

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: P197328

Luminaire Tested: **NAV-AF-06-D-UNV-T4FT-8030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197328
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24256)
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-T4FT-8030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 32500 lumens
Efficiency: N/A
Efficacy: 85.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-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

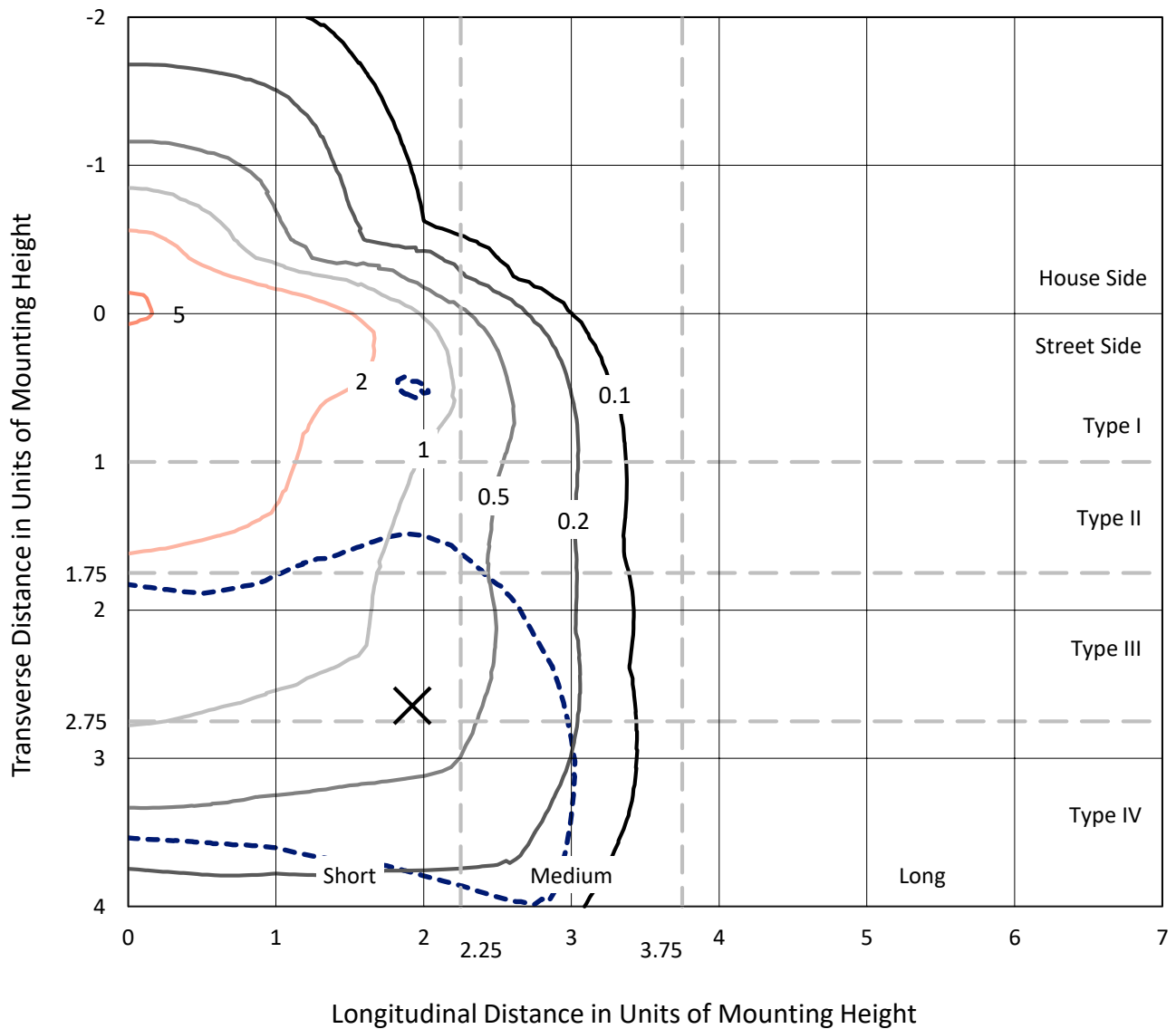


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Iso-Footcandle Lines of Horizontal Illumination

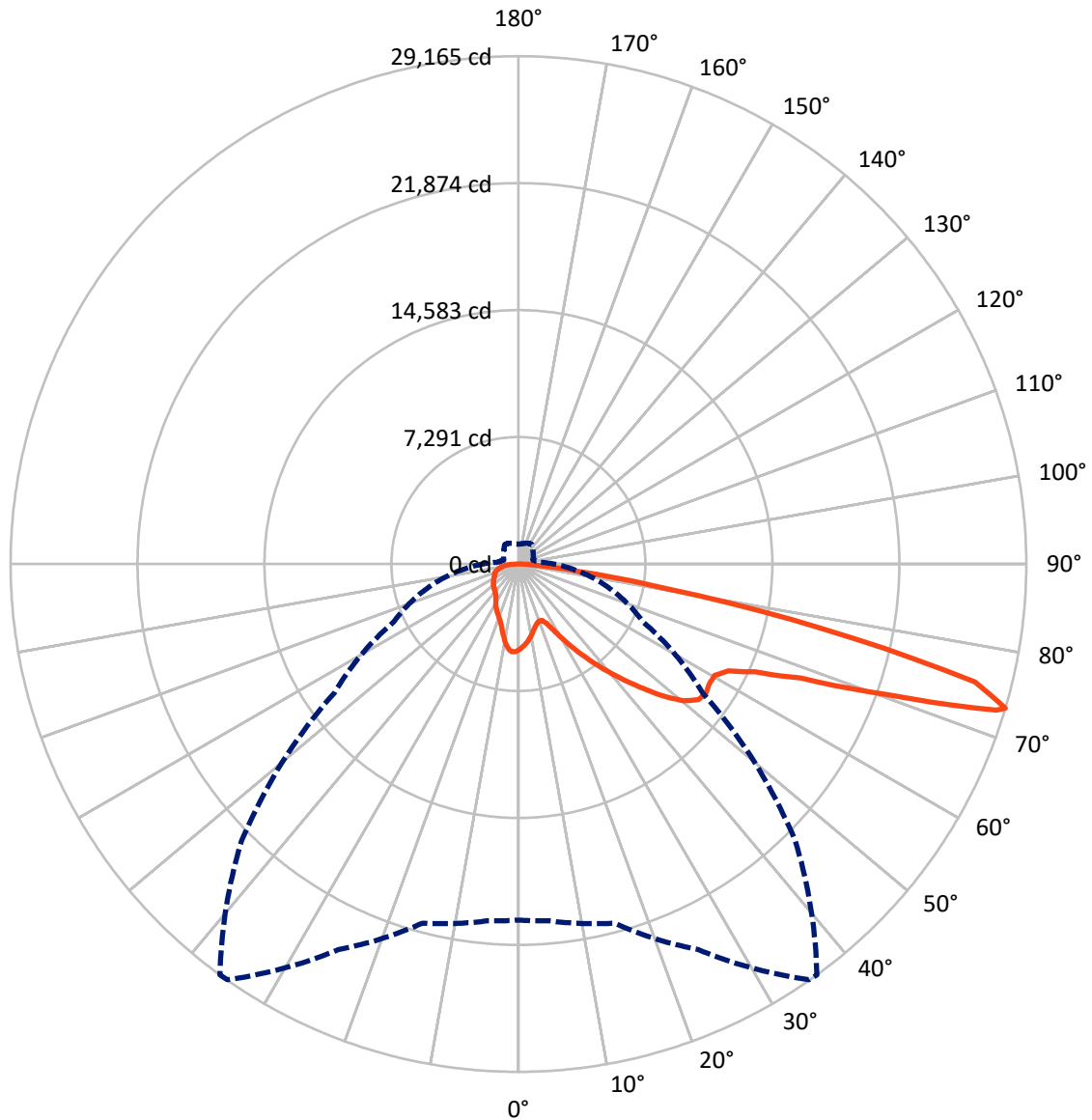
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 5.5 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 36-Deg Lateral - - - Horizontal Cone Through 73-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6267.0	0.0	6267.0
	% Fixture	19.3	0.0	19.3
Street Side	Lumens	26233.0	0.0	26233.0
	% Fixture	80.7	0.0	80.7
Total	Lumens	32500.0	0.0	32500.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	447.1	1.4
10°-20°	1123.0	3.5
20°-30°	1800.5	5.5
30°-40°	2978.1	9.2
40°-50°	4608.2	14.2
50°-60°	6169.1	19.0
60°-70°	8058.7	24.8
70°-80°	6582.6	20.3
80°-90°	732.7	2.3
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°	32500.0	100.0
0°-180°	32500.0	100.0

