

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: P270705

Luminaire Tested: **NAV-AF-06-D-UNV-T3-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270705
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-T3-7027
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 2700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 31305.3 lumens
Efficiency: N/A
Efficacy: 94.0 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

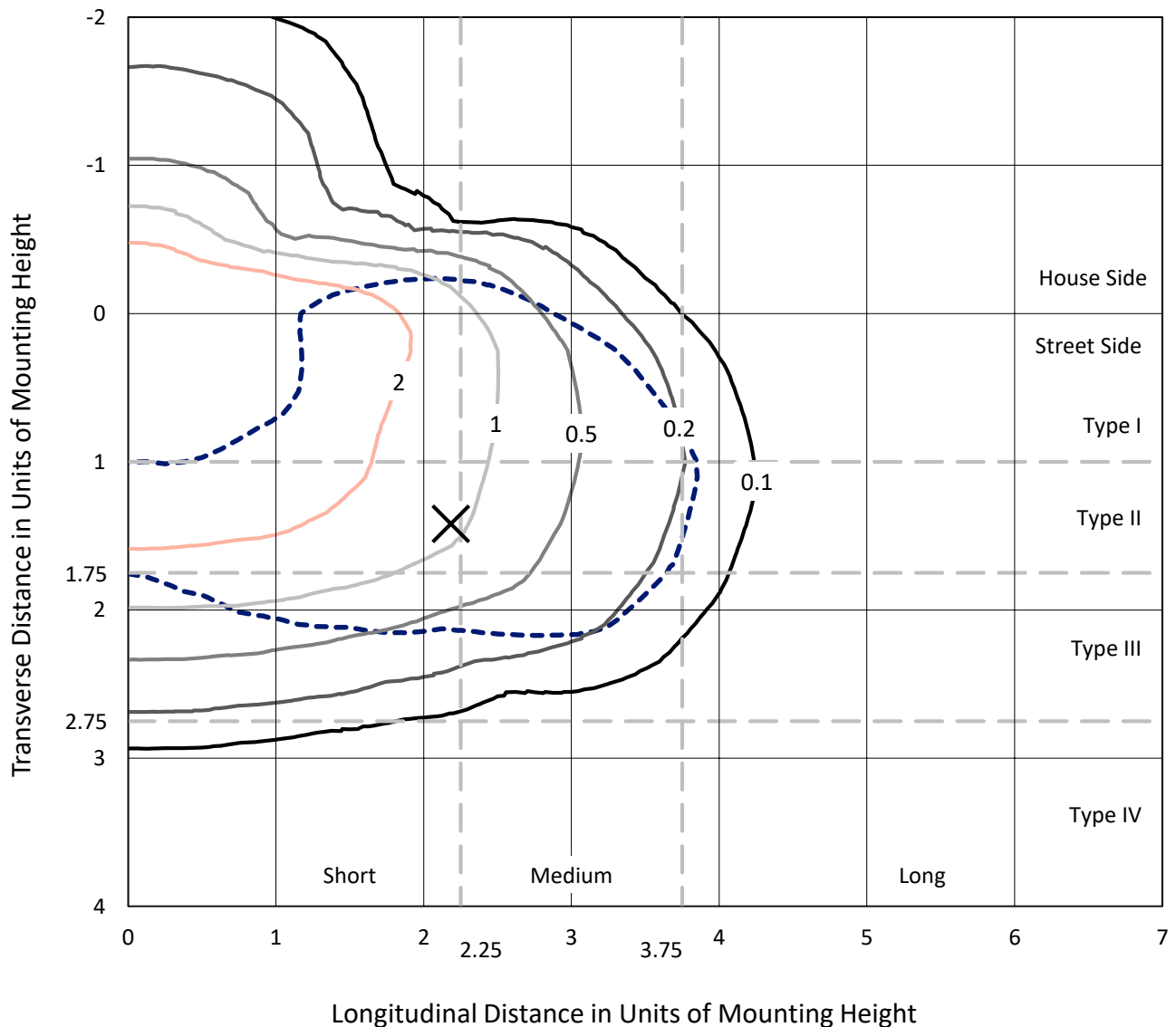
Input Watts (W): 333
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

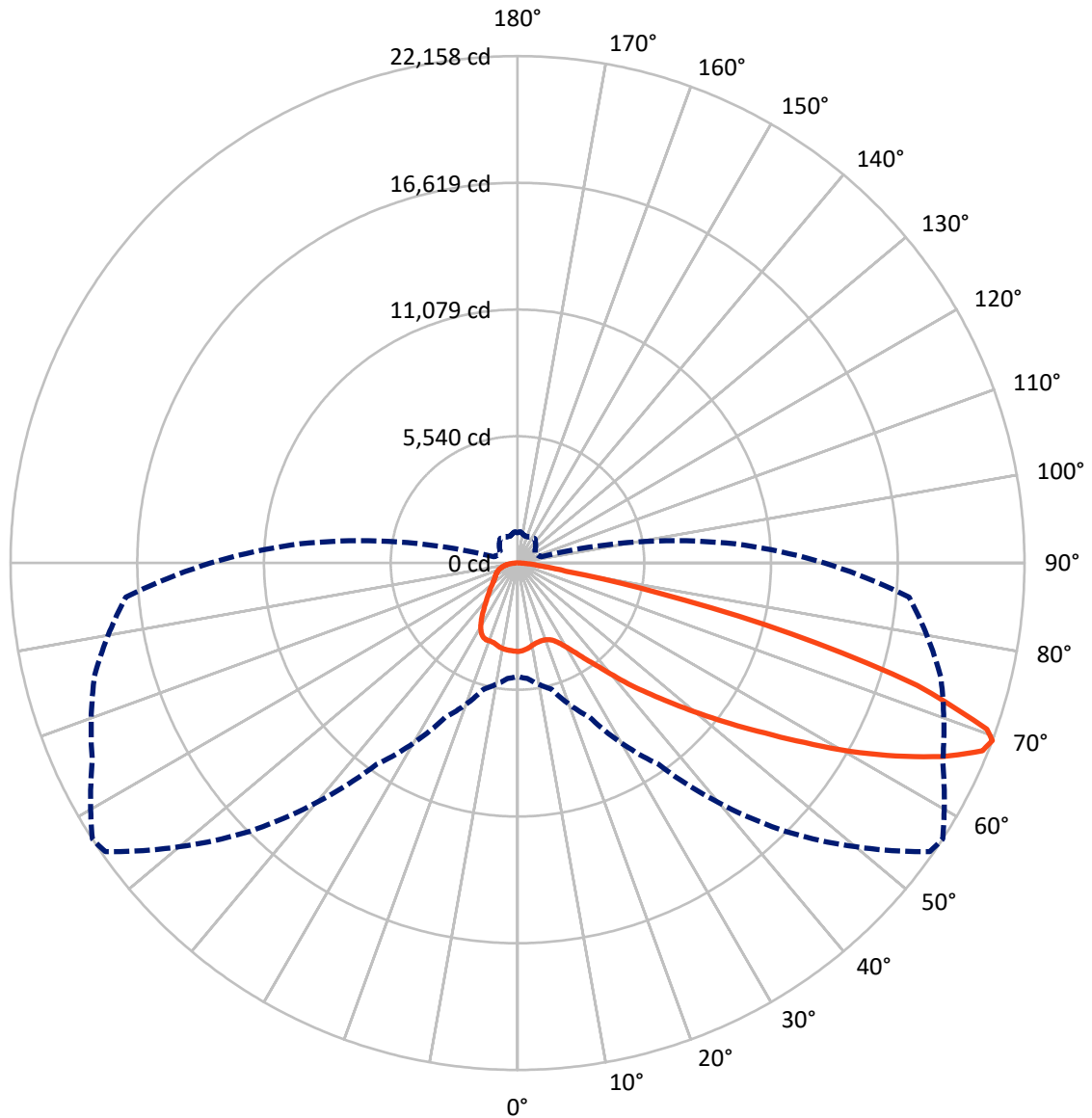
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 4.4 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	6908.0	0.0	6908.0
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	24397.3	0.0	24397.3
	% Fixture	77.9	0.0	77.9
Total	Lumens	31305.3	0.0	31305.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	362.1	1.2
10°-20°	1029.6	3.3
20°-30°	1712.8	5.5
30°-40°	2796.9	8.9
40°-50°	4720.5	15.1
50°-60°	7343.0	23.5
60°-70°	8747.1	27.9
70°-80°	4075.0	13.0
80°-90°	518.3	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°	31305.3	100.0
0°-180°	31305.3	100.0



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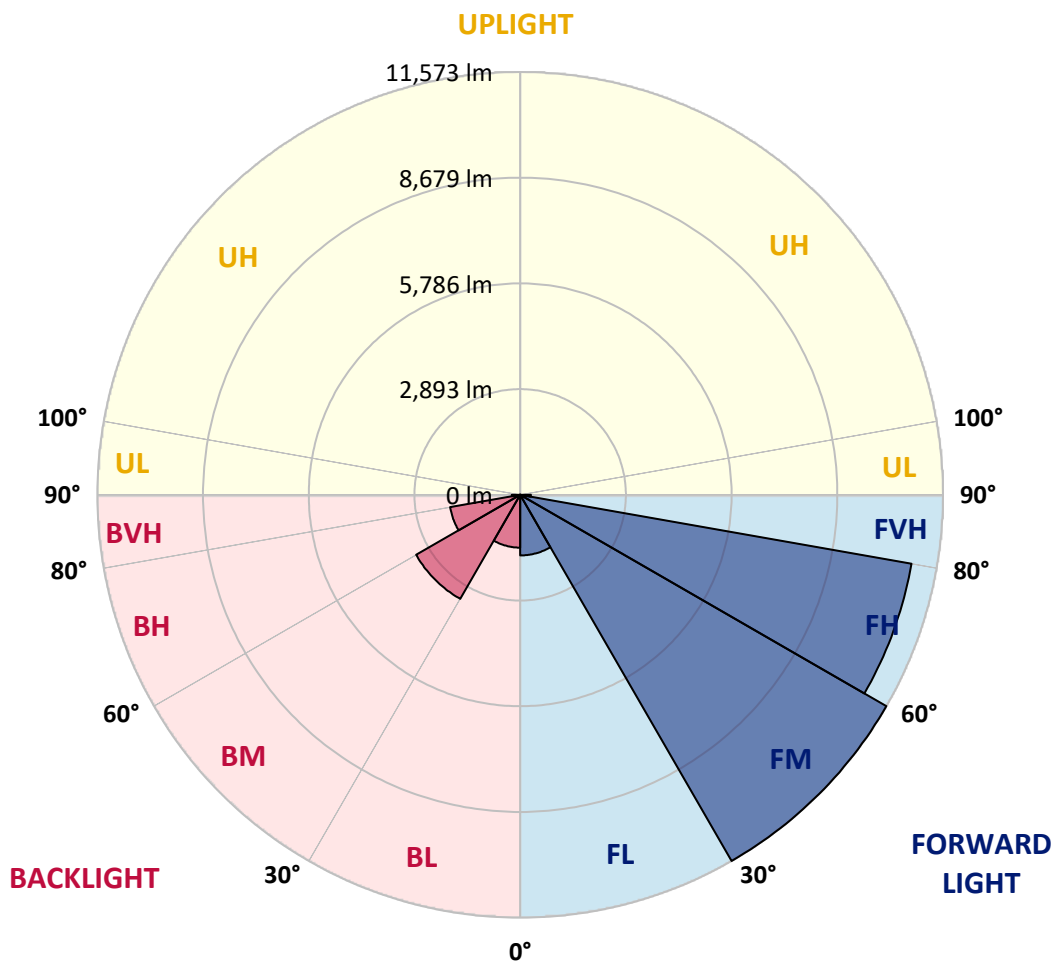
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1657.9	5.3			
