

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: P195432

Luminaire Tested: **NAV-AF-06-D-UNV-T4W-7060-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195432
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24127)
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-T4W-7060-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 39048 lumens
Efficiency: N/A
Efficacy: 102.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B4 - U0 - G5

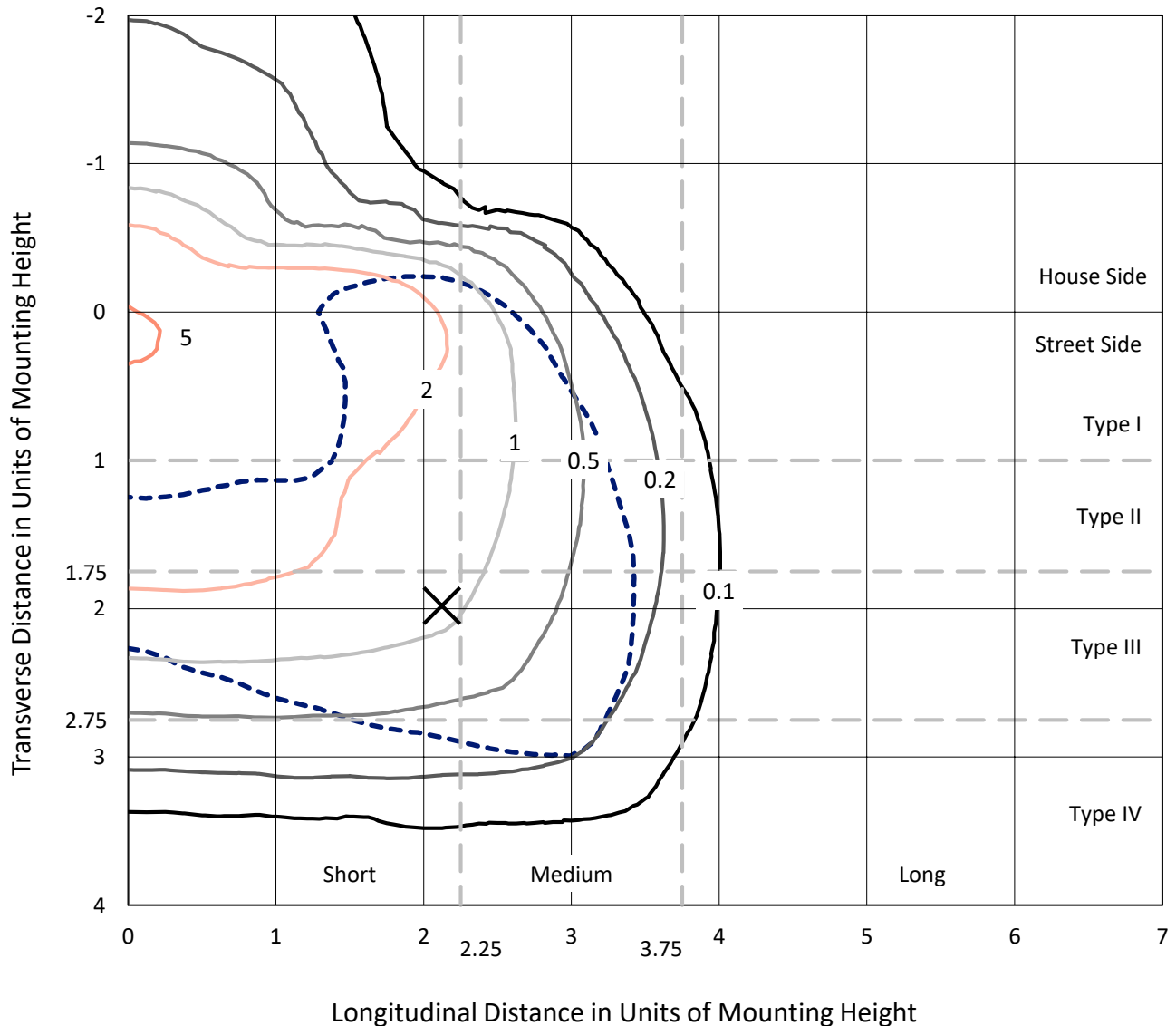
Input Watts (W): 382
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

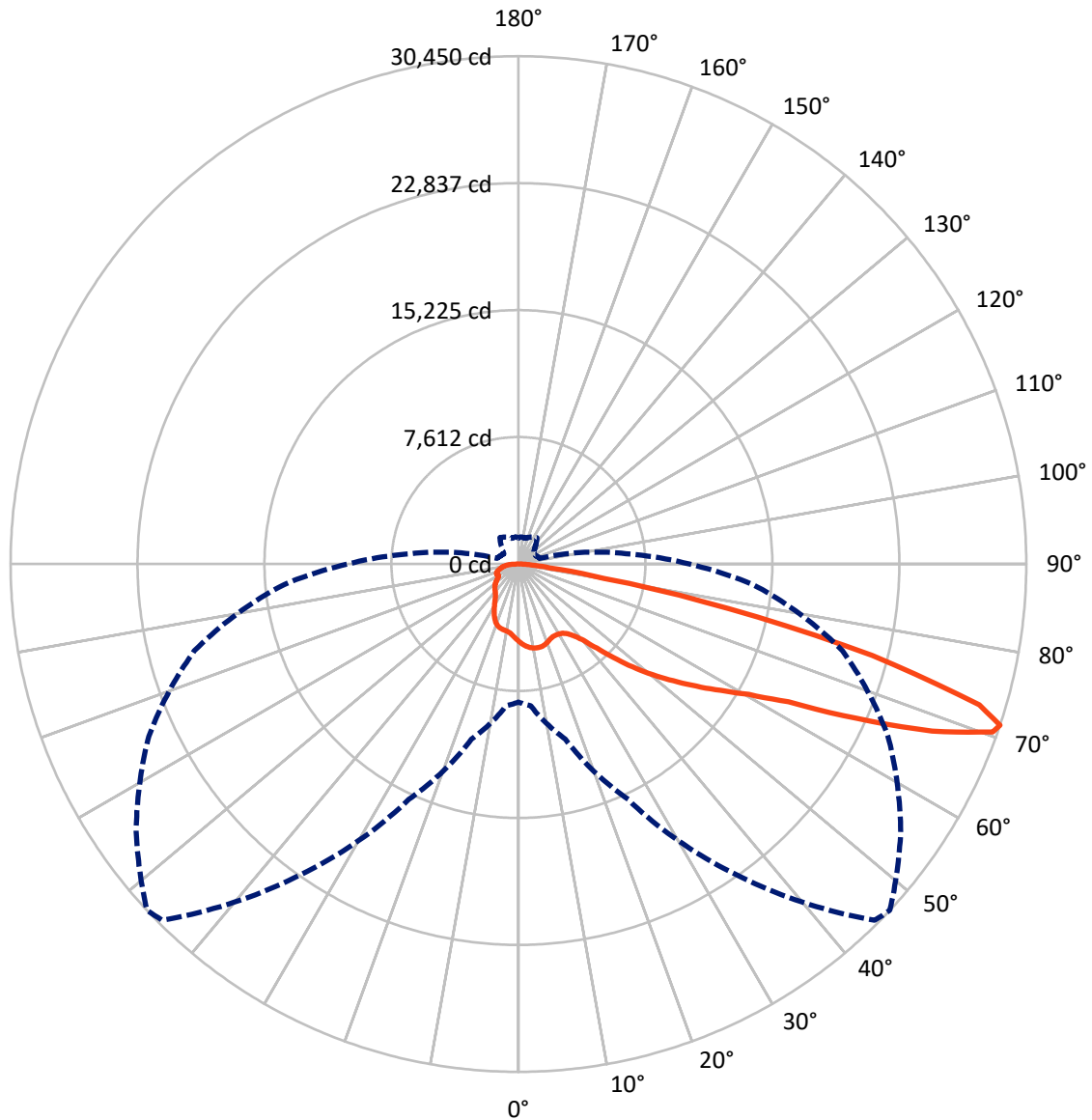
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 5.9 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 47-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8368.5	0.0	8368.5
	% Fixture	21.4	0.0	21.4
Street Side	Lumens	30679.5	0.0	30679.5
	% Fixture	78.6	0.0	78.6
Total	Lumens	39048.0	0.0	39048.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	443.4	1.1
10°-20°	1297.1	3.3
20°-30°	1927.4	4.9
30°-40°	2767.4	7.1
40°-50°	4906.8	12.6
50°-60°	8396.2	21.5
60°-70°	11919.7	30.5
70°-80°	6528.3	16.7
80°-90°	861.8	2.2
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°	39048.0	100.0
0°-180°	39048.0	100.0



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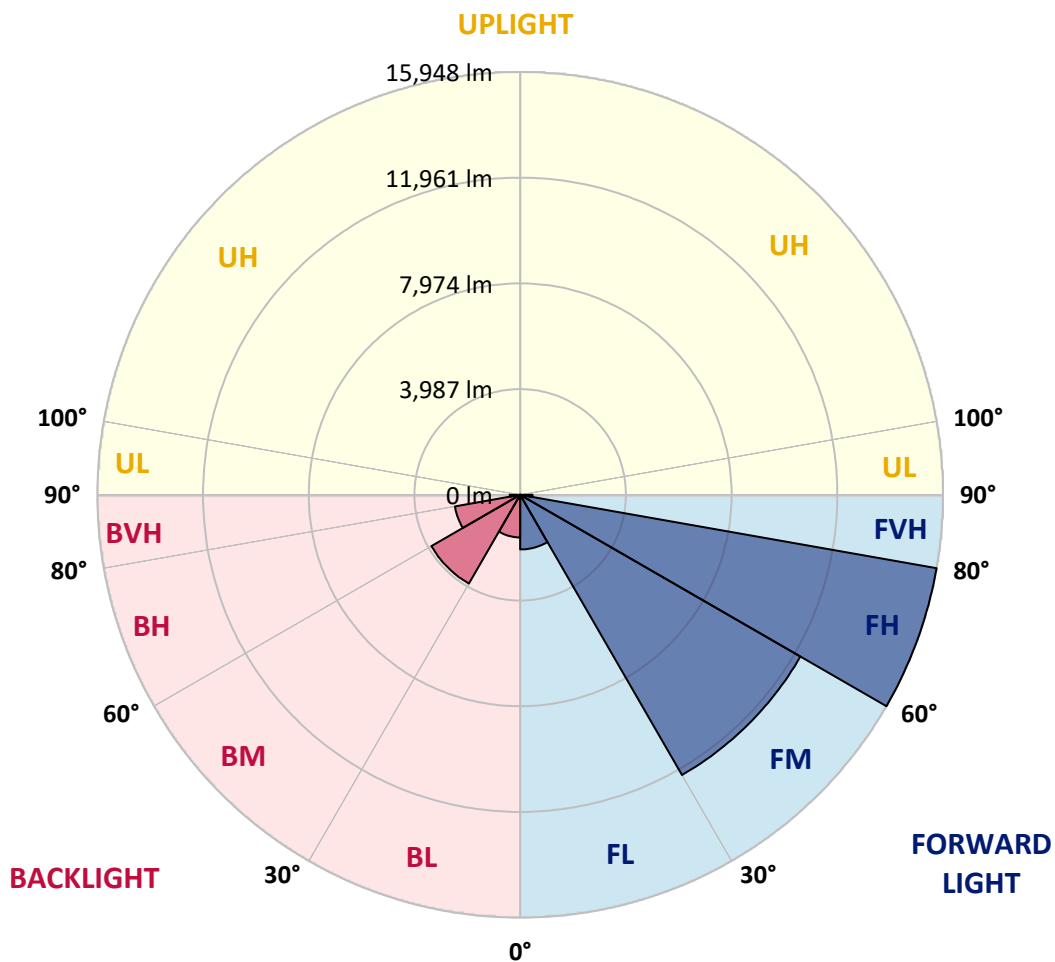
