

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: P197280

Luminaire Tested: **NAV-AF-06-D-UNV-T3-8030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197280
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-T3-8030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 80 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: 32254 lumens
Efficiency: N/A
Efficacy: 84.4 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 - G4

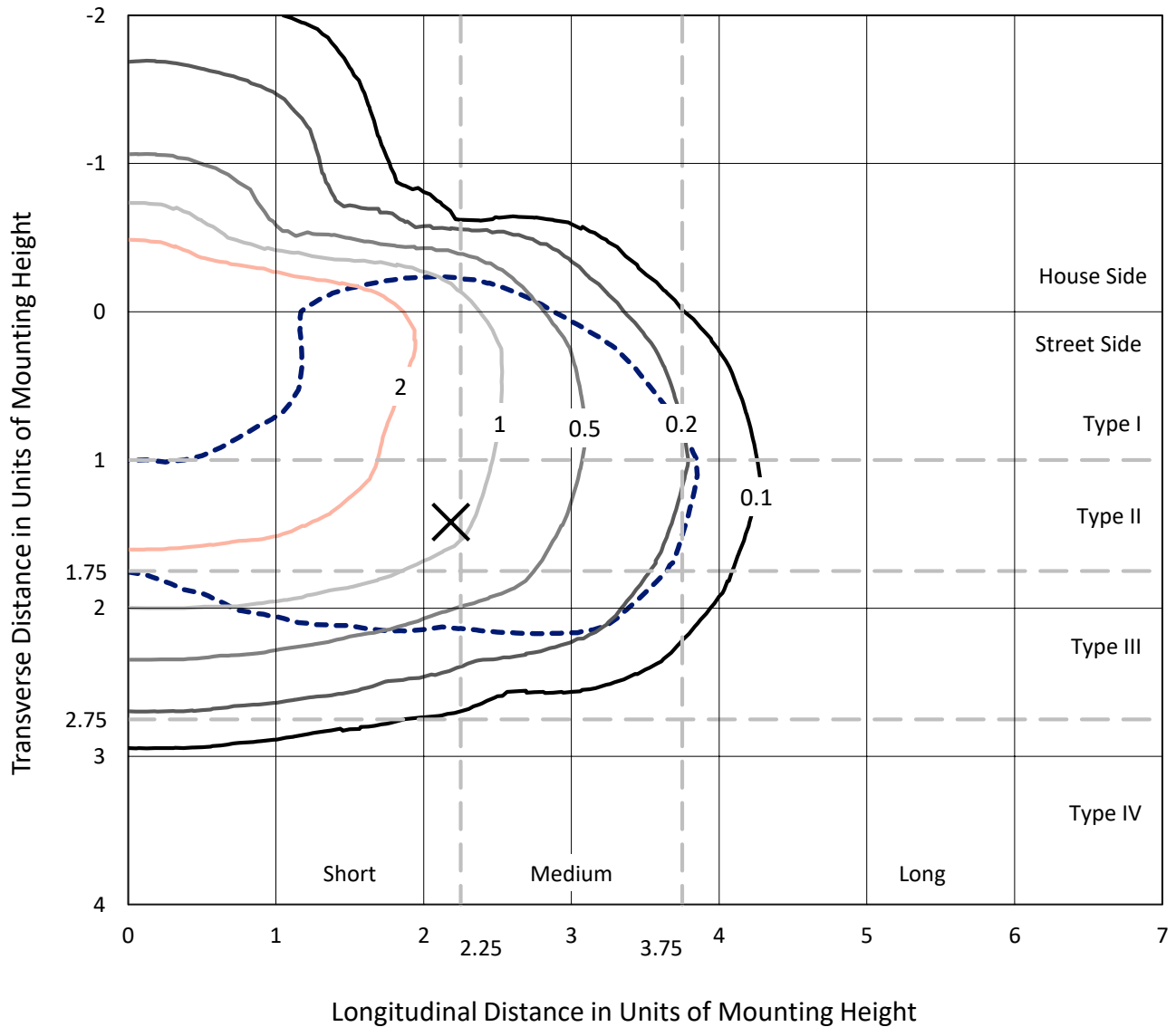
Input Watts (W): 382
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

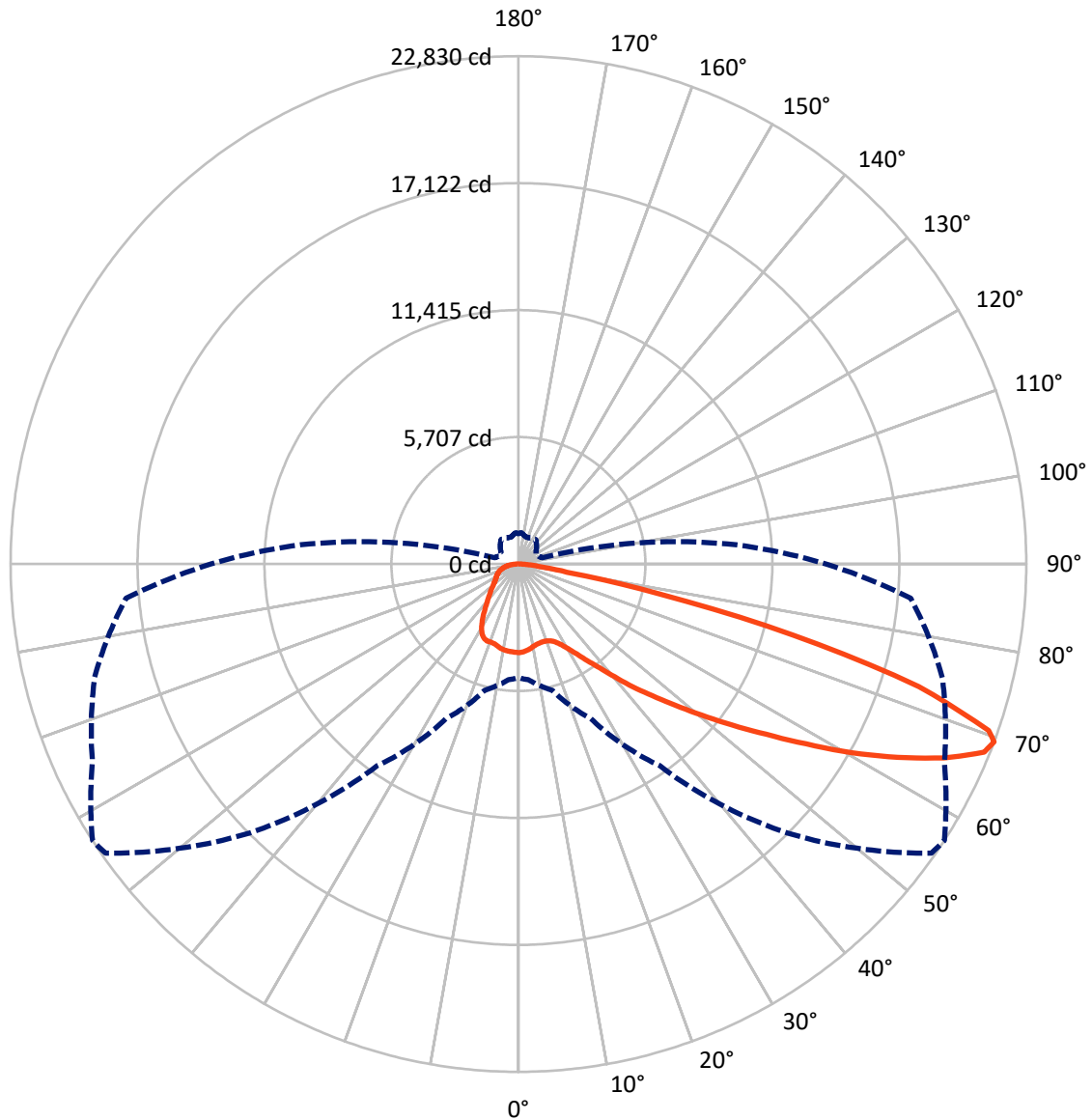
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 4.5 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	7117.3	0.0	7117.3
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	25136.7	0.0	25136.7
	% Fixture	77.9	0.0	77.9
Total	Lumens	32254.0	0.0	32254.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	373.1	1.2
10°-20°	1060.8	3.3
20°-30°	1764.7	5.5
30°-40°	2881.6	8.9
40°-50°	4863.6	15.1
50°-60°	7565.5	23.5
60°-70°	9012.2	27.9
70°-80°	4198.5	13.0
80°-90°	534.0	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°	32254.0	100.0
0°-180°	32254.0	100.0



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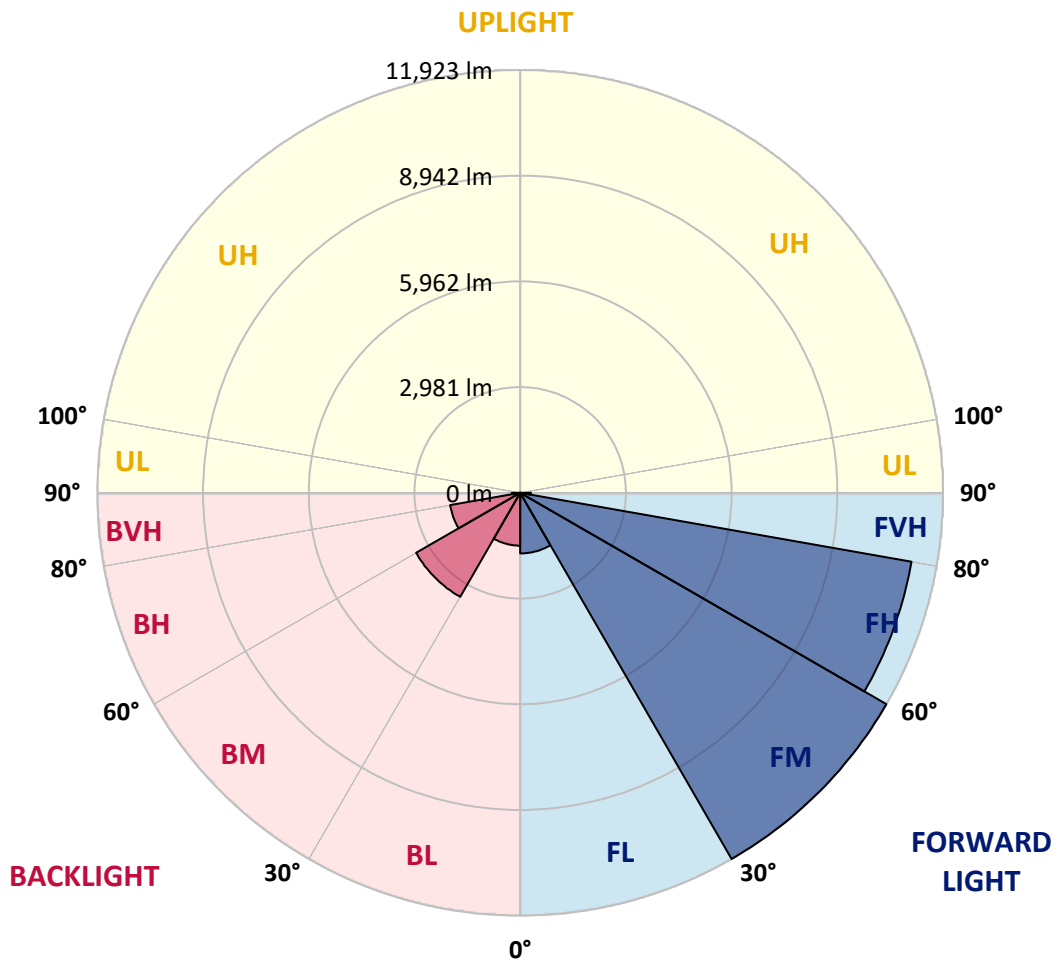
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1708.1	5.3			
