

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: P270720

Luminaire Tested: **NAV-AF-06-D-UNV-T4W-7027-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270720
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-7027-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 2700K, 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: 33924.9 lumens
Efficiency: N/A
Efficacy: 88.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - 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

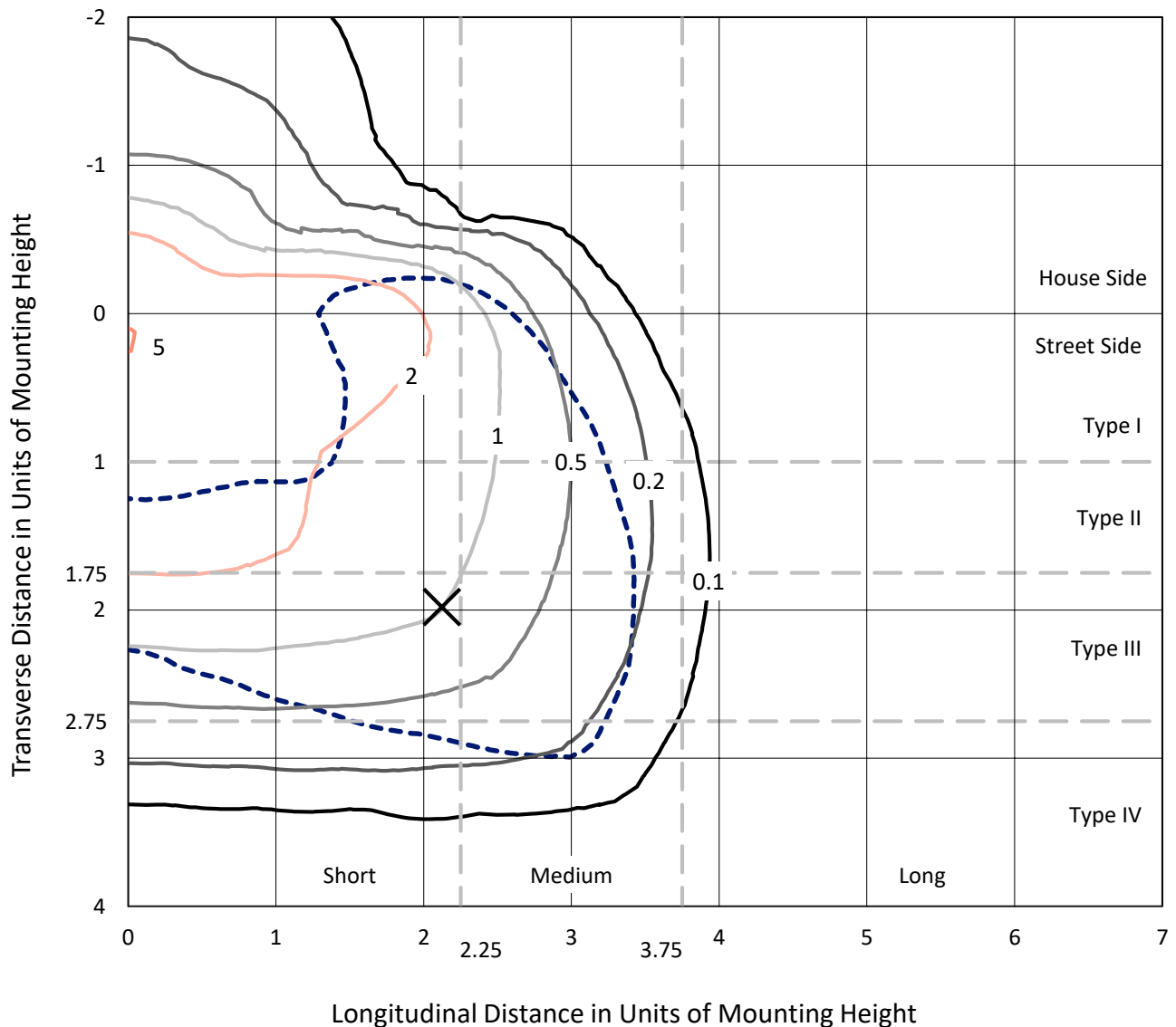


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Iso-Footcandle Lines of Horizontal Illumination

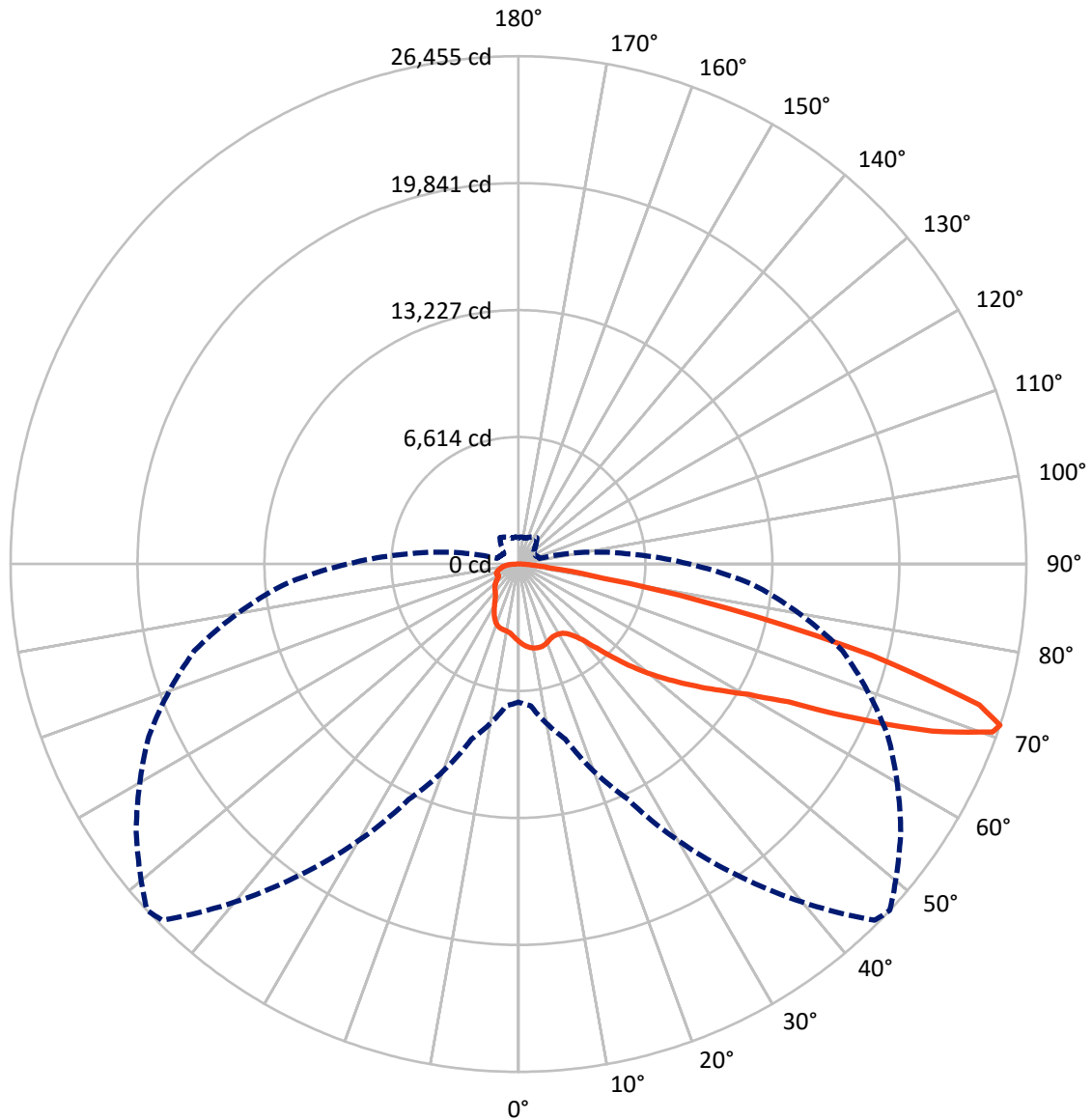
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 5.1 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	7270.6	0.0	7270.6
	% Fixture	21.4	0.0	21.4
Street Side	Lumens	26654.3	0.0	26654.3
	% Fixture	78.6	0.0	78.6
Total	Lumens	33924.9	0.0	33924.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	385.2	1.1
10°-20°	1126.9	3.3
20°-30°	1674.5	4.9
30°-40°	2404.4	7.1
40°-50°	4263.0	12.6
50°-60°	7294.6	21.5
60°-70°	10355.8	30.5
70°-80°	5671.8	16.7
80°-90°	748.7	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°	33924.9	100.0
0°-180°	33924.9	100.0



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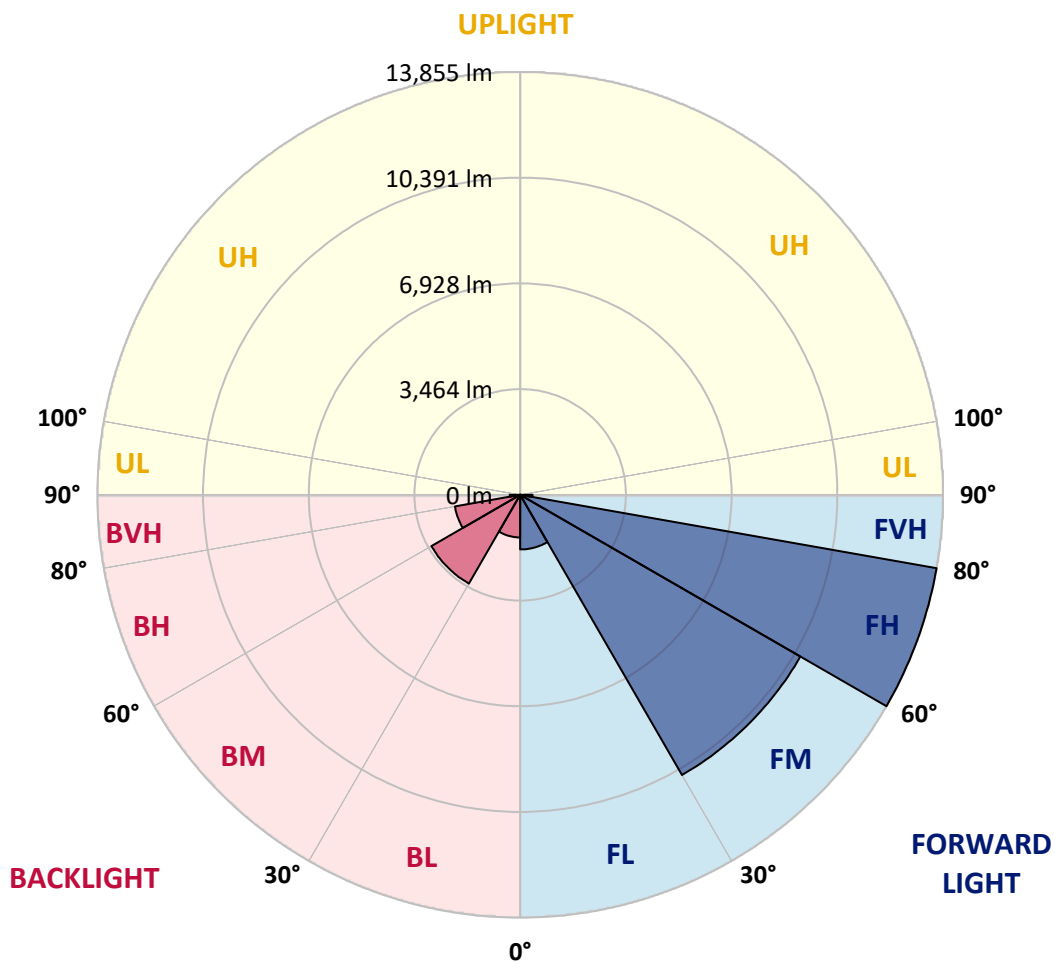
