

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: P196800

Luminaire Tested: **NAV-AF-06-D-UNV-T3-7030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196800
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (p24135)
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-T3-7030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 38228.7 lumens
Efficiency: N/A
Efficacy: 100.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G5

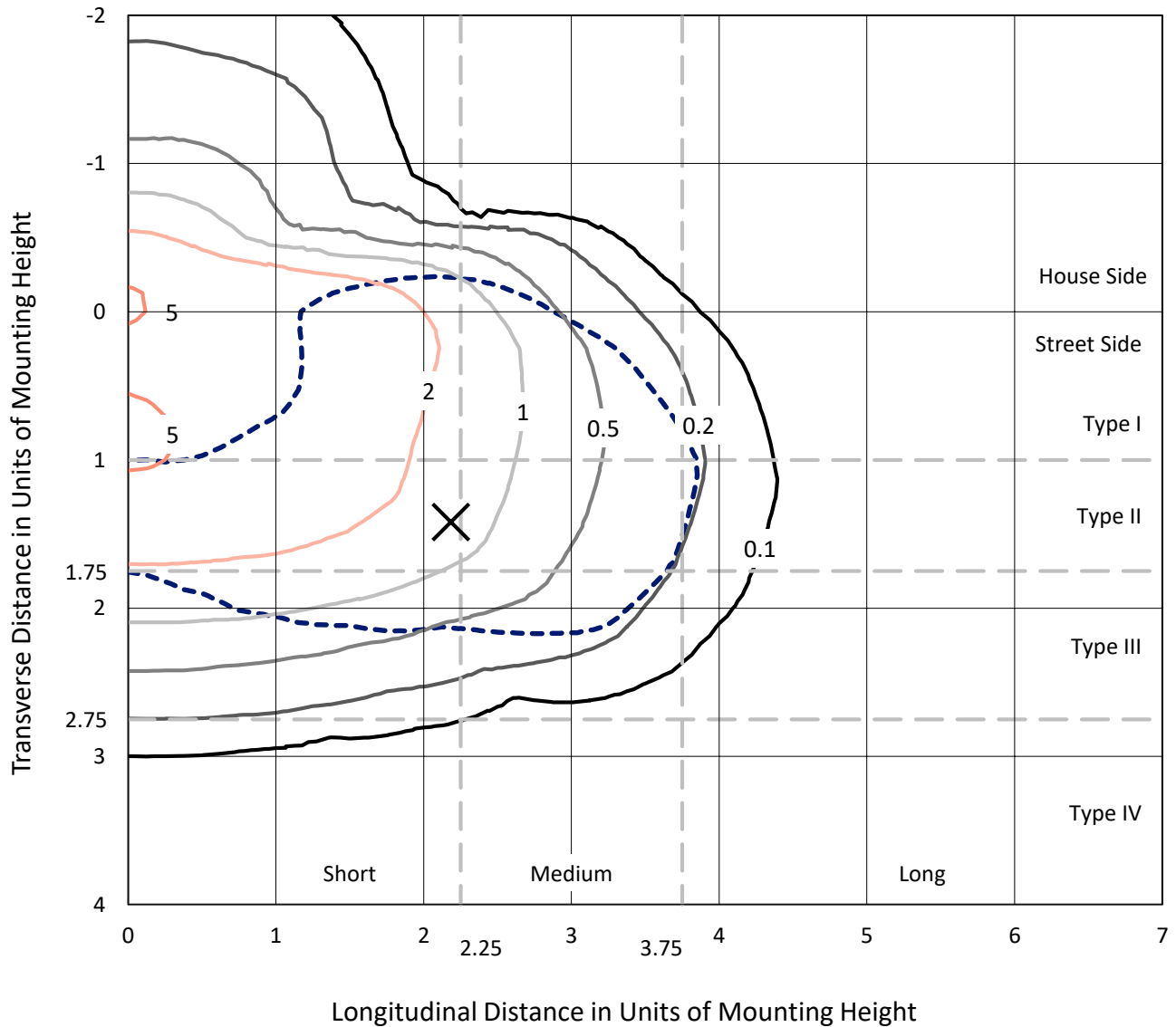
Input Watts (W): 382
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

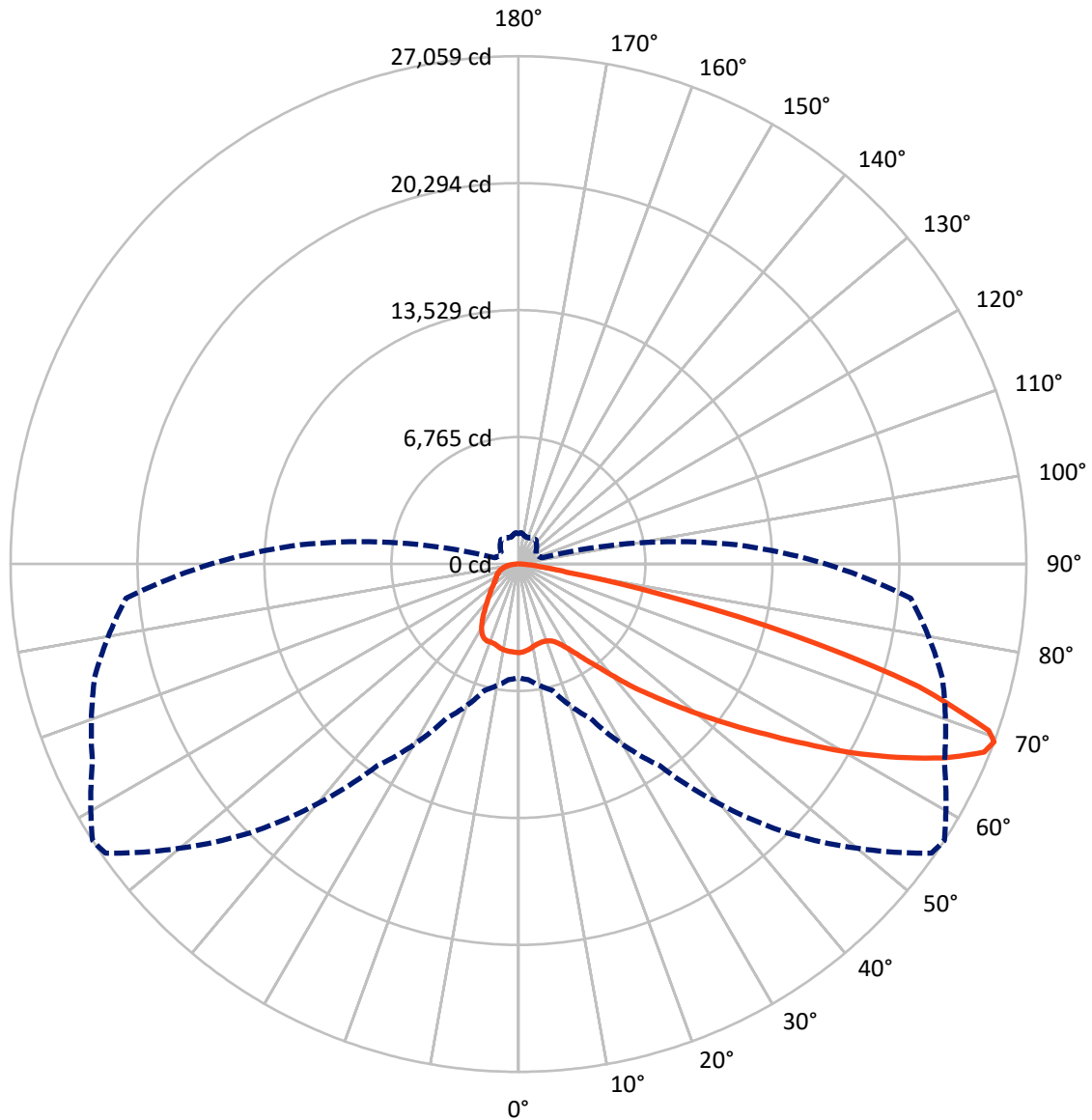
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 5.4 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 57-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8435.7	0.0	8435.7
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	29793.0	0.0	29793.0
	% Fixture	77.9	0.0	77.9
Total	Lumens	38228.7	0.0	38228.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	442.2	1.2
10°-20°	1257.3	3.3
20°-30°	2091.6	5.5
30°-40°	3415.4	8.9
40°-50°	5764.5	15.1
50°-60°	8967.0	23.5
60°-70°	10681.6	27.9
70°-80°	4976.2	13.0
80°-90°	632.9	1.7
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°	38228.7	100.0
0°-180°	38228.7	100.0



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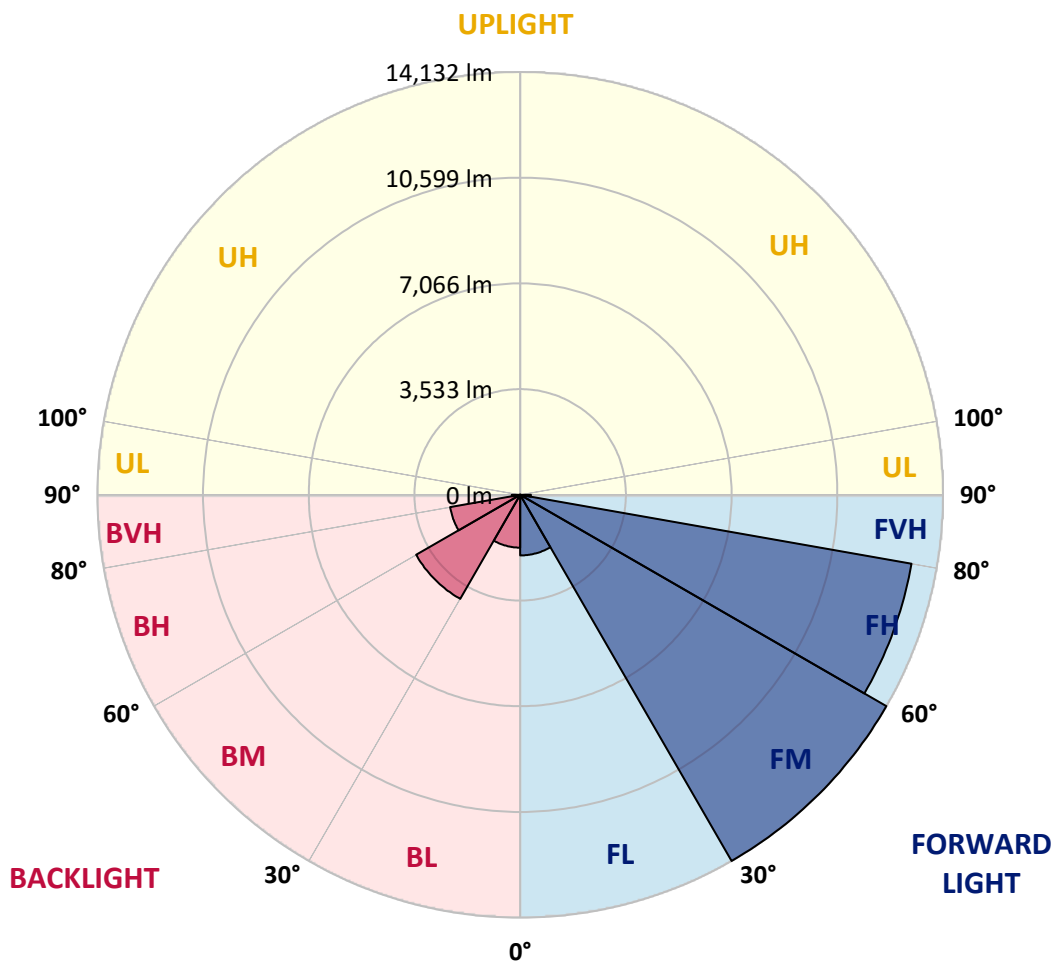