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2060.8	5.3			
FM	(30°-60°)	12203.7	31.3			
FH	(60°-80°)	15947.6	40.8			G5
FVH	(80°-90°)	467.4	1.2			G3/500
BL	(0°-30°)	1607.0	4.1	B3/2500		
BM	(30°-60°)	3866.7	9.9	B3/5000		
BH	(60°-80°)	2500.4	6.4	B4/5000		G4/5000
BVH	(80°-90°)	394.3	1.0			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G5

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	4643.5	4643.5	4643.5	4643.5	4643.5	4643.5	4643.5	4643.5	4643.5	4643.5	4643.5
2.5°	4926.9	4916.8	4921.8	4904.1	4861.1	4815.5	4815.5	4767.5	4716.8	4666.2	4610.6
5°	5233.1	5217.9	5205.2	5149.6	5066.1	4972.4	4957.2	4861.1	4757.3	4653.6	4552.4
7.5°	5488.6	5473.5	5435.5	5334.3	5212.8	5073.6	5055.9	4929.4	4792.8	4648.5	4506.8
10°	5670.8	5660.7	5587.3	5458.3	5316.6	5152.1	5121.7	4992.7	4830.7	4651.1	4471.4
12.5°	5772.1	5756.9	5668.3	5516.5	5349.5	5182.5	5152.1	5028.1	4843.4	4646.0	4436.0
15°	5731.6	5724.0	5640.5	5486.1	5319.1	5174.9	5149.6	5023.0	4835.8	4628.3	4403.1
17.5°	5559.5	5577.2	5511.4	5359.6	5222.9	5121.7	5093.9	4975.0	4797.8	4585.3	4352.5
20°	5321.6	5341.9	5309.0	5154.6	5076.2	5010.4	4995.2	4899.0	4734.6	4522.0	4291.7
22.5°	5068.6	5086.3	5088.8	4944.6	4919.3	4894.0	4881.3	4813.0	4678.9	4484.0	4251.2
25°	4894.0	4914.2	4919.3	4792.8	4807.9	4815.5	4813.0	4764.9	4668.8	4484.0	4256.3