FM	(30°-60°)	11572.6	37.0			
FH	(60°-80°)	10875.5	34.7			G4/12000
FVH	(80°-90°)	291.3	0.9			G3/500
BL	(0°-30°)	1446.7	4.6	B3/2500		
BM	(30°-60°)	3287.8	10.5	B3/5000		
BH	(60°-80°)	1946.6	6.2	B3/2500		G3/2500
BVH	(80°-90°)	227.0	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°	3868.1	3868.1	3868.1	3868.1	3868.1	3868.1	3868.1	3868.1	3868.1	3868.1	3868.1
2.5°	3846.1	3846.1	3856.1	3856.1	3856.1	3852.0	3840.1	3844.0	3836.0	3830.1	3820.0
5°	3767.9	3771.9	3783.9	3788.0	3793.9	3795.9	3795.9	3793.9	3795.9	3795.9	3789.9
7.5°	3659.7	3663.6	3677.8	3685.7	3703.7	3719.8	3727.7	3727.7	3737.8	3745.8	3747.8
10°	3593.5	3593.5	3601.6	3601.6	3615.6	3623.6	3649.6	3647.6	3675.7	3701.7	3713.8
12.5°	3585.4	3585.4	3581.5	3567.4	3559.4	3557.5	3583.5	3587.6	3629.6	3675.7	3697.8
15°	3611.5	3611.5	3599.5	3571.4	3541.4	3527.4	3553.4	3561.4	3607.6	3661.6	3695.6
17.5°	3695.6	3693.7	3667.7	3611.5	3559.4	3537.3	3545.4	3553.4	3595.5	3657.7	3699.7
20°	3882.1	3882.1	3826.1	3723.7	3633.6	3581.5	3569.4	3575.4	3605.5	3663.6	3717.7
22.5°	4208.7	4214.8	4114.5	3946.3	3791.9	3681.8	3633.6	3639.7	3653.6	3709.7	3769.8
25°	4689.8	4673.7	4531.5	4293.0	4052.4	3864.1	3765.9	3771.9	3771.9	3823.9	3886.1
27.5°	5198.9	5202.9	4998.4	4742.0	4425.2	4144.7	3988.4	3986.3	3984.3	4034.4	4100.6
