

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: P196788

Luminaire Tested: **NAV-AF-06-D-UNV-T3-7030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196788
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-T3-7030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 28156.1 lumens
Efficiency: N/A
Efficacy: 113.1 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

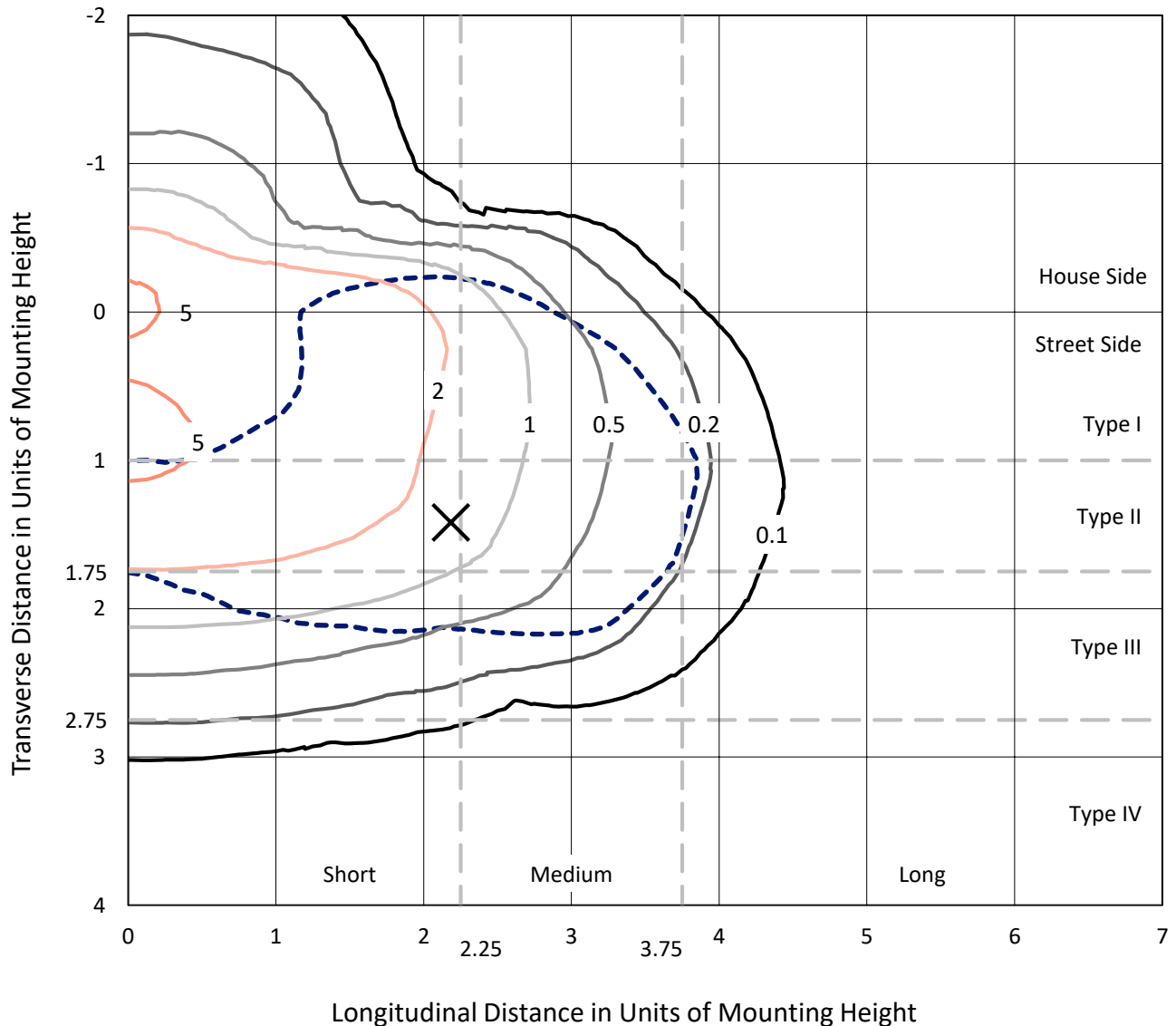
Input Watts (W): 249
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

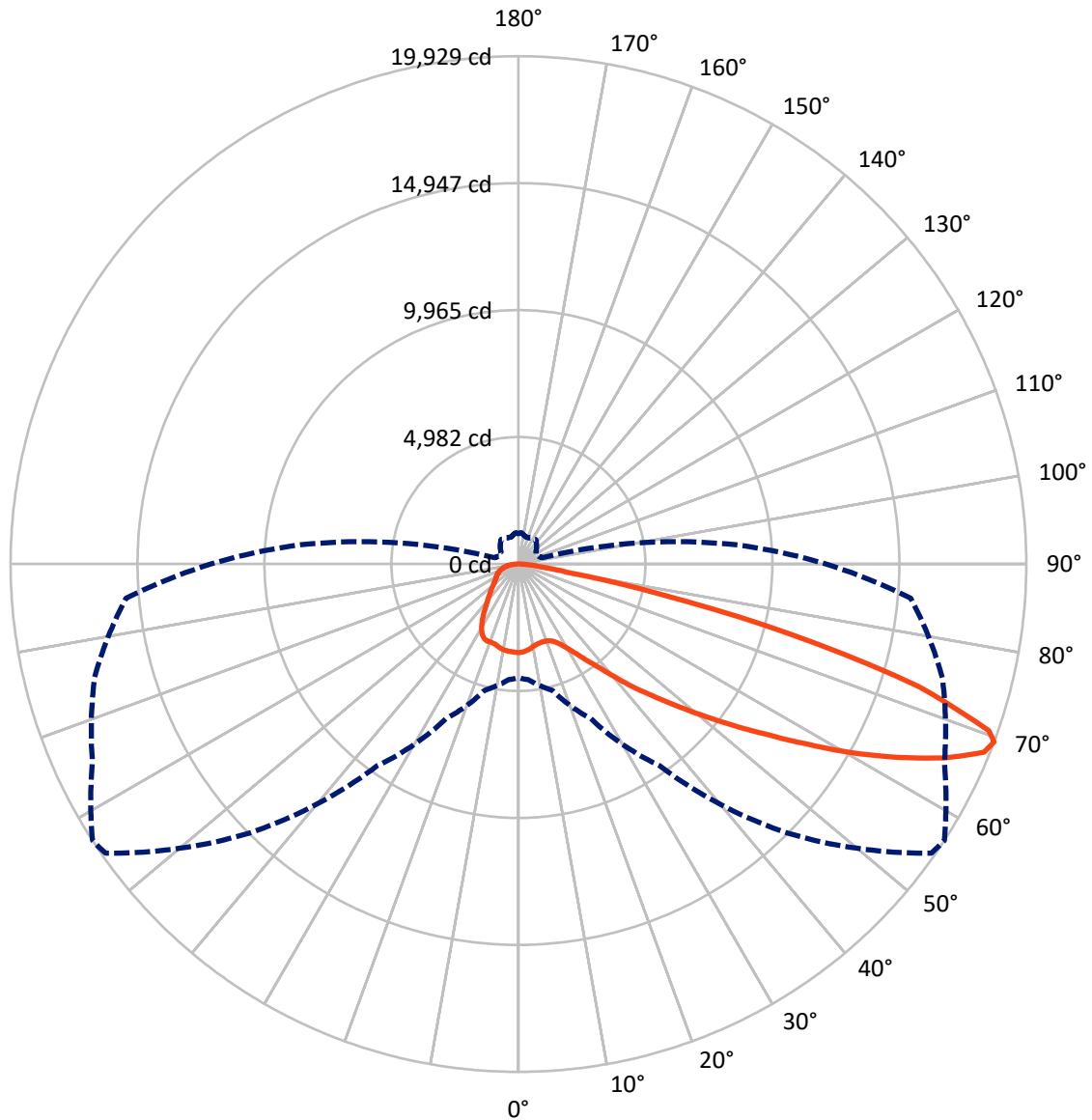
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.7 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	6213.1	0.0	6213.1
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	21943.1	0.0	21943.1
	% Fixture	77.9	0.0	77.9
Total	Lumens	28156.1	0.0	28156.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	325.7	1.2
10°-20°	926.1	3.3
20°-30°	1540.5	5.5
30°-40°	2515.5	8.9
40°-50°	4245.7	15.1
50°-60°	6604.3	23.5
60°-70°	7867.2	27.9
70°-80°	3665.0	13.0
80°-90°	466.2	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°	28156.1	100.0
0°-180°	28156.1	100.0



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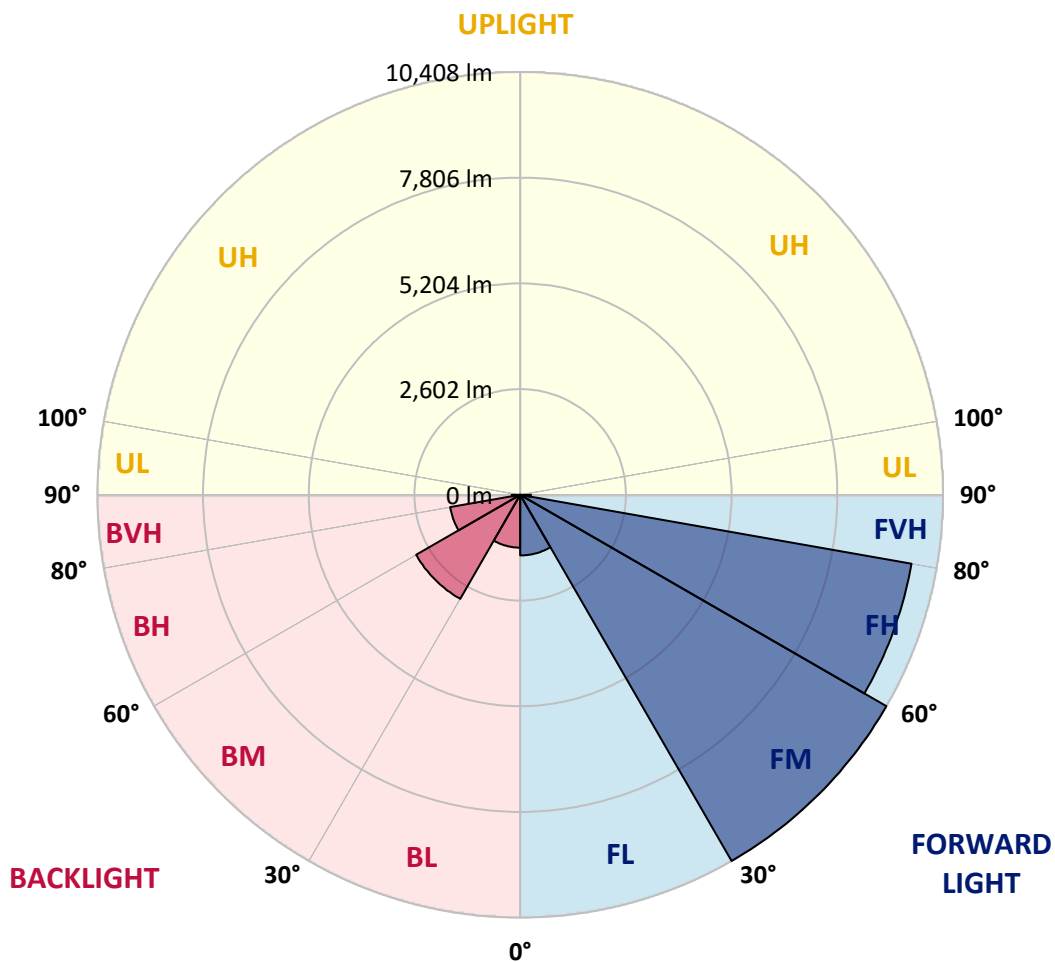
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1491.1	5.3			
FM	(30°-60°)	10408.5	37.0			
FH	(60°-80°)	9781.5	34.7			G4/12000
FVH	(80°-90°)	262.0	0.9			G3/500
BL	(0°-30°)	1301.1	4.6	B3/2500		
BM	(30°-60°)	2957.1	10.5	B3/5000		
BH	(60°-80°)	1750.8	6.2	B3/2500		G3/2500
