

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: P270633

Luminaire Tested: **NAV-AF-05-D-UNV-T4FT-7027**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270633  
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-05-D-UNV-T4FT-7027  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 2700K, 1050mA 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: 26331.2 lumens  
Efficiency: N/A  
Efficacy: 94.4 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 - G4

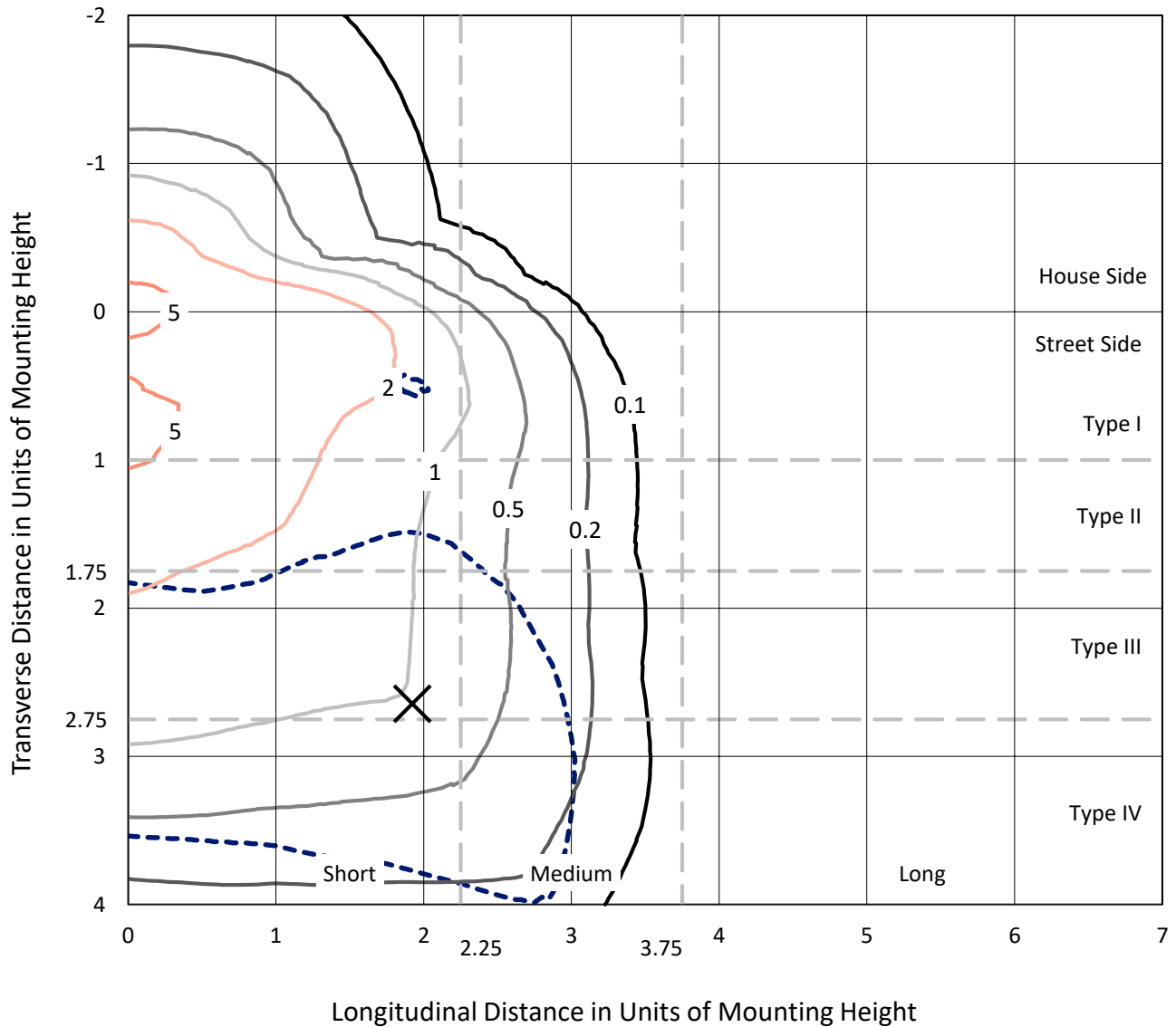
Input Watts (W): 279  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

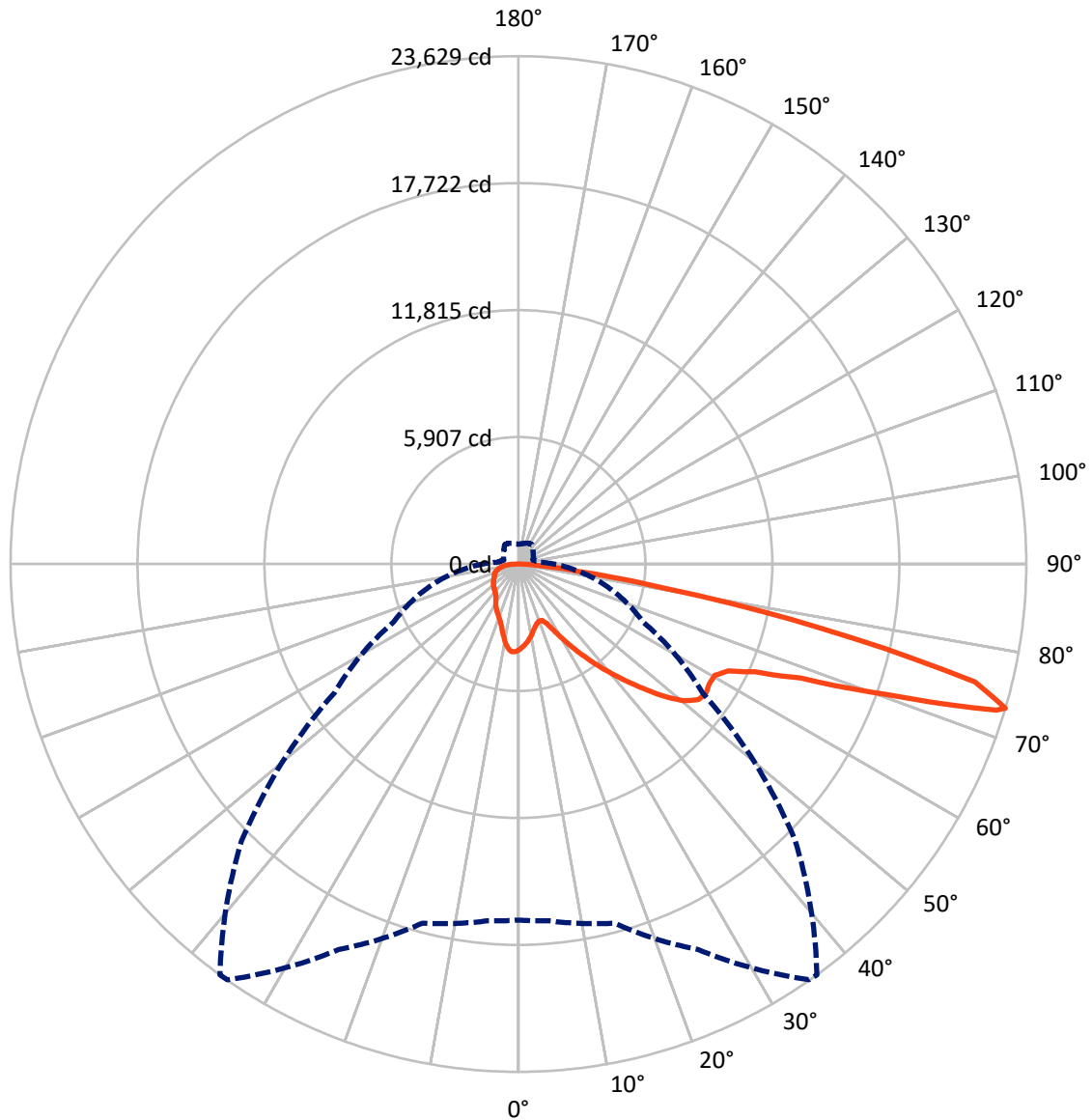
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.4 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
<b>House Side</b>	Lumens	5077.5	0.0	5077.5
	% Fixture	19.3	0.0	19.3
<b>Street Side</b>	Lumens	21253.7	0.0	21253.7
	% Fixture	80.7	0.0	80.7
<b>Total</b>	Lumens	26331.2	0.0	26331.2
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	362.3	1.4
10°-20°	909.8	3.5
20°-30°	1458.7	5.5
30°-40°	2412.8	9.2
40°-50°	3733.6	14.2
50°-60°	4998.1	19.0
60°-70°	6529.1	24.8
70°-80°	5333.1	20.3
80°-90°	593.6	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°	26331.2	100.0
0°-180°	26331.2	100.0

**Coefficient of Utilization**



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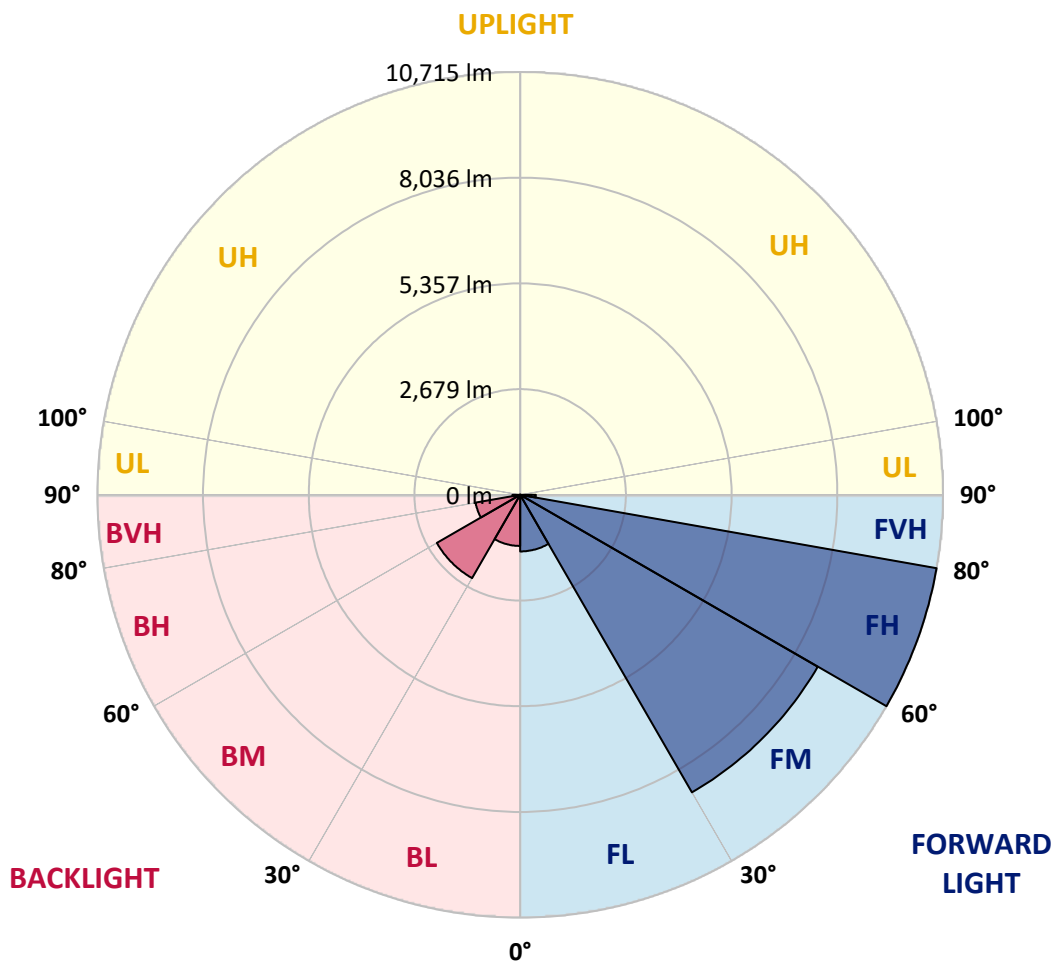