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1790.4	5.3			
FM	(30°-60°)	10602.6	31.3			
FH	(60°-80°)	13855.3	40.8			G5
FVH	(80°-90°)	406.1	1.2			G3/500
BL	(0°-30°)	1396.2	4.1	B3/2500		
BM	(30°-60°)	3359.4	9.9	B3/5000		
BH	(60°-80°)	2172.4	6.4	B3/2500		G3/2500
BVH	(80°-90°)	342.6	1.0			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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	4034.3	4034.3	4034.3	4034.3	4034.3	4034.3	4034.3	4034.3	4034.3	4034.3	4034.3
2.5°	4280.5	4271.7	4276.1	4260.8	4223.3	4183.8	4183.8	4141.9	4098.0	4054.1	4005.6
5°	4546.5	4533.2	4522.2	4474.0	4401.3	4320.0	4306.8	4223.3	4133.2	4043.0	3955.1
7.5°	4768.6	4755.4	4722.4	4634.4	4529.0	4408.1	4392.6	4282.7	4164.0	4038.6	3915.5
10°	4926.8	4918.0	4854.4	4742.2	4619.1	4476.2	4449.8	4337.6	4196.9	4040.8	3884.7
12.5°	5014.8	5001.6	4924.6	4792.6	4647.7	4502.6	4476.2	4368.4	4207.9	4036.4	3854.0
15°	4979.6	4972.9	4900.4	4766.3	4621.2	4495.9	4474.0	4364.1	4201.4	4021.1	3825.4
17.5°	4830.0	4845.5	4788.3	4656.5	4537.7	4449.8	4425.6	4322.3	4168.3	3983.7	3781.4
20°	4623.4	4641.1	4612.4	4478.3	4410.1	4353.0	4339.8	4256.3	4113.3	3928.6	3728.7
22.5°	4403.6	4419.0	4421.2	4295.9	4273.9	4251.9	4240.9	4181.5	4065.0	3895.7	3693.6
25°	4251.9	4269.5	4273.9	4164.0	4177.2	4183.8	4181.5	4139.7	4056.2	3895.7	3697.9