Coefficient of Utilization



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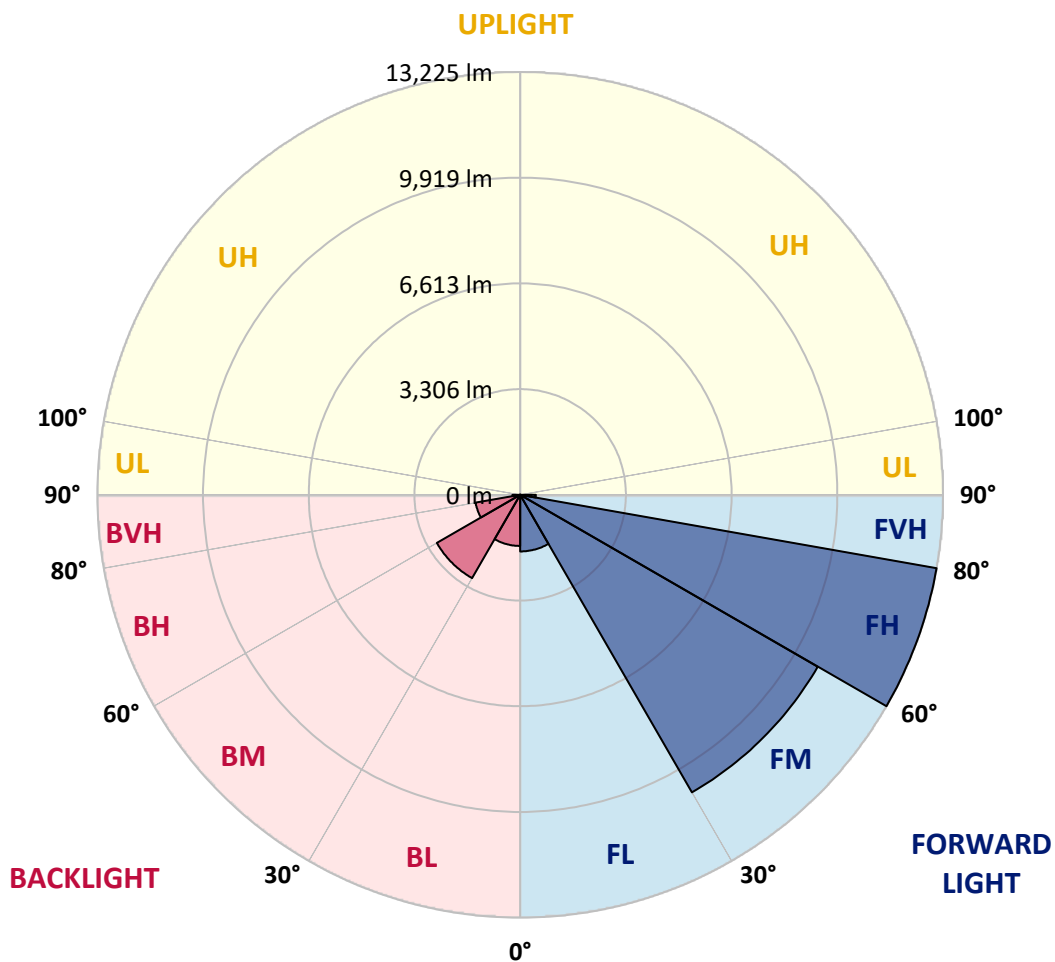
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1770.9	5.4			
FM	(30°-60°)	10745.6	33.1			
FH	(60°-80°)	13225.1	40.7			G5
FVH	(80°-90°)	491.4	1.5			G3/500
BL	(0°-30°)	1599.7	4.9	B3/2500		
BM	(30°-60°)	3009.8	9.3	B3/5000		
BH	(60°-80°)	1416.2	4.4	B3/2500		G3/2500
BVH	(80°-90°)	241.3	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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	4922.8	4922.8	4922.8	4922.8	4922.8	4922.8	4922.8	4922.8	4922.8	4922.8	4922.8
2.5°	4734.9	4747.3	4749.4	4763.8	4763.8	4761.7	4767.9	4792.7	4805.1	4834.0	4858.8
5°	4501.6	4516.0	4522.2	4547.0	4578.0	4580.0	4602.7	4650.2	4695.7	4759.7	4813.4
7.5°	4239.3	4255.8	4272.4	4324.0	4369.4	4373.5	4416.9	4493.3	4553.2	4631.6	4728.7
10°	3985.3	3989.5	4006.0	4072.1	4131.9	4138.1	4200.1	4286.8	4367.3	4476.8	4586.2
12.5°	3776.8	3789.2	3785.0	3834.6	3886.2	3890.3	3972.9	4082.4	4200.1	4324.0	4454.1
15°	3704.5	3702.4	3659.1	3657.0	3679.7	3683.8	3764.4	3892.4	4024.6	4177.4	4344.6
17.5°	3754.1	3737.5	3624.0	3553.8	3539.3	3543.4	3603.3	3743.7	3884.1	4059.7	4260.0
20°	4026.6	3962.6	3696.2	3526.9	3479.4	3479.4	3514.5	3628.1	3783.0	3987.4	4239.3
22.5°	4672.9	4573.8	4006.0	3704.5	3537.2	3520.7	3493.9	3580.6	3752.0	3997.7	4324.0