FM	(30°-60°)	11923.3	37.0			
FH	(60°-80°)	11205.1	34.7			G4/12000
FVH	(80°-90°)	300.2	0.9			G3/500
BL	(0°-30°)	1490.5	4.6	B3/2500		
BM	(30°-60°)	3387.4	10.5	B3/5000		
BH	(60°-80°)	2005.6	6.2	B3/2500		G3/2500
BVH	(80°-90°)	233.8	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-G4

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	3985.3	3985.3	3985.3	3985.3	3985.3	3985.3	3985.3	3985.3	3985.3	3985.3	3985.3
2.5°	3962.6	3962.6	3972.9	3972.9	3972.9	3968.8	3956.4	3960.5	3952.3	3946.1	3935.7
5°	3882.1	3886.2	3898.6	3902.7	3908.9	3911.0	3911.0	3908.9	3911.0	3911.0	3904.8
7.5°	3770.5	3774.7	3789.1	3797.4	3816.0	3832.5	3840.8	3840.8	3851.1	3859.3	3861.4
10°	3702.4	3702.4	3710.7	3710.7	3725.1	3733.4	3760.2	3758.2	3787.1	3813.9	3826.3
12.5°	3694.1	3694.1	3690.0	3675.6	3667.3	3665.2	3692.1	3696.2	3739.6	3787.1	3809.8
15°	3721.0	3721.0	3708.6	3679.7	3648.7	3634.3	3661.1	3669.4	3716.9	3772.6	3807.7
17.5°	3807.7	3805.6	3778.8	3721.0	3667.3	3644.6	3652.8	3661.1	3704.5	3768.5	3811.8
20°	3999.8	3999.8	3941.9	3836.6	3743.7	3690.0	3677.6	3683.8	3714.8	3774.7	3830.4
22.5°	4336.3	4342.5	4239.3	4065.8	3906.8	3793.3	3743.7	3749.9	3764.3	3822.2	3884.1
25°	4831.9	4815.4	4668.8	4423.1	4175.3	3981.2	3880.0	3886.2	3886.2	3939.9	4003.9
27.5°	5356.4	5360.5	5149.9	4885.6	4559.3	4270.3	4109.2	4107.1	4105.1	4156.7	4224.8
