

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: P195864

Luminaire Tested: **NAV-AF-06-D-UNV-T3R-7050-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195864
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24250)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-06-D-UNV-T3R-7050-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 40192 lumens
Efficiency: N/A
Efficacy: 105.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - Full Cutoff
BUG Rating: B3 - U0 - G5

Input Watts (W): 382
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: 25 FT

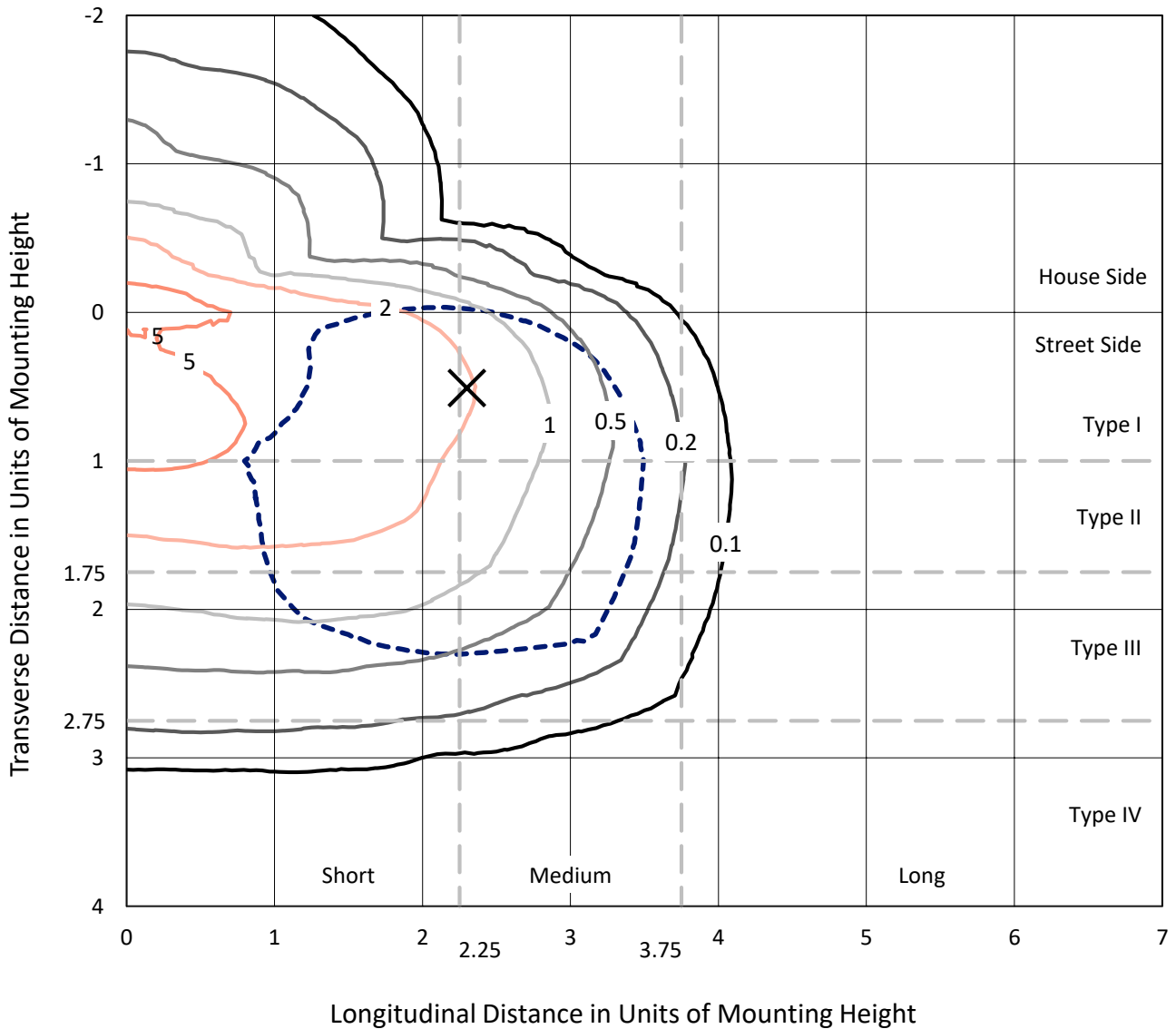


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Iso-Footcandle Lines of Horizontal Illumination

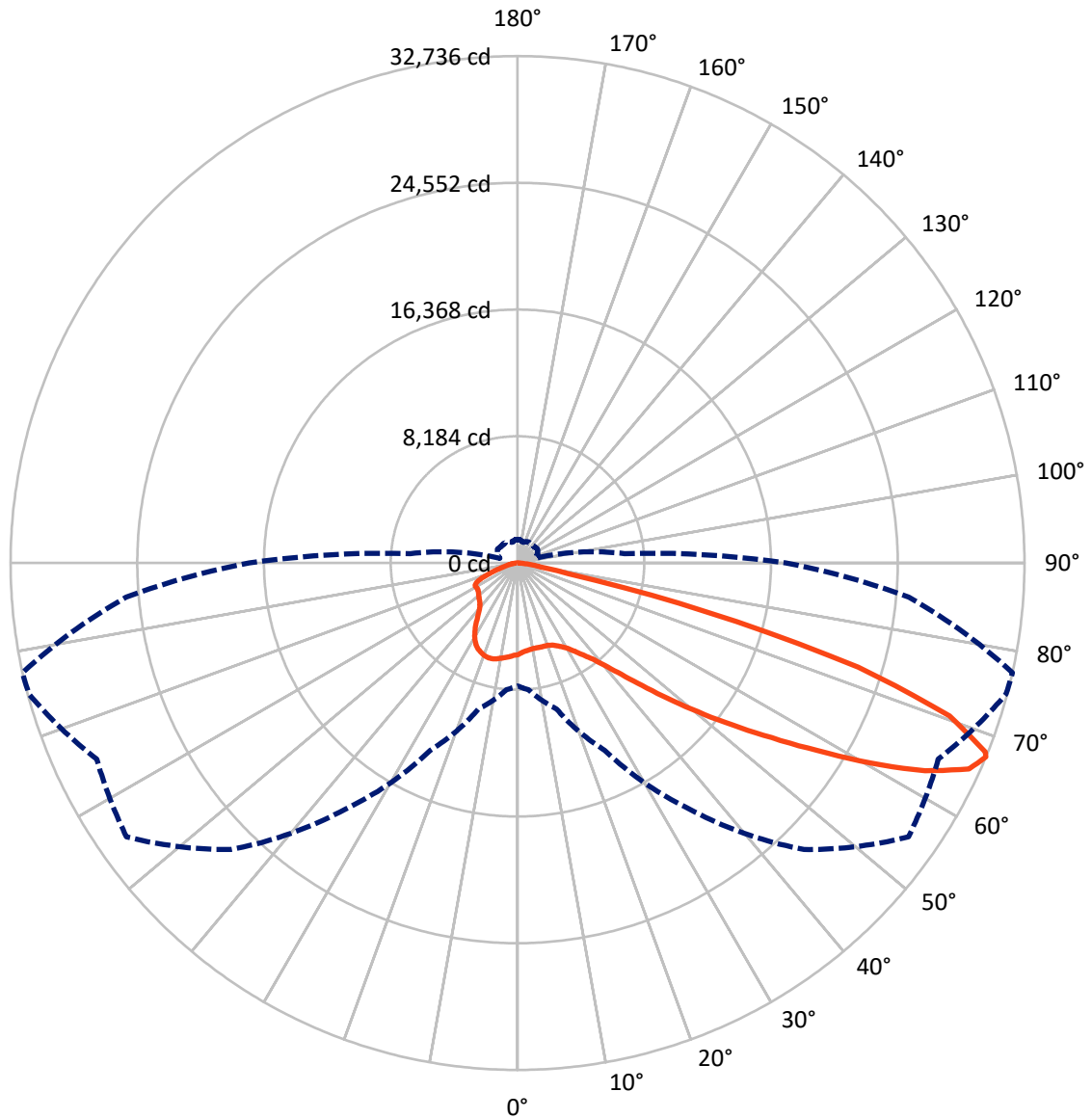
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 7.9 fc
 Type III - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6907.0	0.0	6907.0
	% Fixture	17.2	0.0	17.2
Street Side	Lumens	33285.0	0.0	33285.0
	% Fixture	82.8	0.0	82.8
Total	Lumens	40192.0	0.0	40192.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	526.8	1.3
10°-20°	1459.0	3.6
20°-30°	2479.0	6.2
30°-40°	3965.8	9.9
40°-50°	6105.3	15.2
50°-60°	8470.6	21.1
60°-70°	11299.1	28.1
70°-80°	5377.3	13.4
80°-90°	509.1	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°	40192.0	100.0
0°-180°	40192.0	100.0