27.5°	4212.3	4221.1	4216.7	4115.6	4139.7	4177.2	4179.4	4170.6	4091.4	3939.6	3759.4
30°	4348.6	4353.0	4298.1	4146.3	4170.6	4218.9	4221.1	4216.7	4166.2	4054.1	3897.9
32.5°	4937.9	4933.4	4744.4	4353.0	4269.5	4287.2	4293.7	4333.2	4337.6	4243.1	4098.0
35°	5834.9	5832.6	5612.8	4944.5	4551.0	4458.6	4467.4	4529.0	4584.0	4520.1	4436.5
37.5°	6821.9	6828.6	6694.3	5788.7	5157.7	4773.0	4764.2	4810.3	4909.2	4931.2	4942.3
40°	7916.9	7949.8	7943.2	6758.2	6008.6	5309.3	5221.4	5168.7	5359.9	5480.9	5637.0
42.5°	9167.7	9158.8	9163.3	7822.3	6980.2	6153.6	5990.8	5744.8	5966.7	6175.6	6518.6
45°	10242.8	10278.0	10304.4	8954.5	8068.4	7118.7	6953.8	6505.3	6705.4	7017.6	7540.8
47.5°	11324.5	11262.9	11311.3	10214.2	9279.9	8220.2	8007.0	7402.4	7589.2	8029.0	8824.8
50°	12584.1	12555.6	12335.7	11858.6	10744.1	9337.1	9057.8	8338.8	8611.5	9198.6	10409.9
52.5°	13714.2	13560.4	13388.9	13151.4	12184.2	10467.1	10113.1	9312.8	9814.2	10541.8	12377.6
55°	14127.6	14024.2	14230.9	14538.7	13707.6	11619.0	11223.3	10449.4	11170.6	12078.5	14692.6
57.5°	14567.3	14602.4	15068.4	15690.7	15149.8	12848.0	12419.2	11794.9	12658.9	13797.7	17280.2
60°	14787.1	14927.8	15857.8	17025.1	16521.6	14195.6	13784.6	13340.5	14310.0	15697.3	19861.3
62.5°	14824.5	15013.6	16330.4	17493.5	18410.3	16260.1	15785.1	15303.7	16372.1	17796.9	21729.9
65°	14138.6	14428.8	16288.6	18069.4	20131.6	19709.5	19408.3	18568.4	19133.4	19645.8	22048.7