30°	5949.0	5951.1	5707.4	5401.8	5028.1	4658.5	4416.9	4414.8	4396.2	4460.2	4549.0
32.5°	6597.4	6595.4	6312.5	5967.6	5552.6	5133.4	4819.5	4817.5	4803.0	4889.7	4997.1
35°	7316.0	7316.0	7035.2	6609.8	6161.7	5695.1	5331.6	5329.6	5337.8	5455.5	5556.7
37.5°	8181.2	8199.8	7861.2	7344.9	6855.5	6357.9	5934.6	5922.2	5860.2	6058.5	6225.7
40°	9083.6	9135.2	8784.2	8181.2	7652.6	7138.4	6671.8	6663.5	6609.8	6820.4	7090.9
42.5°	10060.3	10178.0	9787.7	9172.4	8596.3	8040.8	7572.1	7549.3	7342.9	7671.2	8094.5
45°	11340.5	11416.9	10851.2	10293.6	9750.6	9116.6	8559.1	8437.3	8230.8	8652.0	9201.3
47.5°	12211.9	12174.8	11821.7	11447.9	11098.9	10491.9	9634.9	9480.0	9228.1	9785.7	10390.7
50°	12752.9	12779.8	12581.6	12563.0	12544.4	12121.1	10849.1	10663.2	10372.1	11032.9	11739.1
52.5°	13110.2	12988.3	13023.5	13444.7	13954.7	13752.4	12222.3	12015.8	11716.4	12377.1	13174.2
55°	12961.5	12800.4	13124.6	13954.7	15154.5	15199.9	13729.7	13517.0	13260.9	13806.1	14900.5
57.5°	12346.2	12426.7	12938.8	14093.1	15974.2	16496.6	15462.1	15245.3	14741.5	15294.9	16540.0
60°	11481.0	11644.1	12426.7	13874.2	16548.3	17506.4	17363.9	17219.4	16352.1	16744.4	18262.2
62.5°	10551.7	10712.8	11675.1	13500.4	16290.2	18400.5	19230.6	19141.8	18130.0	18140.3	19354.5
65°	9178.6	9244.6	10227.6	12480.4	15573.6	19207.9	21099.4	21020.9	19829.4	19331.8	19660.1