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1434.7	5.4			
FM (30°-60°)	8706.0	33.1			
FH (60°-80°)	10714.9	40.7			G4/12000
FVH (80°-90°)	398.1	1.5			G3/500
BL (0°-30°)	1296.1	4.9	B3/2500		
BM (30°-60°)	2438.5	9.3	B2/2500		
BH (60°-80°)	1147.4	4.4	B3/2500		G3/2500
BVH (80°-90°)	195.5	0.7			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G4**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	3988.5	3988.5	3988.5	3988.5	3988.5	3988.5	3988.5	3988.5	3988.5	3988.5	3988.5
2.5°	3836.1	3846.3	3847.9	3859.6	3859.6	3858.0	3862.9	3883.1	3893.1	3916.5	3936.6
5°	3647.1	3658.8	3663.8	3683.9	3709.0	3710.7	3729.1	3767.6	3804.4	3856.2	3899.7
7.5°	3434.7	3448.1	3461.3	3503.2	3540.0	3543.4	3578.5	3640.4	3688.9	3752.5	3831.1
10°	3228.9	3232.2	3245.5	3299.1	3347.7	3352.7	3402.9	3473.1	3538.3	3627.0	3715.7
12.5°	3059.8	3070.0	3066.6	3106.8	3148.6	3152.0	3218.8	3307.5	3402.9	3503.2	3608.6
15°	3001.3	2999.7	2964.5	2962.9	2981.2	2984.6	3049.8	3153.6	3260.7	3384.5	3520.0
17.5°	3041.5	3028.0	2936.1	2879.2	2867.5	2870.9	2919.4	3033.1	3146.9	3289.1	3451.4
20°	3262.4	3210.5	2994.7	2857.5	2819.1	2819.1	2847.4	2939.4	3064.8	3230.6	3434.7
22.5°	3785.9	3705.7	3245.5	3001.3	2865.9	2852.5	2830.6	2900.9	3039.9	3238.8	3503.2
25°	4445.2	4406.6	3705.7	3384.5	3105.1	3061.6	2917.7	2942.8	3091.6	3329.3	3690.6