25°	5486.5	5439.0	4573.8	4177.4	3832.5	3778.8	3601.2	3632.2	3816.0	4109.2	4555.2
27.5°	6240.2	6157.6	5319.3	4865.0	4377.7	4295.1	3919.2	3793.3	3968.8	4315.7	4889.8
30°	6680.1	6624.3	6085.4	5651.7	5071.5	4966.2	4427.2	4111.3	4241.4	4656.4	5364.7
32.5°	7159.1	7126.1	6853.5	6459.1	5823.1	5701.3	5083.9	4629.6	4658.5	5108.6	5936.7
35°	7623.7	7667.1	7512.2	7223.1	6632.6	6519.0	5965.6	5306.9	5172.7	5616.6	6547.9
37.5°	8181.3	8191.6	8094.5	7906.6	7483.3	7390.4	6934.1	6029.6	5732.3	6157.6	7138.5
40°	9294.3	9131.1	8751.2	8602.5	8350.6	8292.8	7772.4	6692.5	6252.6	6713.1	7696.0
42.5°	10498.1	10244.1	9649.4	9405.8	9304.6	9250.9	8470.4	7134.4	6739.9	7268.6	8243.2
45°	11468.6	11262.2	10679.8	10378.4	10390.8	10304.0	9079.5	7528.8	7268.6	7826.1	8854.4
47.5°	12424.7	12079.9	11427.3	11384.0	11528.5	11400.5	9661.8	7923.2	7819.9	8433.2	9465.7
50°	12486.7	12172.8	11908.5	12255.4	12503.2	12344.2	10190.5	8439.4	8391.9	9168.3	10254.5
52.5°	11733.0	11687.5	12090.2	12674.6	13085.5	12943.0	10622.0	8970.1	8976.3	10087.2	11214.7
55°	11458.3	11400.5	11883.7	12602.3	13157.8	13073.1	10944.2	9568.9	9624.7	11202.3	12245.1
57.5°	11920.9	11776.3	11871.3	12466.0	12988.4	12938.9	11278.7	10233.8	10335.0	12486.7	13197.0
60°	13356.0	13060.7	12556.9	12668.4	12994.6	12965.7	11757.7	10975.1	11144.5	13824.7	13800.0
62.5°	15505.6	15171.1	14144.8	13649.2	13576.9	13521.2	12548.6	11885.8	11970.4	14791.1	13448.9