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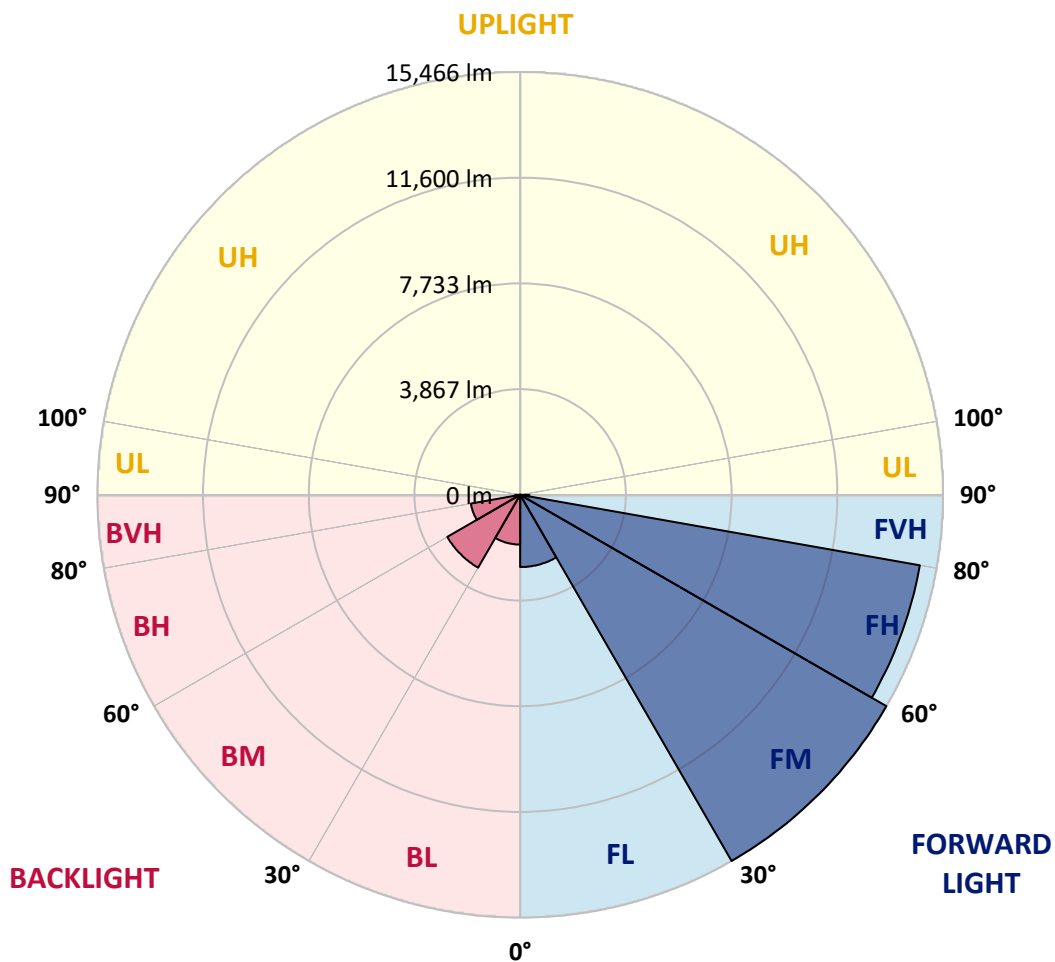
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2643.0	6.6			
FM	(30°-60°)	15466.3	38.5			
FH	(60°-80°)	14845.0	36.9			G5
FVH	(80°-90°)	330.7	0.8			G3/500
BL	(0°-30°)	1821.8	4.5	B3/2500		
BM	(30°-60°)	3075.4	7.7	B3/5000		
BH	(60°-80°)	1831.4	4.6	B3/2500		G3/2500
BVH	(80°-90°)	178.5	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-G5

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	5915.2	5915.2	5915.2	5915.2	5915.2	5915.2	5915.2	5915.2	5915.2	5915.2	5915.2
2.5°	5304.1	5328.9	5331.4	5403.4	5435.7	5517.7	5607.1	5686.6	5756.2	5781.1	5825.8
5°	4772.4	4772.4	4779.9	4827.1	4919.0	5050.7	5237.0	5440.7	5654.4	5706.5	5838.2
7.5°	4494.2	4499.1	4504.1	4551.3	4623.4	4740.1	4926.4	5204.7	5559.9	5646.9	5877.9
10°	4519.0	4511.6	4486.7	4476.8	4506.6	4581.1	4742.6	5028.3	5480.4	5614.6	5950.0
12.5°	4909.0	4894.1	4812.2	4692.9	4583.6	4556.3	4668.1	4938.9	5443.2	5614.6	6071.7
15°	5577.3	5587.3	5425.8	5177.4	4891.7	4697.9	4683.0	4906.6	5430.8	5629.5	6213.3
17.5°	6446.9	6451.8	6228.2	5868.0	5393.5	4993.5	4784.8	4906.6	5430.8	5644.4	6350.0
20°	7371.0	7336.2	7082.8	6630.7	6014.6	5403.4	4971.2	4936.4	5445.7	5666.8	6479.2
22.5°	8163.5	8131.2	7865.4	7390.9	6685.4	5887.9	5222.1	5035.8	5527.6	5758.7	6660.5
25°	8856.7	8876.5	8618.2	8084.0	7353.6	6434.4	5597.2	5264.3	5699.1	5925.1	6884.1