27.5°	5055.8	4988.8	4309.6	3941.6	3546.8	3479.9	3175.2	3073.3	3215.6	3496.6	3961.6
30°	5412.1	5367.0	4930.3	4579.0	4108.8	4023.6	3586.9	3330.9	3436.3	3772.6	4346.4
32.5°	5800.3	5773.4	5552.7	5233.2	4717.8	4619.2	4118.9	3750.9	3774.3	4139.0	4809.9
35°	6176.7	6211.8	6086.3	5852.1	5373.7	5281.7	4833.3	4299.6	4190.9	4550.5	5305.0
37.5°	6628.5	6636.8	6558.2	6405.9	6062.9	5987.7	5617.9	4885.2	4644.1	4988.8	5783.6
40°	7530.1	7397.9	7090.1	6969.7	6765.6	6718.8	6297.1	5422.2	5065.8	5438.9	6235.2
42.5°	8505.5	8299.7	7817.9	7620.5	7538.4	7495.0	6862.6	5780.1	5460.6	5888.8	6678.5
45°	9291.8	9124.4	8652.7	8408.5	8418.5	8348.2	7356.1	6099.8	5888.8	6340.6	7173.8
47.5°	10066.3	9787.0	9258.3	9223.2	9340.2	9236.6	7827.9	6419.3	6335.7	6832.5	7669.0
50°	10116.6	9862.3	9648.2	9929.1	10129.9	10001.1	8256.2	6837.4	6799.0	7428.1	8308.1
52.5°	9506.0	9469.2	9795.4	10268.9	10601.7	10486.4	8605.9	7267.5	7272.5	8172.6	9085.9
55°	9283.4	9236.6	9628.0	10210.2	10660.2	10591.6	8866.8	7752.6	7797.7	9075.9	9920.8
57.5°	9658.1	9541.1	9618.1	10099.9	10523.1	10483.0	9137.9	8291.4	8373.3	10116.6	10692.0
60°	10821.0	10581.7	10173.5	10263.9	10528.1	10504.7	9525.9	8892.0	9029.1	11200.6	11180.6
62.5°	12562.4	12291.5	11459.9	11058.5	10999.9	10954.7	10166.7	9629.7	9698.3	11983.6	10896.3