27.5°	4848.4	4858.6	4853.5	4737.1	4764.9	4807.9	4810.5	4800.4	4709.3	4534.6	4327.1
30°	5005.3	5010.4	4947.1	4772.5	4800.4	4856.0	4858.6	4853.5	4795.3	4666.2	4486.6
32.5°	5683.5	5678.4	5460.8	5010.4	4914.2	4934.5	4942.1	4987.6	4992.7	4883.9	4716.8
35°	6715.9	6713.4	6460.4	5691.1	5238.1	5131.8	5142.0	5212.8	5276.1	5202.7	5106.5
37.5°	7852.1	7859.7	7705.4	6662.8	5936.5	5493.7	5483.6	5536.7	5650.6	5675.9	5688.6
40°	9112.3	9150.3	9142.7	7778.7	6915.8	6111.1	6009.9	5949.2	6169.4	6308.5	6488.2
42.5°	10552.2	10542.0	10547.1	9003.5	8034.3	7082.9	6895.6	6612.2	6867.8	7108.2	7502.9
45°	11789.6	11830.1	11860.4	10306.7	9286.9	8193.7	8004.0	7487.7	7718.0	8077.3	8679.6
47.5°	13034.6	12963.7	13019.4	11756.7	10681.2	9461.5	9216.1	8520.2	8735.3	9241.4	10157.4
50°	14484.6	14451.7	14198.6	13649.5	12366.5	10747.0	10425.6	9598.2	9912.0	10587.6	11981.9
52.5°	15785.2	15608.1	15410.7	15137.4	14024.0	12047.7	11640.3	10719.2	11296.1	12133.7	14246.7
55°	16261.0	16142.0	16379.9	16734.2	15777.6	13373.7	12918.2	12027.5	12857.5	13902.5	16911.3
57.5°	16767.1	16807.6	17344.0	18060.2	17437.7	14788.2	14294.8	13576.1	14570.6	15881.4	19889.7
60°	17020.1	17182.1	18252.5	19596.2	19016.7	16339.4	15866.2	15355.1	16471.0	18067.7	22860.5
62.5°	17063.1	17280.8	18796.5	20135.2	21190.4	18715.6	18169.0	17614.8	18844.6	20484.4	25011.4
65°	16273.6	16607.6	18748.4	20798.2	23171.8	22685.9	22339.2	21372.6	22022.9	22612.5	25378.4