27.5°	9698.9	9661.6	9363.5	8854.2	8041.8	7000.9	6066.8	5552.5	5902.8	6126.4	7157.4
30°	10672.7	10655.3	10252.9	9728.7	8799.5	7634.4	6531.3	5863.0	6168.6	6402.1	7500.2
32.5°	11855.3	11852.8	11420.5	10777.1	9651.6	8349.9	7080.4	6287.9	6556.2	6792.2	7954.8
35°	13194.3	13191.8	12744.6	11895.0	10633.0	9142.4	7726.3	6804.6	7035.6	7284.1	8496.4
37.5°	14123.5	14108.5	13875.0	13050.2	11718.6	10064.0	8533.7	7500.2	7579.7	7858.0	9149.8
40°	14302.3	14391.8	14593.0	14106.1	12903.6	11087.6	9343.6	8248.0	8322.5	8680.3	9972.1
42.5°	14108.5	14225.3	14893.6	15030.2	14088.7	12327.3	10357.2	9284.0	9378.4	9823.1	10938.5
45°	13939.6	14041.5	14878.7	15542.0	15258.8	13678.8	11621.7	10548.5	10727.4	11278.9	12041.6
47.5°	13651.4	13745.8	14585.5	15633.9	15927.1	14980.6	13144.6	12068.9	12377.0	13045.3	13298.7
50°	13636.5	13678.8	14185.6	15325.9	16158.1	15969.3	14831.5	13847.7	14319.7	15089.9	14689.9
52.5°	13258.9	13554.5	14014.1	14834.0	16163.1	16545.7	16493.5	15797.9	16525.8	17377.9	16215.3
55°	10948.5	11288.8	13442.7	14593.0	16133.3	17040.1	18011.4	17872.3	19010.1	19907.0	17924.5
57.5°	10223.0	10367.1	11793.1	14665.0	16381.7	17857.4	19529.4	20100.8	21852.2	22831.1	19974.1
60°	10024.3	10175.8	11462.7	14699.8	17055.0	19345.5	21588.9	22617.4	25193.7	26232.1	22301.9
62.5°	9803.2	9999.5	11487.6	14732.1	18237.5	21546.7	24321.7	25347.7	28624.5	29551.2	24483.1
