	4029.7	3899.5	3850.7	3841.4	3839.0	3841.4	3848.4
10°	5980.7	5499.3	4701.8	4250.7	4036.7	3964.6	3962.2	3964.6	3973.9	3976.3	3978.5
12.5°	6289.9	5659.7	4739.0	4280.8	4125.0	4085.5	4078.6	4076.2	4083.2	4087.9	4090.2
15°	6627.0	5871.3	4801.7	4346.0	4222.7	4180.9	4173.9	4160.0	4157.6	4155.2	4153.0
17.5°	6973.5	6080.6	4871.5	4415.7	4285.5	4227.4	4201.8	4169.3	4143.7	4136.7	4143.7
20°	7324.6	6287.6	4920.3	4450.5	4290.1	4208.8	4157.6	4101.8	4057.7	4032.0	4041.4
22.5°	7699.0	6503.8	4950.5	4441.3	4248.3	4136.7	4043.6	3978.5	3911.1	3866.9	3869.3
25°	8064.1	6692.2	4948.2	4392.4	4166.9	4025.1	3906.5	3822.7	3729.8	3683.2	3683.2
27.5°	8415.2	6862.0	4890.1	4306.4	4050.7	3892.5	3750.7	3650.7	3560.0	3515.9	3513.5
30°	8778.0	7003.7	4799.4	4180.9	3913.4	3739.1	3583.3	3497.2	3415.8	3374.0	3371.6
32.5°	9138.4	7134.0	4671.5	4025.1	3755.3	3587.9	3434.5	3355.4	3306.5	3306.5	3308.9
35°	9519.7	7224.7	4501.8	3843.7	3587.9	3427.5	3306.5	3260.0	3255.4	3227.5	3220.5
37.5°	9922.0	7282.8	4294.9	3657.7	3422.8	3271.7	3234.5	3178.6	3132.2	3071.7	3062.4
40°	10345.2	7340.9	4046.0	3464.7	3248.4	3164.7	3148.4	3074.1	2941.4	2792.7	2771.7
42.5°	10859.1	7380.4	3787.9	3271.7	3064.7	3036.9	3060.0	2932.2	2720.6	2608.9	2611.3
45°	11454.4	7445.6	3550.7	3081.0	2876.4	2876.4	2974.0	2806.7	2632.2	2562.5	2574.1
47.5°	12226.4	7596.7	3329.8	2871.7	2702.0	2748.5	2783.4	2655.5	2557.8	2471.8	2469.4
50°	13342.5	7959.4	3102.0	2660.1	2569.5	2662.4	2613.6	2539.2	2425.3	2355.6	2348.6
52.5°	14728.3	8173.4	2899.6	2469.4	2455.5	2548.6	2478.8	2409.0	2323.0	2230.0	2211.3
55°	15672.5	8212.9	2729.9	2329.9	2378.7	2369.5	2343.9	2281.1	2234.6	2111.4	2113.7
57.5°	16728.1	8291.9	2590.4	2246.2	2329.9	2227.6	2218.3	2164.8	2104.4	2020.7	1992.8
60°	17990.7	8415.2	2469.4	2213.7	2288.1	2134.6	2088.1	2067.2	2006.7	1964.8	1976.5
62.5°	19367.3	8526.9	2346.2	2218.3	2239.2	2044.0	1974.2	1967.2	1930.0	1916.0	1916.0
65°	20306.7	8222.2	2192.8	2213.7	2162.5	1950.9	1862.5	1860.3	1830.0	1825.3	1823.1
67.5°	19978.9	7257.2	1985.8	2148.6	2083.4	1857.9	1760.2	1750.9	1711.4	1713.7	1713.7
70°	18337.2	5880.6	1699.8	1988.1	1985.8	1774.2	1653.3	1623.1	1569.6	1578.9	1588.1
72.5°	15258.6	4357.6	1316.1	1720.7	1830.0	1697.5	1530.0	1481.2	1413.8	1423.1	1420.8
75°	11019.6	2962.5	958.1	1309.1	1592.8	1606.8	1409.2	1325.4	1244.0	1258.0	1262.6
77.5°	5638.8	1678.8	704.6	902.2	1251.0	1460.3	1299.8	1188.2	1169.6	1299.8	1281.2
80°	1839.3	841.7	488.3	632.5	820.8	1195.1	1139.4	1011.5	1006.9	1037.1	890.6
82.5°	548.8	355.8	314.0	416.3	453.5	916.1	983.6	765.1	658.0	692.9	716.2
85°	188.4	172.1	179.1	206.9	216.3	537.1	688.3	506.9	479.0	527.9	520.9
87.5°	44.2	60.5	51.1	46.5	46.5	130.2	267.4	211.6	292.9	195.4	188.4
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)