30°	5774.0	5776.0	5539.6	5243.0	4880.2	4521.4	4286.9	4284.9	4266.9	4329.0	4415.2
32.5°	6403.4	6401.4	6126.8	5792.1	5389.2	4982.4	4677.7	4675.8	4661.8	4745.9	4850.0
35°	7100.8	7100.8	6828.2	6415.3	5980.5	5527.5	5174.7	5172.8	5180.9	5295.1	5393.2
37.5°	7940.6	7958.7	7629.9	7128.9	6653.8	6170.8	5760.0	5748.1	5687.9	5880.2	6042.5
40°	8816.4	8866.5	8525.9	7940.6	7427.5	6928.4	6475.5	6467.4	6415.3	6619.8	6882.4
42.5°	9764.3	9878.7	9499.8	8902.7	8343.4	7804.4	7349.4	7327.4	7127.0	7445.5	7856.3
45°	11007.0	11081.1	10532.0	9990.9	9463.7	8848.5	8307.3	8189.0	7988.6	8397.5	8930.7
47.5°	11852.7	11816.7	11474.1	11111.2	10772.6	10183.2	9351.5	9201.2	8956.7	9497.8	10085.0
50°	12377.8	12403.8	12211.5	12193.5	12175.4	11764.6	10530.0	10349.6	10067.0	10708.3	11393.8
52.5°	12724.6	12606.4	12640.4	13049.3	13544.3	13347.8	11862.7	11662.3	11371.7	12013.2	12786.7
55°	12580.3	12424.0	12738.7	13544.3	14708.7	14752.9	13325.8	13119.3	12870.8	13399.9	14462.3
57.5°	11983.0	12061.3	12558.2	13678.6	15504.3	16011.4	15007.4	14796.9	14307.8	14845.0	16053.5
60°	11143.2	11301.5	12061.3	13466.1	16061.5	16991.5	16853.2	16712.8	15871.2	16252.0	17725.0
62.5°	10241.3	10397.7	11331.7	13103.3	15811.0	17859.4	18665.1	18578.7	17596.8	17606.8	18785.3
65°	8908.6	8972.7	9926.7	12113.4	15115.6	18643.0	20478.8	20402.7	19246.1	18763.2	19081.8