65°	9157.3	9418.1	11028.0	14528.4	19531.9	24309.2	27933.9	28194.7	31459.2	32047.9	25799.8
67°	7932.5	8218.2	9765.9	13350.8	19412.6	26170.0	30823.2	29976.0	32664.1	32736.1	25372.5
67.5°	7544.9	7840.6	9338.6	12861.4	19072.3	26413.5	31334.9	30222.0	32654.1	32574.6	24975.0
70°	5080.5	5413.4	6613.3	9443.0	15298.5	24582.5	31210.7	29464.2	30512.6	29600.9	21457.2
72.5°	2521.6	2531.5	3299.2	5172.4	9269.1	17631.3	26035.9	25206.1	24734.1	23012.4	15745.7
75°	1214.8	1237.2	1557.7	2285.6	3907.9	9102.6	17755.6	17007.8	14481.2	12538.4	7880.3
77.5°	926.7	949.0	1209.9	1488.1	1629.7	2968.8	8794.6	7107.7	4196.0	3351.4	2221.0
80°	715.5	757.7	1021.1	1142.8	1078.2	1190.0	2765.1	2176.3	1632.2	1498.1	1100.6
82.5°	559.0	583.8	867.0	867.0	745.3	797.5	1286.9	1257.1	1013.6	914.2	591.3
85°	395.0	444.7	698.1	645.9	489.4	494.4	770.1	737.8	521.7	419.9	231.0
87.5°	176.4	226.1	496.9	422.3	260.9	201.2	315.5	270.8	206.2	159.0	106.8
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°	5915.2	5915.2	5915.2	5915.2	5915.2	5915.2	5915.2	5915.2	5915.2	5915.2	5915.2
2.5°	5875.5	5915.2	5977.3	6014.6	6064.3	6084.1	6104.0	6138.8	6166.1	6158.7	6146.2
5°	5930.1	5997.2	6074.2	6099.0	6099.0	6074.2	6059.3	6061.8	6054.3	6049.4	6034.5
7.5°	6009.6	6101.5	6156.2	6131.3	6054.3	5957.4	5865.5	5810.9	5758.7	5726.4	5736.3