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2024.5	5.3			
FM	(30°-60°)	14132.0	37.0			
FH	(60°-80°)	13280.7	34.7			G5
FVH	(80°-90°)	355.8	0.9			G3/500
BL	(0°-30°)	1766.6	4.6	B3/2500		
BM	(30°-60°)	4014.9	10.5	B3/5000		
BH	(60°-80°)	2377.1	6.2	B3/2500		G3/2500
BVH	(80°-90°)	277.1	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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	4723.5	4723.5	4723.5	4723.5	4723.5	4723.5	4723.5	4723.5	4723.5	4723.5	4723.5
2.5°	4696.6	4696.6	4708.8	4708.8	4708.8	4703.9	4689.3	4694.3	4684.4	4677.1	4664.9
5°	4601.1	4606.1	4620.8	4625.6	4633.0	4635.5	4635.5	4633.0	4635.5	4635.5	4628.1
7.5°	4469.0	4473.9	4491.0	4500.8	4522.9	4542.5	4552.2	4552.2	4564.5	4574.2	4576.7
10°	4388.2	4388.2	4398.0	4398.0	4415.1	4425.0	4456.8	4454.3	4488.6	4520.4	4535.2
12.5°	4378.4	4378.4	4373.5	4356.3	4346.7	4344.1	4376.0	4380.9	4432.3	4488.6	4515.4
15°	4410.2	4410.2	4395.6	4361.3	4324.6	4307.4	4339.2	4349.1	4405.4	4471.4	4513.1
17.5°	4513.1	4510.7	4478.7	4410.2	4346.7	4319.7	4329.5	4339.2	4390.7	4466.5	4518.0
20°	4740.6	4740.6	4672.2	4547.4	4437.2	4373.5	4358.9	4366.2	4402.9	4473.9	4539.9
22.5°	5139.5	5146.9	5024.7	4819.0	4630.5	4495.9	4437.2	4444.5	4461.7	4530.2	4603.6
25°	5727.0	5707.3	5533.7	5242.4	4948.7	4718.7	4598.7	4606.1	4606.1	4669.7	4745.5