67.5°	13953.2	14317.5	16893.6	20524.9	24760.9	26805.6	26739.8	25312.6	24477.5	23434.9	22658.1
70°	10240.9	10534.5	13009.3	17546.5	24067.6	30039.5	30155.9	27865.8	25163.3	21688.9	16848.0
71°	8282.3	8535.4	10868.5	15577.7	22716.3	30206.5	30449.5	27979.7	24449.7	20112.4	14105.0
72.5°	5154.6	5296.3	7217.0	11756.7	19560.7	28485.8	28895.7	26522.1	22202.6	16999.9	9970.2
75°	1946.0	2001.6	2677.3	5185.0	11675.7	21400.4	21896.4	20044.1	15598.0	9704.5	4172.8
77.5°	1045.1	1072.9	1328.5	2156.0	4678.9	12267.8	12905.5	11432.8	7482.7	3395.9	1705.6
80°	700.9	718.7	918.6	1277.9	2150.9	4671.3	5202.7	4590.3	2801.3	1938.4	1214.6
82.5°	453.0	463.1	625.0	840.1	1389.2	1642.3	1875.1	1958.6	1748.6	1389.2	733.8
85°	298.6	306.2	412.5	536.5	860.4	809.8	830.0	1085.6	1191.9	916.0	374.5
87.5°	172.1	177.1	248.0	275.8	387.2	303.7	329.0	516.2	708.5	597.2	215.1
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°	4643.5	4643.5	4643.5	4643.5	4643.5	4643.5	4643.5	4643.5	4643.5	4643.5	4643.5
2.5°	4585.3	4565.0	4519.5	4491.6	4479.0	4473.9	4468.9	4479.0	4479.0	4473.9	4463.8
5°	4501.8	4463.8	4387.9	4334.7	4306.9	4299.3	4309.4	4322.1	4329.7	4329.7	4322.1
7.5°	4441.0	4385.4	4284.1	4210.7	4167.7	4155.1	4182.9	4228.5	4258.8	4274.0	4276.5
10°	4390.4	4314.5	4203.2	4127.2	4091.8	4086.8	4122.2	4180.4	4243.6	4271.5	4276.5