67.5°	12122.4	12439.1	14677.1	17832.1	21512.3	23288.6	23231.4	21991.5	21266.0	20360.3	19685.4
70°	8897.4	9152.3	11302.5	15244.3	20909.8	26098.4	26199.4	24209.9	21861.8	18843.2	14637.6
71°	7195.7	7415.5	9442.5	13534.0	19735.9	26243.4	26454.5	24308.8	21242.0	17473.7	12254.4
72.5°	4478.3	4601.5	6270.1	10214.2	16994.3	24748.5	25104.7	23042.5	19289.7	14769.6	8662.0
75°	1690.6	1738.9	2326.0	4504.7	10143.9	18592.7	19023.5	17414.4	13551.6	8431.2	3625.3
77.5°	907.9	932.3	1154.2	1873.1	4065.0	10658.3	11212.4	9932.7	6500.9	2950.4	1481.8
80°	609.1	624.4	798.1	1110.2	1868.7	4058.5	4520.1	3988.0	2433.8	1684.1	1055.2
82.5°	393.5	402.4	543.0	730.0	1207.0	1426.8	1629.0	1701.6	1519.2	1207.0	637.5
85°	259.4	266.0	358.3	466.1	747.5	703.6	721.1	943.2	1035.4	795.9	325.4
87.5°	149.5	153.9	215.5	239.7	336.3	263.8	285.8	448.6	615.6	518.9	186.8
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°	4034.3	4034.3	4034.3	4034.3	4034.3	4034.3	4034.3	4034.3	4034.3	4034.3	4034.3
2.5°	3983.7	3966.0	3926.5	3902.3	3891.4	3887.0	3882.6	3891.4	3891.4	3887.0	3878.2
5°	3911.1	3878.2	3812.1	3766.1	3741.8	3735.2	3744.0	3755.1	3761.7	3761.7	3755.1
7.5°	3858.4	3810.0	3722.0	3658.3	3620.9	3609.8	3634.2	3673.7	3700.1	3713.2	3715.5
10°	3814.5	3748.4	3651.7	3585.8	3555.0	3550.6	3581.4	3631.8	3686.9	3711.1	3715.5