65°	14473.0	14181.9	13193.1	12535.7	12191.1	12094.1	11200.6	10519.7	10089.9	11982.0	9788.7
67.5°	16617.8	16309.9	15324.5	14697.2	14324.2	14158.5	12878.7	11239.1	9962.7	10968.1	7833.0
70°	18814.5	18521.7	18069.9	18289.1	18453.2	18200.5	15522.1	11478.5	9049.2	8599.1	5259.8
72.5°	17648.5	17624.9	17967.9	20045.8	23206.0	23256.2	18162.0	10802.5	6991.4	5110.9	2803.9
73°	16566.0	16664.6	17300.4	19786.4	23612.6	23629.3	18213.9	10452.9	6419.3	4403.3	2462.7
75°	8582.4	9251.6	11610.6	16044.0	21864.2	21943.0	16055.6	7913.3	3826.2	2445.9	1659.6
77.5°	2298.8	2268.6	3740.8	7816.2	14576.7	14473.0	10145.0	3831.1	1833.6	1534.1	1164.5
80°	788.0	798.1	1273.2	2859.1	6804.0	7046.7	4403.3	1671.3	1206.2	1069.1	824.7
82.5°	401.5	414.8	665.9	1216.2	2845.7	2785.6	1417.0	983.7	808.0	649.1	461.8
85°	214.2	220.9	366.4	630.7	1043.9	1055.7	498.6	525.2	513.7	368.0	227.5
87.5°	105.5	108.8	175.7	277.8	386.5	373.1	174.0	227.5	252.7	207.5	125.5
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°	3988.5	3988.5	3988.5	3988.5	3988.5	3988.5	3988.5	3988.5	3988.5	3988.5	3988.5
2.5°	3961.6	3961.6	3983.4	4020.2	4047.0	4072.0	4088.7	4115.6	4130.5	4128.9	4127.3
5°	3934.8	3951.6	3995.1	4040.2	4070.4	4090.4	4090.4	4102.2	4102.2	4097.2	4090.4
7.5°	3873.0	3901.3	3964.9	4005.2	4013.4	3991.8	3948.3	3914.9	3873.0	3851.3	3842.9