27.5°	6348.6	6353.5	6103.9	5790.6	5404.0	5061.3	4870.3	4867.9	4865.6	4926.7	5007.5
30°	7051.0	7053.4	6764.7	6402.5	5959.4	5521.4	5235.0	5232.7	5210.6	5286.4	5391.7
32.5°	7819.5	7817.1	7481.7	7073.0	6581.1	6084.3	5712.3	5709.9	5692.7	5795.5	5922.7
35°	8671.3	8671.3	8338.3	7834.2	7303.1	6750.0	6319.2	6316.9	6326.5	6466.1	6586.0
37.5°	9696.6	9718.7	9317.3	8705.4	8125.5	7535.6	7033.9	7019.3	6945.8	7180.7	7379.1
40°	10766.2	10827.4	10411.4	9696.6	9070.1	8460.7	7907.6	7897.8	7834.2	8083.9	8404.4
42.5°	11923.9	12063.4	11600.8	10871.6	10188.7	9530.2	8974.7	8947.8	8703.0	9092.2	9593.9
45°	13441.3	13531.9	12861.2	12200.4	11556.8	10805.4	10144.6	10000.2	9755.4	10254.7	10905.7
47.5°	14474.1	14430.0	14011.5	13568.6	13155.0	12435.4	11419.7	11236.1	10937.5	11598.3	12315.4
50°	15115.3	15147.1	14912.1	14890.2	14868.1	14366.4	12858.7	12638.4	12293.5	13076.5	13913.6
52.5°	15538.8	15394.3	15435.9	15935.1	16539.6	16299.9	14486.3	14241.6	13886.8	14669.9	15614.6
55°	15362.5	15171.6	15555.8	16539.6	17961.6	18015.5	16273.0	16020.8	15717.4	16363.5	17660.6
57.5°	14633.2	14728.5	15335.5	16703.7	18933.3	19552.5	18326.3	18069.3	17472.2	18128.1	19603.9
60°	13607.7	13801.1	14728.5	16444.3	19613.6	20749.3	20580.4	20409.1	19381.2	19846.2	21645.1
62.5°	12506.4	12697.2	13837.8	16001.2	19307.8	21809.0	22792.9	22687.6	21488.3	21500.6	22939.7