65°	17863.8	17504.5	16284.1	15472.6	15047.2	14927.4	13824.7	12984.3	12453.6	14789.1	12081.9
67.5°	20511.0	20131.1	18914.8	18140.5	17680.0	17475.5	15895.9	13872.2	12296.7	13537.7	9668.0
70°	23222.3	22860.9	22303.4	22573.9	22776.2	22464.4	19158.5	14167.5	11169.2	10613.8	6492.2
72.5°	21783.0	21754.1	22177.4	24742.1	28642.7	28704.7	22416.9	13333.3	8629.4	6308.4	3460.8
73°	20447.0	20568.8	21353.5	24422.0	29144.5	29165.1	22480.9	12901.7	7923.2	5434.9	3039.6
75°	10593.1	11419.1	14330.6	19802.7	26986.6	27083.7	19817.2	9767.1	4722.5	3018.9	2048.4
77.5°	2837.2	2800.1	4617.2	9647.4	17991.8	17863.8	12521.8	4728.7	2263.2	1893.5	1437.2
80°	972.6	985.0	1571.4	3529.0	8398.1	8697.5	5434.9	2062.9	1488.8	1319.5	1018.0
82.5°	495.6	512.1	821.8	1501.2	3512.5	3438.1	1749.0	1214.2	997.4	801.2	569.9
85°	264.3	272.6	452.2	778.5	1288.5	1303.0	615.4	648.4	633.9	454.3	280.8
87.5°	130.1	134.2	216.8	342.8	477.0	460.5	214.8	280.8	311.8	256.1	154.9
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°	4922.8	4922.8	4922.8	4922.8	4922.8	4922.8	4922.8	4922.8	4922.8	4922.8	4922.8
2.5°	4889.8	4889.8	4916.6	4962.0	4995.1	5026.1	5046.7	5079.7	5098.3	5096.3	5094.2
5°	4856.7	4877.4	4931.1	4986.8	5024.0	5048.8	5048.8	5063.2	5063.2	5057.0	5048.8
7.5°	4780.3	4815.4	4893.9	4943.5	4953.8	4926.9	4873.2	4831.9	4780.3	4753.5	4743.2