67.5°	6931.9	7014.5	7821.9	9851.7	13393.1	18770.1	22592.3	22579.9	20851.6	19773.7	18933.3
69°	5118.9	5220.1	5878.8	7648.5	11074.2	17101.7	22662.5	22829.8	21128.3	19728.2	17704.6
70°	3745.8	3861.4	4470.6	6070.9	9224.0	15259.8	22061.6	22420.9	21023.0	19441.2	16746.5
72.5°	1592.1	1631.3	1930.7	2740.1	4679.1	9201.3	18070.1	18825.9	18986.9	17419.7	13083.3
75°	997.4	1009.7	1127.4	1406.2	2081.4	3805.6	11701.9	12732.3	14175.7	13514.9	8759.4
77.5°	751.6	762.0	830.1	968.4	1292.6	1420.7	5428.7	6473.5	8119.3	7949.9	4359.0
80°	576.1	582.3	627.7	704.1	910.6	890.0	1761.4	2213.6	3388.5	2990.0	1542.5
82.5°	452.2	454.3	493.5	508.0	636.0	598.8	883.8	985.0	1369.0	1137.8	753.7
85°	400.6	406.8	446.0	371.7	406.8	361.4	485.3	526.6	726.9	685.6	285.0
87.5°	204.4	214.8	373.8	318.0	204.4	171.4	212.7	229.2	295.3	320.1	138.3
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°	3985.3	3985.3	3985.3	3985.3	3985.3	3985.3	3985.3	3985.3	3985.3	3985.3	3985.3
2.5°	3937.8	3939.9	3946.1	3956.4	3972.9	3993.6	4018.3	4043.1	4057.6	4067.9	4063.8
5°	3904.8	3906.8	3919.2	3937.8	3958.5	3989.4	4030.7	4061.7	4084.4	4098.9	4096.8
7.5°	3863.5	3869.7	3894.4	3915.1	3944.0	3968.8	4001.8	4030.7	4053.4	4067.9	4065.8
10°	3832.5	3838.7	3869.7	3896.5	3921.3	3925.4	3919.2	3911.0	3908.9	3919.2	3915.1