65°	10878.8	10957.2	12122.1	14792.3	18458.5	22766.0	25007.8	24914.8	23502.6	22912.8	23301.9
67.5°	8216.0	8313.9	9270.8	11676.6	15874.0	22247.2	26777.3	26762.6	24714.1	23436.5	22440.4
69°	6067.1	6187.2	6967.8	9065.2	13125.6	20269.6	26860.6	27058.7	25042.1	23382.7	20984.3
70°	4439.6	4576.7	5298.6	7195.4	10932.7	18086.4	26148.3	26574.1	24917.2	23042.6	19848.6
72.5°	1887.0	1933.5	2288.3	3247.7	5545.9	10905.7	21417.4	22313.2	22504.1	20646.5	15506.8
75°	1182.0	1196.8	1336.2	1666.7	2467.0	4510.7	13869.6	15090.8	16801.6	16018.4	10382.1
77.5°	890.9	903.1	983.9	1147.9	1532.2	1683.8	6434.3	7672.7	9623.2	9422.6	5166.6
80°	682.9	690.2	744.0	834.5	1079.3	1054.8	2087.6	2623.7	4016.3	3543.9	1828.2
82.5°	536.0	538.4	585.0	602.0	753.8	709.7	1047.5	1167.4	1622.6	1348.5	893.3
85°	474.8	482.2	528.6	440.6	482.2	428.3	575.1	624.1	861.5	812.6	337.7
87.5°	242.3	254.6	442.9	377.0	242.3	203.1	252.1	271.6	349.9	379.3	164.0
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°	4723.5	4723.5	4723.5	4723.5	4723.5	4723.5	4723.5	4723.5	4723.5	4723.5	4723.5
2.5°	4667.2	4669.7	4677.1	4689.3	4708.8	4733.3	4762.7	4792.1	4809.1	4821.4	4816.5
5°	4628.1	4630.5	4645.2	4667.2	4691.7	4728.4	4777.4	4814.1	4841.1	4858.1	4855.7
7.5°	4579.2	4586.4	4615.8	4640.3	4674.5	4703.9	4743.2	4777.4	4804.3	4821.4	4819.0
10°	4542.5	4549.8	4586.4	4618.3	4647.7	4652.6	4645.2	4635.5	4633.0	4645.2	4640.3