12.5°	4344.9	4258.8	4137.4	4066.5	4041.2	4053.9	4101.9	4155.1	4228.5	4268.9	4271.5
15°	4301.8	4213.3	4084.2	4010.8	4005.8	4026.0	4071.6	4114.6	4170.3	4220.9	4220.9
17.5°	4251.2	4155.1	4021.0	3952.6	3952.6	3970.3	4000.7	4023.5	4058.9	4107.0	4104.5
20°	4190.5	4091.8	3955.2	3884.3	3869.1	3859.0	3859.0	3864.1	3894.4	3937.5	3945.0
22.5°	4145.0	4043.7	3899.5	3813.5	3745.1	3679.3	3651.5	3641.4	3669.2	3709.7	3719.8
25°	4145.0	4043.7	3881.8	3737.5	3570.5	3444.0	3390.9	3375.7	3403.5	3441.5	3456.7
27.5°	4213.3	4112.1	3922.3	3669.2	3363.0	3160.6	3097.3	3084.7	3110.0	3140.3	3155.5
30°	4372.7	4274.0	4038.7	3590.8	3132.8	2867.1	2796.2	2783.5	2796.2	2808.9	2826.6
32.5°	4638.4	4554.9	4228.5	3519.9	2899.9	2601.4	2515.3	2495.1	2500.1	2502.7	2517.8
35°	5071.1	5033.2	4481.5	3436.4	2679.8	2383.7	2295.2	2254.7	2252.1	2264.8	2282.5
37.5°	5734.1	5756.9	4807.9	3315.0	2497.6	2229.4	2140.8	2100.3	2080.1	2105.4	2125.6
40°	6670.4	6723.5	5185.0	3150.5	2348.3	2138.3	2044.6	2006.7	1978.8	1971.3	1981.4
42.5°	7887.6	7872.4	5569.6	2940.4	2186.3	2077.5	1978.8	1938.4	1892.8	1834.6	1822.0
45°	9329.9	9112.3	5891.0	2682.3	2001.6	2019.3	1918.1	1862.4	1791.6	1705.6	1695.4
47.5°	11033.0	10433.2	6088.4	2406.5	1829.5	1943.4	1849.8	1763.8	1660.0	1604.3	1596.7
50°	13085.2	11979.4	6227.6	2125.6	1675.2	1847.3	1753.6	1639.8	1538.5	1523.4	1520.8