12.5°	3774.8	3700.1	3594.6	3532.9	3510.9	3522.0	3563.8	3609.8	3673.7	3708.8	3711.1
15°	3737.5	3660.6	3548.3	3484.6	3480.3	3497.8	3537.3	3574.7	3623.1	3667.2	3667.2
17.5°	3693.6	3609.8	3493.4	3434.0	3434.0	3449.4	3475.8	3495.7	3526.3	3568.2	3565.9
20°	3640.7	3555.0	3436.2	3374.8	3361.5	3352.7	3352.7	3357.1	3383.5	3420.8	3427.5
22.5°	3601.1	3513.2	3387.9	3313.0	3253.8	3196.6	3172.5	3163.7	3187.8	3222.9	3231.8
25°	3601.1	3513.2	3372.4	3247.2	3102.0	2992.2	2946.0	2932.7	2957.0	2990.0	3003.2
27.5°	3660.6	3572.6	3407.7	3187.8	2921.7	2745.8	2691.0	2680.0	2701.9	2728.3	2741.5
30°	3799.0	3713.2	3508.8	3119.6	2721.8	2490.9	2429.3	2418.3	2429.3	2440.3	2455.7
32.5°	4029.8	3957.4	3673.7	3058.1	2519.4	2260.0	2185.2	2167.7	2172.1	2174.3	2187.6
35°	4405.7	4372.8	3893.6	2985.5	2328.1	2071.0	1994.1	1958.8	1956.7	1967.6	1983.1
37.5°	4981.8	5001.6	4177.2	2880.1	2169.9	1936.8	1859.9	1824.7	1807.2	1829.2	1846.7
40°	5795.2	5841.4	4504.7	2737.1	2040.2	1857.8	1776.4	1743.4	1719.3	1712.6	1721.4
42.5°	6852.7	6839.5	4838.9	2554.7	1899.5	1805.0	1719.3	1684.1	1644.4	1594.0	1583.0
45°	8105.9	7916.9	5118.2	2330.5	1738.9	1754.4	1666.4	1618.0	1556.6	1481.8	1473.0
47.5°	9585.5	9064.3	5289.6	2090.7	1589.6	1688.5	1607.1	1532.4	1442.1	1393.8	1387.3
50°	11368.4	10407.8	5410.5	1846.7	1455.4	1604.9	1523.5	1424.6	1336.7	1323.6	1321.2