67.5°	6728.0	6808.3	7591.8	9562.0	12999.2	18218.0	21927.7	21915.8	20238.3	19192.1	18376.4
69°	4968.3	5066.6	5705.9	7423.6	10748.5	16598.7	21996.0	22158.3	20506.9	19148.0	17183.9
70°	3635.6	3747.8	4339.1	5892.3	8952.7	14811.0	21412.7	21761.4	20404.6	18869.3	16253.9
72.5°	1545.3	1583.4	1874.0	2659.5	4541.6	8930.7	17538.7	18272.2	18428.5	16907.3	12698.5
75°	968.1	980.1	1094.2	1364.9	2020.2	3693.7	11357.7	12357.9	13758.7	13117.4	8501.7
77.5°	729.6	739.6	805.7	939.9	1254.7	1378.9	5269.0	6283.1	7880.4	7716.1	4230.8
80°	559.1	565.2	609.3	683.4	883.8	863.8	1709.6	2148.4	3288.9	2902.1	1497.1
82.5°	438.9	440.9	478.9	493.0	617.2	581.3	857.8	955.9	1328.8	1104.2	731.5
85°	388.7	394.9	433.0	360.8	394.9	350.8	471.0	511.0	705.4	665.4	276.6
87.5°	198.4	208.4	362.7	308.7	198.4	166.4	206.4	222.5	286.6	310.6	134.2
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°	3868.1	3868.1	3868.1	3868.1	3868.1	3868.1	3868.1	3868.1	3868.1	3868.1	3868.1
2.5°	3822.0	3823.9	3830.1	3840.1	3856.1	3876.0	3900.1	3924.2	3938.2	3948.2	3944.3
5°	3789.9	3791.9	3804.0	3822.0	3842.1	3872.1	3912.2	3942.2	3964.3	3978.4	3976.3
7.5°	3749.9	3755.9	3779.9	3799.9	3827.9	3852.0	3884.1	3912.2	3934.1	3948.2	3946.3
10°	3719.8	3725.8	3755.9	3782.0	3805.9	3809.9	3804.0	3795.9	3793.9	3804.0	3799.9