10°	4658.5	4703.9	4803.0	4825.8	4772.1	4677.1	4547.0	4435.5	4336.4	4290.9	4276.5
12.5°	4538.7	4598.6	4691.5	4656.4	4528.4	4342.6	4142.3	3989.5	3877.9	3834.6	3820.1
15°	4439.6	4511.9	4584.2	4474.7	4251.7	3993.6	3772.6	3630.2	3545.5	3512.5	3504.2
17.5°	4373.5	4458.2	4483.0	4278.5	3968.8	3679.7	3483.5	3390.6	3353.5	3339.0	3334.9
20°	4377.7	4472.6	4412.8	4088.6	3696.2	3405.1	3275.0	3248.1	3248.1	3248.1	3246.1
22.5°	4491.2	4573.8	4383.9	3911.0	3434.0	3173.8	3118.1	3140.8	3157.3	3157.3	3155.2
25°	4726.6	4772.1	4404.5	3739.6	3188.3	2973.5	2975.6	3018.9	3033.4	3033.4	3029.3
27.5°	5085.9	5048.8	4441.7	3549.6	2946.7	2791.8	2820.7	2859.9	2870.3	2864.1	2862.0
30°	5536.1	5387.4	4472.6	3326.6	2719.5	2622.5	2647.2	2670.0	2661.7	2647.2	2645.2
32.5°	6039.9	5732.3	4454.1	3076.8	2519.2	2446.9	2461.4	2473.8	2461.4	2426.3	2426.3
35°	6539.6	6044.1	4352.9	2804.2	2360.2	2277.6	2275.6	2314.8	2312.7	2271.4	2273.5
37.5°	6977.4	6289.8	4156.7	2554.3	2223.9	2153.7	2162.0	2186.8	2199.2	2143.4	2137.2
40°	7359.4	6459.1	3880.0	2341.6	2114.5	2118.6	2095.9	2056.7	2042.2	2017.4	2013.3
42.5°	7718.7	6576.8	3586.8	2164.1	2058.7	2106.2	2029.8	1936.9	1897.7	1920.4	1934.8
45°	8071.8	6709.0	3303.9	2017.4	1988.5	2069.1	1963.8	1860.5	1815.1	1825.4	1839.9
47.5°	8503.4	6892.8	2963.2	1860.5	1881.2	2000.9	1922.5	1810.9	1742.8	1701.5	1689.1
50°	9071.3	7159.1	2521.3	1691.2	1767.6	1926.6	1887.4	1738.7	1664.3	1581.7	1561.1