12.5°	3818.0	3830.4	3859.3	3877.9	3867.6	3828.4	3782.9	3764.3	3758.2	3778.8	3780.9
15°	3822.2	3832.5	3857.3	3844.9	3789.1	3723.1	3698.3	3712.7	3725.1	3737.5	3739.6
17.5°	3832.5	3838.7	3844.9	3799.5	3721.0	3677.6	3669.4	3654.9	3617.7	3597.1	3595.0
20°	3851.1	3859.3	3849.0	3776.7	3706.5	3648.7	3549.6	3460.8	3376.1	3330.7	3312.1
22.5°	3915.1	3921.3	3890.3	3820.1	3712.7	3524.8	3324.5	3171.7	3041.6	2971.4	2944.6
25°	4041.0	4051.4	4008.0	3919.2	3638.4	3310.1	3027.2	2820.7	2657.6	2572.9	2550.2
27.5°	4262.0	4272.3	4224.8	3993.6	3464.9	3023.0	2680.3	2475.8	2335.4	2263.2	2252.8
30°	4592.4	4606.8	4563.5	3991.5	3200.6	2657.6	2341.6	2221.9	2141.3	2091.8	2089.7
32.5°	5050.8	5104.5	4926.9	3921.3	2874.4	2287.9	2085.6	2044.3	2005.0	1972.0	1972.0
35°	5633.1	5759.1	5286.2	3774.7	2515.1	2036.0	1943.1	1903.9	1854.3	1819.2	1815.1
37.5°	6329.0	6525.1	5542.2	3514.5	2205.3	1914.2	1856.4	1792.4	1713.9	1645.7	1629.2
40°	7285.0	7330.5	5668.2	3091.2	1974.1	1848.1	1775.8	1695.3	1596.2	1519.8	1511.5
42.5°	8245.2	8096.6	5643.4	2636.9	1841.9	1788.2	1693.2	1604.4	1515.7	1451.6	1451.6
45°	9337.6	8765.6	5455.5	2180.6	1722.1	1720.1	1616.8	1532.2	1464.0	1416.5	1406.2
47.5°	10382.4	9366.5	5131.3	1844.0	1598.2	1651.9	1567.3	1499.1	1437.2	1391.8	1383.5
50°	11650.3	10062.4	4786.5	1608.6	1478.5	1592.1	1546.6	1511.5	1451.6	1373.2	1364.9