10°	6121.4	6223.3	6225.7	6116.4	5932.6	5721.4	5540.1	5423.3	5311.5	5261.8	5276.7
12.5°	6282.9	6384.7	6297.8	6061.8	5738.8	5408.4	5075.5	4834.5	4618.4	4566.2	4551.3
15°	6456.8	6536.3	6342.5	5945.0	5460.6	4916.5	4357.5	3997.3	3756.3	3714.1	3699.2
17.5°	6608.3	6653.1	6320.2	5736.3	5020.8	4163.7	3512.9	3269.4	3219.7	3244.5	3244.5
20°	6742.5	6727.6	6223.3	5413.4	4327.7	3329.0	2951.4	2948.9	3016.0	3078.1	3083.1
22.5°	6911.4	6794.7	6069.2	4933.9	3500.4	2777.5	2712.9	2777.5	2852.0	2921.6	2929.0
25°	7112.7	6869.2	5863.0	4250.7	2814.8	2521.6	2548.9	2603.6	2650.8	2705.4	2707.9
27.5°	7313.9	6926.3	5572.4	3448.3	2442.1	2357.6	2387.4	2409.8	2422.2	2457.0	2457.0
30°	7547.4	6971.0	5152.5	2762.6	2270.7	2213.5	2196.2	2186.2	2196.2	2243.4	2245.8
32.5°	7840.6	7050.5	4578.6	2370.1	2191.2	2111.7	2022.3	1972.6	2007.3	2091.8	2106.7
35°	8173.5	7145.0	3890.5	2213.5	2163.9	2062.0	1898.0	1821.0	1833.4	1910.5	1922.9
37.5°	8590.8	7266.7	3212.2	2176.3	2191.2	2057.0	1840.9	1731.6	1676.9	1679.4	1676.9
40°	9125.0	7388.4	2675.6	2186.2	2250.8	2069.5	1813.6	1642.1	1527.9	1532.8	1542.8
42.5°	9683.9	7467.9	2335.3	2216.0	2322.9	2086.8	1803.6	1555.2	1455.8	1540.3	1617.3
45°	10337.3	7445.6	2158.9	2243.4	2377.5	2094.3	1766.4	1545.3	1463.3	1716.7	1860.8
47.5°	11087.6	7348.7	2059.5	2255.8	2392.4	2091.8	1739.0	1577.6	1525.4	1965.1	2129.1
50°	11902.5	7197.1	1980.0	2235.9	2385.0	2081.9	1768.8	1617.3	1550.2	2019.8	2146.5