BVH	(80°-90°)	204.1	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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	3479.0	3479.0	3479.0	3479.0	3479.0	3479.0	3479.0	3479.0	3479.0	3479.0	3479.0
2.5°	3459.1	3459.1	3468.1	3468.1	3468.1	3464.5	3453.6	3457.3	3450.1	3444.7	3435.6
5°	3388.7	3392.4	3403.2	3406.8	3412.2	3414.1	3414.1	3412.2	3414.1	3414.1	3408.7
7.5°	3291.6	3295.2	3307.8	3314.9	3331.2	3345.5	3352.7	3352.7	3361.8	3369.0	3370.7
10°	3232.0	3232.0	3239.2	3239.2	3251.9	3259.1	3282.4	3280.7	3305.9	3329.3	3340.2
12.5°	3224.8	3224.8	3221.2	3208.6	3201.4	3199.5	3223.0	3226.7	3264.4	3305.9	3325.8
15°	3248.3	3248.3	3237.5	3212.2	3185.1	3172.6	3196.0	3203.2	3244.7	3293.3	3324.0
17.5°	3324.0	3322.1	3298.7	3248.3	3201.4	3181.5	3188.7	3196.0	3233.8	3289.7	3327.6
20°	3491.6	3491.6	3441.1	3349.2	3268.1	3221.2	3210.4	3215.8	3242.9	3295.2	3343.8
22.5°	3785.4	3790.9	3700.7	3549.3	3410.4	3311.3	3268.1	3273.5	3286.1	3336.6	3390.7
25°	4218.1	4203.6	4075.6	3861.1	3644.8	3475.3	3387.0	3392.4	3392.4	3439.3	3495.2
27.5°	4675.9	4679.5	4495.6	4264.9	3980.1	3727.7	3587.1	3585.4	3583.4	3628.6	3688.0
30°	5193.2	5195.1	4982.3	4715.5	4389.3	4066.6	3855.6	3853.9	3837.6	3893.6	3971.0
32.5°	5759.2	5757.4	5510.5	5209.5	4847.1	4481.2	4207.2	4205.4	4192.9	4268.5	4362.1
35°	6386.5	6386.5	6141.4	5770.0	5378.9	4971.6	4654.2	4652.5	4659.7	4762.4	4850.7
37.5°	7141.8	7158.0	6862.3	6411.8	5984.5	5550.2	5180.6	5169.8	5115.7	5288.7	5434.8
40°	7929.5	7974.7	7668.2	7141.8	6680.3	6231.5	5824.1	5816.9	5770.0	5953.9	6190.1
42.5°	8782.1	8884.9	8544.2	8007.1	7504.2	7019.3	6610.0	6590.2	6409.9	6696.5	7066.2