52.5°	12909.9	10875.9	4520.1	1431.0	1373.2	1544.6	1559.0	1563.1	1507.4	1354.6	1344.3
55°	14262.4	11745.3	4239.3	1292.6	1286.4	1521.8	1587.9	1583.8	1556.9	1358.7	1342.2
57.5°	15548.8	12618.7	3820.1	1195.6	1218.3	1499.1	1594.1	1528.0	1480.5	1379.4	1352.5
60°	16614.3	13341.5	3204.8	1127.4	1160.5	1453.7	1552.8	1453.7	1373.2	1375.2	1350.5
62.5°	17132.6	13543.8	2451.1	1049.0	1113.0	1379.4	1492.9	1398.0	1323.6	1383.5	1369.0
65°	16738.2	12967.7	1746.9	976.7	1055.2	1292.6	1457.8	1350.5	1298.8	1424.8	1408.3
67.5°	15321.7	11398.4	1267.9	912.7	999.4	1203.8	1391.8	1307.1	1274.1	1455.8	1418.6
69°	13816.4	9841.4	1098.5	875.5	960.2	1156.4	1348.4	1284.4	1255.5	1412.4	1358.7
70°	12565.0	8641.7	1013.9	852.8	927.1	1129.5	1315.4	1269.9	1236.9	1360.8	1296.8
72.5°	9009.2	5585.6	852.8	784.7	840.4	1069.6	1243.1	1216.2	1166.7	1228.6	1187.3
75°	5443.1	2915.7	724.8	714.5	749.6	987.0	1158.4	1125.4	1075.8	1082.0	1061.4
77.5°	2500.6	1346.3	607.1	631.9	654.6	883.8	1055.2	1018.0	972.6	956.1	958.1
80°	1096.5	786.7	508.0	538.9	551.3	795.0	943.7	902.4	852.8	941.6	873.5
82.5°	592.6	456.3	396.5	417.1	452.2	691.7	819.8	766.1	718.6	836.3	675.2
85°	239.5	233.3	268.4	289.1	313.9	497.6	685.6	629.8	572.0	512.1	499.7
87.5°	103.2	111.5	132.2	140.4	167.3	309.7	460.5	402.7	404.7	346.9	340.7
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)