52.5°	15514.5	13803.9	6399.6	1872.6	1553.7	1723.3	1657.5	1541.1	1460.1	1467.7	1467.7
55°	18098.1	15691.6	6404.7	1672.7	1447.4	1579.0	1586.6	1493.0	1429.7	1455.0	1462.6
57.5°	20454.0	17341.5	5901.1	1531.0	1346.2	1465.2	1563.8	1510.7	1462.6	1551.2	1558.8
60°	22508.8	18611.8	4818.1	1414.5	1262.7	1422.1	1614.5	1619.5	1609.4	1849.8	1867.5
62.5°	23260.3	18624.5	3421.2	1315.9	1217.2	1447.4	1720.7	1728.3	1728.3	1951.0	1983.9
65°	22207.6	17073.3	2277.4	1257.7	1186.8	1503.1	1806.8	1773.9	1695.4	1849.8	1814.4
67.5°	18497.9	13290.2	1665.1	1219.7	1143.8	1505.6	1882.7	1799.2	1665.1	1796.7	1735.9
70°	12713.2	8456.9	1394.3	1184.3	1093.2	1439.9	1923.2	1791.6	1619.5	1675.2	1594.2
71°	10233.3	6748.8	1323.4	1171.6	1072.9	1401.9	1928.2	1781.5	1596.7	1632.2	1558.8
72.5°	6741.2	4157.6	1237.4	1143.8	1042.6	1336.1	1915.6	1758.7	1566.4	1568.9	1520.8
75°	2659.6	1723.3	1113.4	1080.5	956.5	1229.8	1859.9	1710.6	1508.2	1457.6	1437.3
77.5°	1343.7	1126.1	979.3	992.0	855.3	1121.0	1781.5	1632.2	1427.2	1358.9	1343.7
80°	981.8	855.3	837.6	860.4	741.4	1014.7	1682.8	1525.9	1323.4	1394.3	1363.9
82.5°	597.2	521.3	655.4	711.1	620.0	905.9	1566.4	1401.9	1191.9	1098.2	1062.8
85°	283.4	306.2	473.2	523.8	458.0	723.7	1432.3	1265.2	1040.0	898.3	913.5
87.5°	139.2	169.5	270.8	313.8	301.1	531.4	1080.5	981.8	819.9	675.6	660.5
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)