12.5°	3705.8	3717.7	3745.8	3763.9	3753.8	3715.7	3671.6	3653.6	3647.6	3667.7	3669.7
15°	3709.7	3719.8	3743.9	3731.7	3677.8	3613.5	3589.4	3603.6	3615.6	3627.5	3629.6
17.5°	3719.8	3725.8	3731.7	3687.7	3611.5	3569.4	3561.4	3547.3	3511.4	3491.4	3489.2
20°	3737.8	3745.8	3735.8	3665.7	3597.5	3541.4	3445.2	3359.0	3276.8	3232.7	3214.8
22.5°	3799.9	3805.9	3775.8	3707.8	3603.6	3421.1	3226.7	3078.4	2952.2	2884.0	2858.0
25°	3922.2	3932.2	3890.1	3804.0	3531.3	3212.7	2938.1	2737.8	2579.5	2497.2	2475.2
27.5°	4136.6	4146.7	4100.6	3876.0	3363.1	2934.1	2601.4	2403.1	2266.8	2196.5	2186.6
30°	4457.3	4471.4	4429.3	3874.1	3106.5	2579.5	2272.7	2156.6	2078.4	2030.2	2028.3
32.5°	4902.2	4954.3	4781.9	3805.9	2789.9	2220.6	2024.2	1984.1	1946.1	1914.0	1914.0
35°	5467.4	5589.7	5130.7	3663.6	2441.1	1976.1	1885.9	1847.9	1799.8	1765.7	1761.7
37.5°	6142.8	6333.2	5379.2	3411.1	2140.5	1857.9	1801.8	1739.7	1663.5	1597.4	1581.2
40°	7070.7	7114.8	5501.5	3000.2	1916.1	1793.7	1723.6	1645.4	1549.2	1475.0	1467.0
42.5°	8002.7	7858.5	5477.4	2559.4	1787.7	1735.6	1643.4	1557.2	1471.1	1408.9	1408.9
45°	9062.9	8507.8	5295.1	2116.4	1671.4	1669.5	1569.2	1487.1	1420.9	1374.9	1364.9
47.5°	10077.0	9090.9	4980.5	1789.8	1551.3	1603.4	1521.2	1455.1	1394.9	1350.8	1342.7
50°	11307.7	9766.5	4645.8	1561.3	1435.0	1545.3	1501.2	1467.0	1408.9	1332.7	1324.8