45°	9899.8	9966.4	9472.6	8985.8	8511.8	7958.3	7471.7	7365.2	7185.0	7552.8	8032.3
47.5°	10660.4	10627.9	10319.7	9993.5	9688.8	9158.8	8410.8	8275.7	8055.6	8542.4	9070.4
50°	11132.7	11156.1	10983.1	10966.8	10950.6	10581.1	9470.7	9308.5	9054.4	9631.1	10247.7
52.5°	11444.5	11338.2	11368.9	11736.5	12181.8	12005.1	10669.3	10489.1	10227.8	10804.6	11500.4
55°	11314.8	11174.2	11457.2	12181.8	13229.1	13268.8	11985.3	11799.7	11576.1	12052.0	13007.4
57.5°	10777.6	10848.0	11294.9	12302.6	13944.6	14400.7	13497.7	13308.5	12868.5	13351.6	14438.6
60°	10022.3	10164.7	10848.0	12111.5	14445.8	15282.2	15157.9	15031.7	14274.6	14617.0	15941.9
62.5°	9211.1	9351.7	10191.7	11785.2	14220.5	16062.7	16787.3	16709.8	15826.5	15835.6	16895.6
65°	8012.4	8070.1	8928.1	10894.8	13595.0	16767.5	18418.7	18350.2	17310.1	16875.6	17162.2
67.5°	6051.3	6123.3	6828.1	8600.1	11691.5	16385.4	19722.0	19711.1	18202.4	17261.5	16527.7
69°	4468.6	4556.8	5131.9	6676.8	9667.1	14928.8	19783.2	19929.2	18443.9	17221.8	15455.3
70°	3269.9	3370.7	3902.5	5299.5	8052.1	13321.0	19258.7	19572.2	18352.0	16971.2	14618.9
72.5°	1389.8	1424.0	1685.5	2392.0	4084.6	8032.3	15774.3	16434.0	16574.6	15206.4	11421.1
75°	870.7	881.5	984.2	1227.5	1817.0	3322.1	10215.2	11114.6	12374.7	11797.9	7646.5
77.5°	656.1	665.2	724.6	845.4	1128.4	1240.2	4739.0	5651.1	7087.7	6939.9	3805.3
80°	502.9	508.3	547.9	614.7	795.0	777.0	1537.6	1932.4	2957.9	2610.1	1346.5
82.5°	394.8	396.6	430.8	443.5	555.1	522.7	771.5	859.9	1195.1	993.1	658.0
85°	349.7	355.1	389.4	324.5	355.1	315.4	423.6	459.7	634.5	598.4	248.8
87.5°	178.4	187.5	326.2	277.6	178.4	149.5	185.6	200.1	257.8	279.3	120.7