12.5°	4525.3	4539.9	4574.2	4596.3	4584.1	4537.5	4483.7	4461.7	4454.3	4478.7	4481.3
15°	4530.2	4542.5	4571.9	4557.1	4491.0	4412.8	4383.4	4400.4	4415.1	4429.8	4432.3
17.5°	4542.5	4549.8	4557.1	4503.2	4410.2	4358.9	4349.1	4331.9	4287.9	4263.4	4261.0
20°	4564.5	4574.2	4562.0	4476.4	4393.1	4324.6	4207.1	4101.9	4001.5	3947.6	3925.6
22.5°	4640.3	4647.7	4611.0	4527.7	4400.4	4177.7	3940.3	3759.3	3605.0	3521.9	3490.1
25°	4789.6	4801.8	4750.5	4645.2	4312.4	3923.2	3588.0	3343.3	3149.8	3049.5	3022.5
27.5°	5051.5	5063.7	5007.5	4733.3	4106.7	3583.0	3176.7	2934.4	2768.1	2682.5	2670.2
30°	5443.1	5460.2	5408.8	4730.9	3793.5	3149.8	2775.4	2633.4	2538.0	2479.2	2476.8
32.5°	5986.5	6050.0	5839.6	4647.7	3406.8	2711.7	2471.9	2423.0	2376.5	2337.3	2337.3
35°	6676.7	6825.9	6265.4	4473.9	2980.9	2413.2	2303.0	2256.5	2197.8	2156.2	2151.4
37.5°	7501.4	7733.9	6568.8	4165.5	2613.8	2268.8	2200.3	2124.3	2031.3	1950.6	1931.0
40°	8634.5	8688.4	6718.2	3663.8	2339.8	2190.4	2104.8	2009.4	1891.9	1801.3	1791.6
42.5°	9772.5	9596.4	6688.9	3125.4	2183.1	2119.5	2006.9	1901.6	1796.4	1720.5	1720.5
45°	11067.3	10389.4	6466.1	2584.5	2041.2	2038.7	1916.3	1816.0	1735.2	1679.0	1666.7
47.5°	12305.7	11101.5	6081.8	2185.5	1894.3	1957.9	1857.6	1776.9	1703.5	1649.6	1639.8
50°	13808.4	11926.3	5673.2	1906.6	1752.4	1887.0	1833.2	1791.6	1720.5	1627.5	1617.8