52.5°	12530.2	10556.1	4387.1	1388.9	1332.7	1499.1	1513.1	1517.1	1463.1	1314.8	1304.7
55°	13842.9	11399.9	4114.5	1254.7	1248.6	1477.2	1541.2	1537.2	1511.2	1318.7	1302.7
57.5°	15091.5	12247.6	3707.8	1160.4	1182.4	1455.1	1547.2	1483.1	1437.0	1338.8	1312.8
60°	16125.7	12949.1	3110.6	1094.2	1126.4	1411.0	1507.1	1411.0	1332.7	1334.8	1310.7
62.5°	16628.7	13145.4	2379.0	1018.0	1080.2	1338.8	1449.1	1356.8	1284.7	1342.7	1328.8
65°	16245.9	12586.3	1695.6	948.0	1024.2	1254.7	1415.0	1310.7	1260.6	1382.9	1366.9
67.5°	14871.0	11063.0	1230.6	885.9	970.0	1168.4	1350.8	1268.6	1236.5	1412.9	1376.9
69°	13410.0	9551.9	1066.2	849.7	931.9	1122.3	1308.7	1246.6	1218.6	1370.9	1318.7
70°	12195.5	8387.6	984.1	827.7	899.9	1096.3	1276.8	1232.6	1200.6	1320.8	1258.6
72.5°	8744.3	5421.4	827.7	761.7	815.8	1038.3	1206.6	1180.5	1132.4	1192.5	1152.4
75°	5283.0	2829.9	703.5	693.4	727.4	958.0	1124.4	1092.2	1044.2	1050.2	1030.1
77.5°	2427.1	1306.8	589.2	613.4	635.3	857.8	1024.2	988.0	943.9	927.9	929.9
80°	1064.2	763.6	493.0	523.2	535.1	771.6	915.9	875.8	827.7	913.9	847.8
82.5°	575.3	443.0	384.8	404.9	438.9	671.5	795.7	743.5	697.4	811.7	655.4
85°	232.5	226.5	260.6	280.6	304.6	483.0	665.4	611.2	555.2	497.0	485.1
87.5°	100.3	108.2	128.3	136.4	162.4	300.7	446.9	390.9	392.7	336.8	330.7
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)