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°	3479.0	3479.0	3479.0	3479.0	3479.0	3479.0	3479.0	3479.0	3479.0	3479.0	3479.0
2.5°	3437.6	3439.3	3444.7	3453.6	3468.1	3486.1	3507.8	3529.4	3542.0	3551.0	3547.4
5°	3408.7	3410.4	3421.2	3437.6	3455.6	3482.5	3518.5	3545.7	3565.4	3578.1	3576.3
7.5°	3372.7	3378.0	3399.6	3417.6	3442.9	3464.5	3493.3	3518.5	3538.5	3551.0	3549.3
10°	3345.5	3351.0	3378.0	3401.5	3423.1	3426.7	3421.2	3414.1	3412.2	3421.2	3417.6
12.5°	3333.0	3343.8	3369.0	3385.2	3376.2	3341.9	3302.4	3286.1	3280.7	3298.7	3300.5
15°	3336.6	3345.5	3367.2	3356.3	3307.8	3250.0	3228.4	3241.0	3251.9	3262.7	3264.4
17.5°	3345.5	3351.0	3356.3	3316.8	3248.3	3210.4	3203.2	3190.6	3158.1	3140.1	3138.3
20°	3361.8	3369.0	3359.9	3296.9	3235.6	3185.1	3098.6	3021.1	2947.2	2907.5	2891.3
22.5°	3417.6	3423.1	3396.0	3334.7	3241.0	3077.0	2902.2	2768.7	2655.2	2594.0	2570.5
25°	3527.7	3536.6	3498.8	3421.2	3176.1	2889.5	2642.6	2462.2	2319.9	2246.1	2226.1
27.5°	3720.5	3729.6	3688.0	3486.1	3024.8	2638.9	2339.8	2161.2	2038.7	1975.6	1966.5
30°	4008.9	4021.5	3983.7	3484.4	2794.0	2319.9	2044.1	1939.6	1869.3	1826.0	1824.2
32.5°	4409.0	4455.9	4300.9	3423.1	2509.1	1997.3	1820.6	1784.5	1750.4	1721.5	1721.5
35°	4917.4	5027.3	4614.6	3295.2	2195.6	1777.3	1696.2	1662.0	1618.6	1588.1	1584.5
37.5°	5524.9	5696.1	4838.1	3068.0	1925.1	1671.0	1620.6	1564.6	1496.1	1436.6	1422.2
40°	6359.4	6399.1	4948.1	2698.4	1723.2	1613.3	1550.2	1479.9	1393.4	1326.7	1319.6
42.5°	7197.7	7067.9	4926.4	2301.9	1607.9	1561.0	1478.1	1400.6	1323.1	1267.2	1267.2