52.5°	13479.0	11992.8	5560.0	1626.9	1349.9	1497.1	1440.1	1338.8	1268.5	1275.1	1275.1
55°	15723.7	13632.9	5564.5	1453.2	1257.5	1371.8	1378.4	1297.2	1242.1	1264.2	1270.7
57.5°	17770.5	15066.4	5126.8	1330.1	1169.7	1272.9	1358.6	1312.6	1270.7	1347.6	1354.3
60°	19555.7	16169.9	4185.9	1228.9	1097.0	1235.6	1402.7	1407.0	1398.2	1607.1	1622.5
62.5°	20208.6	16180.9	2972.3	1143.3	1057.5	1257.5	1495.0	1501.5	1501.5	1695.0	1723.6
65°	19293.9	14833.3	1978.6	1092.7	1031.1	1305.9	1569.7	1541.1	1473.0	1607.1	1576.3
67.5°	16070.9	11546.5	1446.6	1059.7	993.7	1308.1	1635.6	1563.1	1446.6	1561.0	1508.2
70°	11045.2	7347.3	1211.4	1028.9	949.8	1250.9	1670.8	1556.6	1407.0	1455.4	1385.0
71°	8890.7	5863.3	1149.8	1017.9	932.3	1217.9	1675.2	1547.7	1387.3	1418.1	1354.3
72.5°	5856.8	3612.2	1075.0	993.7	905.9	1160.8	1664.3	1527.9	1360.8	1363.1	1321.2
75°	2310.6	1497.1	967.4	938.8	831.0	1068.4	1616.0	1486.2	1310.3	1266.3	1248.7
77.5°	1167.3	978.3	850.9	861.8	743.1	973.9	1547.7	1418.1	1239.9	1180.6	1167.3
80°	853.0	743.1	727.6	747.5	644.2	881.5	1462.0	1325.7	1149.8	1211.4	1185.0
82.5°	518.9	452.8	569.4	617.8	538.7	787.0	1360.8	1217.9	1035.4	954.1	923.4
85°	246.2	266.0	411.2	455.1	397.9	628.8	1244.3	1099.3	903.5	780.4	793.7
87.5°	120.9	147.3	235.3	272.6	261.6	461.6	938.8	853.0	712.4	587.0	573.7
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)