10°	3774.3	3811.1	3891.4	3909.8	3866.2	3789.3	3683.9	3593.6	3513.4	3476.5	3464.8
12.5°	3677.2	3725.7	3801.1	3772.6	3668.9	3518.3	3356.0	3232.2	3141.9	3106.8	3095.0
15°	3597.0	3655.6	3714.0	3625.4	3444.7	3235.5	3056.6	2941.1	2872.5	2845.7	2839.1
17.5°	3543.4	3611.9	3632.0	3466.4	3215.6	2981.2	2822.4	2747.0	2717.0	2705.2	2701.9
20°	3546.8	3623.8	3575.2	3312.5	2994.7	2758.8	2653.4	2631.7	2631.7	2631.7	2630.0
22.5°	3638.8	3705.7	3551.8	3168.6	2782.2	2571.4	2526.3	2544.5	2558.1	2558.1	2556.3
25°	3829.5	3866.2	3568.4	3029.9	2583.0	2409.2	2410.8	2445.9	2457.7	2457.7	2454.3
27.5°	4120.5	4090.4	3598.6	2875.8	2387.3	2261.9	2285.3	2317.1	2325.4	2320.4	2318.7
30°	4485.2	4364.9	3623.8	2695.2	2203.4	2124.8	2144.8	2163.2	2156.6	2144.8	2143.0
32.5°	4893.4	4644.1	3608.6	2492.7	2041.0	1982.5	1994.1	2004.3	1994.1	1965.9	1965.9
35°	5298.4	4896.8	3526.7	2272.0	1912.2	1845.3	1843.6	1875.4	1873.8	1840.3	1842.0
37.5°	5653.0	5095.9	3367.7	2069.4	1801.8	1745.0	1751.7	1771.6	1781.8	1736.6	1731.6
40°	5962.5	5233.2	3143.6	1897.2	1713.2	1716.5	1698.1	1666.3	1654.6	1634.6	1631.1
42.5°	6253.6	5328.4	2905.9	1753.3	1668.0	1706.4	1644.5	1569.2	1537.4	1555.9	1567.6
45°	6539.8	5435.6	2676.8	1634.6	1611.1	1676.3	1591.0	1507.4	1470.5	1478.9	1490.6
47.5°	6889.5	5584.5	2400.7	1507.4	1524.2	1621.1	1557.5	1467.2	1412.0	1378.5	1368.5
50°	7349.5	5800.3	2042.7	1370.2	1432.1	1561.0	1529.2	1408.6	1348.4	1281.5	1264.8