52.5°	9781.6	7411.1	2075.3	1554.9	1674.7	1862.6	1829.5	1676.7	1585.9	1486.8	1470.2
55°	10489.9	7446.2	1691.2	1437.2	1569.4	1775.8	1759.3	1627.2	1499.1	1418.6	1402.1
57.5°	10985.5	7113.7	1433.1	1338.1	1468.2	1668.5	1695.3	1567.3	1426.9	1364.9	1354.6
60°	10993.7	6318.7	1276.1	1272.0	1391.8	1575.5	1629.2	1497.1	1381.4	1340.1	1331.9
62.5°	10120.2	5092.1	1174.9	1222.4	1336.0	1499.1	1579.7	1457.8	1371.1	1354.6	1346.3
65°	8482.8	3762.3	1094.4	1177.0	1284.4	1435.1	1538.4	1445.5	1367.0	1360.8	1354.6
67.5°	6262.9	2579.1	1026.3	1119.2	1226.6	1369.1	1499.1	1426.9	1342.2	1367.0	1358.7
70°	3939.9	1722.2	962.3	1053.1	1150.2	1292.6	1447.5	1393.8	1311.2	1296.8	1269.9
72.5°	2223.9	1245.2	885.9	968.5	1051.1	1191.5	1377.3	1338.1	1241.0	1183.2	1156.4
73°	2009.2	1179.1	867.3	947.8	1028.3	1170.8	1360.8	1321.6	1220.4	1156.4	1131.6
75°	1470.2	964.3	782.6	863.1	933.4	1075.8	1282.3	1239.0	1129.5	1053.1	1036.6
77.5°	1065.5	743.4	673.2	745.4	807.4	943.7	1164.6	1115.1	1007.7	966.4	949.9
80°	768.2	563.7	557.5	627.7	681.4	819.8	1038.7	987.0	883.8	1005.6	978.8
82.5°	458.4	361.4	408.9	487.3	543.1	687.6	902.4	842.5	743.4	751.6	640.1
85°	218.9	204.4	254.0	320.1	359.3	470.8	751.6	704.1	594.7	487.3	477.0
87.5°	97.1	92.9	121.8	142.5	192.0	282.9	514.2	456.4	431.6	258.1	202.4
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)