52.5°	12794.3	7058.0	1898.0	2191.2	2347.7	2052.1	1806.1	1599.9	1480.7	1860.8	1957.7
55°	13850.2	7025.7	1806.1	2114.2	2285.6	2019.8	1786.2	1545.3	1403.7	1649.6	1709.2
57.5°	15057.6	7226.9	1686.9	2019.8	2201.1	1955.2	1739.0	1515.4	1376.3	1500.5	1532.8
60°	16590.4	7671.6	1560.2	1920.4	2096.8	1858.3	1696.8	1522.9	1383.8	1478.2	1485.6
62.5°	17787.9	8071.6	1445.9	1798.7	1957.7	1741.5	1652.1	1530.4	1406.1	1508.0	1495.6
65°	18222.6	7875.3	1304.3	1617.3	1761.4	1612.3	1590.0	1535.3	1406.1	1525.4	1498.1
67°	17330.7	6938.8	1170.1	1435.9	1575.1	1498.1	1530.4	1515.4	1381.3	1522.9	1475.7
67.5°	16905.9	6608.3	1135.3	1406.1	1525.4	1463.3	1515.4	1505.5	1373.8	1517.9	1463.3
70°	13942.1	4740.1	959.0	1180.1	1276.9	1289.4	1423.5	1440.9	1314.2	1426.0	1326.6
72.5°	9920.0	2966.3	827.3	914.2	1031.0	1103.0	1299.3	1354.0	1234.7	1239.7	1157.7
75°	4909.0	1592.5	737.8	705.6	802.4	919.2	1132.9	1234.7	1118.0	1033.5	1006.2
77.5°	1657.1	901.8	623.6	568.9	623.6	737.8	939.1	1078.2	986.3	874.5	857.1
80°	857.1	655.9	486.9	457.1	491.9	571.4	735.4	896.8	842.2	847.2	698.1
82.5°	534.1	400.0	350.3	347.8	372.7	437.2	541.6	727.9	722.9	618.6	449.7
85°	248.4	231.0	223.6	231.0	238.5	248.4	352.8	519.2	549.0	332.9	295.6
87.5°	104.3	101.9	89.4	96.9	106.8	104.3	141.6	221.1	308.1	208.7	191.3
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)