52.5°	15301.3	12890.6	5357.4	1696.0	1627.5	1830.6	1847.8	1852.7	1786.6	1605.6	1593.3
55°	16904.4	13920.9	5024.7	1532.2	1524.7	1803.8	1882.1	1877.2	1845.4	1610.4	1590.9
57.5°	18429.1	14956.2	4527.7	1417.1	1444.0	1776.9	1889.4	1811.1	1754.8	1634.8	1603.1
60°	19692.1	15812.8	3798.4	1336.2	1375.5	1723.0	1840.5	1723.0	1627.5	1630.0	1600.6
62.5°	20306.3	16052.7	2905.1	1243.3	1319.2	1634.8	1769.5	1656.9	1568.9	1639.8	1622.6
65°	19838.9	15369.8	2070.6	1157.6	1250.6	1532.2	1727.9	1600.6	1539.5	1688.7	1669.2
67.5°	18159.9	13509.8	1502.8	1081.7	1184.6	1426.8	1649.6	1549.2	1510.1	1725.4	1681.4
69°	16375.8	11664.4	1302.1	1037.8	1138.1	1370.5	1598.1	1522.3	1488.0	1674.1	1610.4
70°	14892.6	10242.5	1201.7	1010.7	1098.9	1338.8	1559.0	1505.1	1466.0	1612.8	1537.0
72.5°	10678.1	6620.2	1010.7	930.1	996.1	1267.7	1473.4	1441.5	1382.7	1456.2	1407.3
75°	6451.4	3455.8	859.0	846.8	888.4	1169.8	1373.0	1333.8	1275.0	1282.4	1258.0
77.5°	2963.8	1595.7	719.6	748.9	775.8	1047.5	1250.6	1206.5	1152.6	1133.1	1135.6
80°	1299.5	932.4	602.0	638.7	653.5	942.3	1118.5	1069.5	1010.7	1116.0	1035.2
82.5°	702.4	540.9	470.0	494.4	536.0	819.9	971.7	908.0	851.6	991.2	800.4
85°	283.8	276.5	318.2	342.6	372.0	589.8	812.6	746.5	678.0	606.9	592.3
87.5°	122.4	132.2	156.7	166.4	198.2	367.1	545.8	477.3	479.6	411.2	403.8
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)