52.5°	7924.9	6004.5	1681.4	1259.8	1356.8	1509.1	1482.3	1358.4	1284.8	1204.5	1191.2
55°	8498.8	6032.7	1370.2	1164.5	1271.6	1438.7	1425.4	1318.4	1214.6	1149.3	1135.9
57.5°	8900.2	5763.4	1161.1	1084.2	1189.4	1351.8	1373.5	1269.8	1155.9	1105.9	1097.5
60°	8907.1	5119.4	1033.9	1030.5	1127.6	1276.5	1320.0	1212.9	1119.2	1085.8	1079.0
62.5°	8199.3	4125.6	951.9	990.4	1082.4	1214.6	1279.8	1181.1	1110.8	1097.5	1090.8
65°	6872.7	3048.2	886.6	953.6	1040.5	1162.8	1246.4	1171.1	1107.5	1102.5	1097.5
67.5°	5074.2	2089.5	831.6	906.7	993.7	1109.1	1214.6	1155.9	1087.5	1107.5	1100.9
70°	3192.0	1395.2	779.5	853.2	931.8	1047.3	1172.7	1129.3	1062.3	1050.7	1028.9
72.5°	1801.8	1008.7	717.7	784.6	851.6	965.3	1115.9	1084.2	1005.5	958.6	936.9
73°	1627.8	955.3	702.7	768.0	833.2	948.6	1102.5	1070.7	988.8	936.9	916.8
75°	1191.2	781.3	634.1	699.3	756.3	871.6	1038.9	1003.8	915.2	853.2	839.8
77.5°	863.4	602.3	545.5	603.9	654.1	764.5	943.6	903.4	816.4	783.0	769.6
80°	622.3	456.7	451.7	508.6	552.1	664.1	841.5	799.8	716.0	814.8	793.1
82.5°	371.4	292.8	331.3	394.9	440.0	557.0	731.1	682.6	602.3	609.1	518.6
85°	177.3	165.6	205.8	259.3	291.1	381.4	609.1	570.6	481.9	394.9	386.5
87.5°	78.6	75.3	98.8	115.4	155.5	229.2	416.5	369.7	349.7	209.1	163.9
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)