45°	8151.2	7651.9	4762.4	1903.6	1503.3	1501.5	1411.4	1337.6	1278.0	1236.6	1227.5
47.5°	9063.3	8176.4	4479.4	1609.7	1395.2	1442.0	1368.2	1308.7	1254.7	1215.0	1207.8
50°	10170.1	8783.9	4178.4	1404.2	1290.7	1389.8	1350.1	1319.6	1267.2	1198.7	1191.5
52.5°	11269.6	9494.2	3945.8	1249.2	1198.7	1348.4	1361.0	1364.5	1315.9	1182.5	1173.5
55°	12450.3	10253.0	3700.7	1128.4	1122.9	1328.5	1386.2	1382.5	1359.1	1186.1	1171.7
57.5°	13573.4	11015.5	3334.7	1043.7	1063.5	1308.7	1391.6	1333.9	1292.4	1204.1	1180.6
60°	14503.5	11646.4	2797.6	984.2	1013.1	1269.0	1355.6	1269.0	1198.7	1200.5	1178.9
62.5°	14956.0	11823.1	2139.7	915.7	971.6	1204.1	1303.3	1220.3	1155.4	1207.8	1195.1
65°	14611.7	11320.2	1524.9	852.7	921.2	1128.4	1272.7	1178.9	1133.8	1243.8	1229.3
67.5°	13375.1	9950.2	1106.8	796.7	872.4	1050.8	1215.0	1141.0	1112.1	1270.8	1238.4
69°	12061.0	8591.0	959.0	764.3	838.2	1009.4	1177.0	1121.2	1096.0	1233.0	1186.1
70°	10968.6	7543.8	885.1	744.5	809.4	985.9	1148.2	1108.6	1079.7	1187.8	1132.0
72.5°	7864.6	4875.9	744.5	684.9	733.6	933.7	1085.2	1061.7	1018.4	1072.5	1036.5
75°	4751.5	2545.2	632.7	623.7	654.4	861.6	1011.2	982.4	939.2	944.5	926.5
77.5°	2182.9	1175.3	529.9	551.5	571.4	771.5	921.2	888.8	849.1	834.6	836.4
80°	957.1	686.8	443.5	470.5	481.3	694.1	823.9	787.8	744.5	821.9	762.5
82.5°	517.4	398.4	346.2	364.2	394.8	603.8	715.6	668.7	627.2	730.1	589.5
85°	209.1	203.7	234.4	252.4	274.0	434.5	598.4	549.8	499.4	447.1	436.3
87.5°	90.1	97.4	115.4	122.6	146.0	270.4	402.0	351.5	353.4	302.8	297.4
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)