

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: P270629

Luminaire Tested: **NAV-AF-05-D-UNV-T3R-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270629
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24250)
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-T3R-7027
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 2700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 26572.6 lumens
Efficiency: N/A
Efficacy: 95.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - Full Cutoff
BUG Rating: B3 - U0 - G4

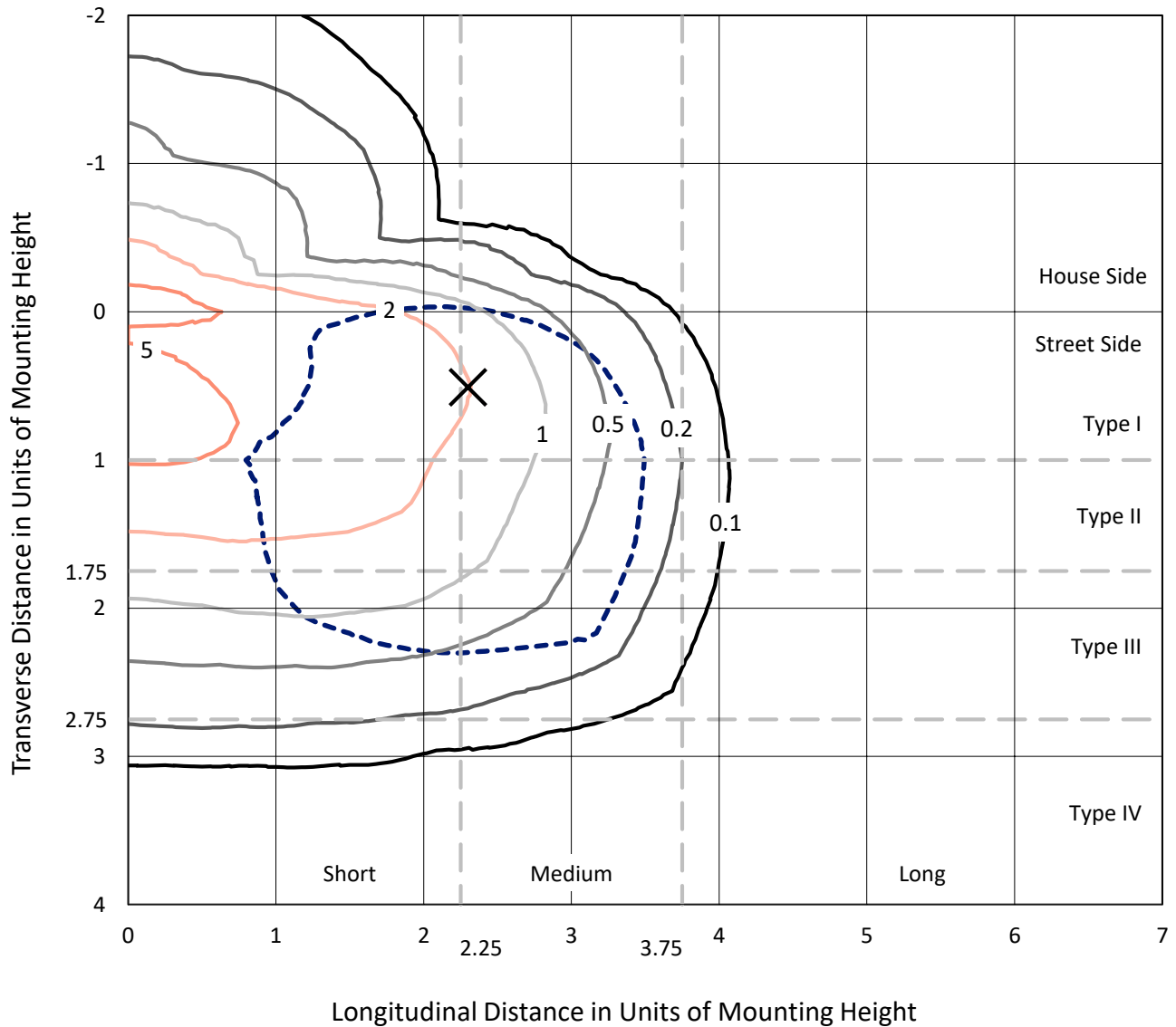
Input Watts (W): 279
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

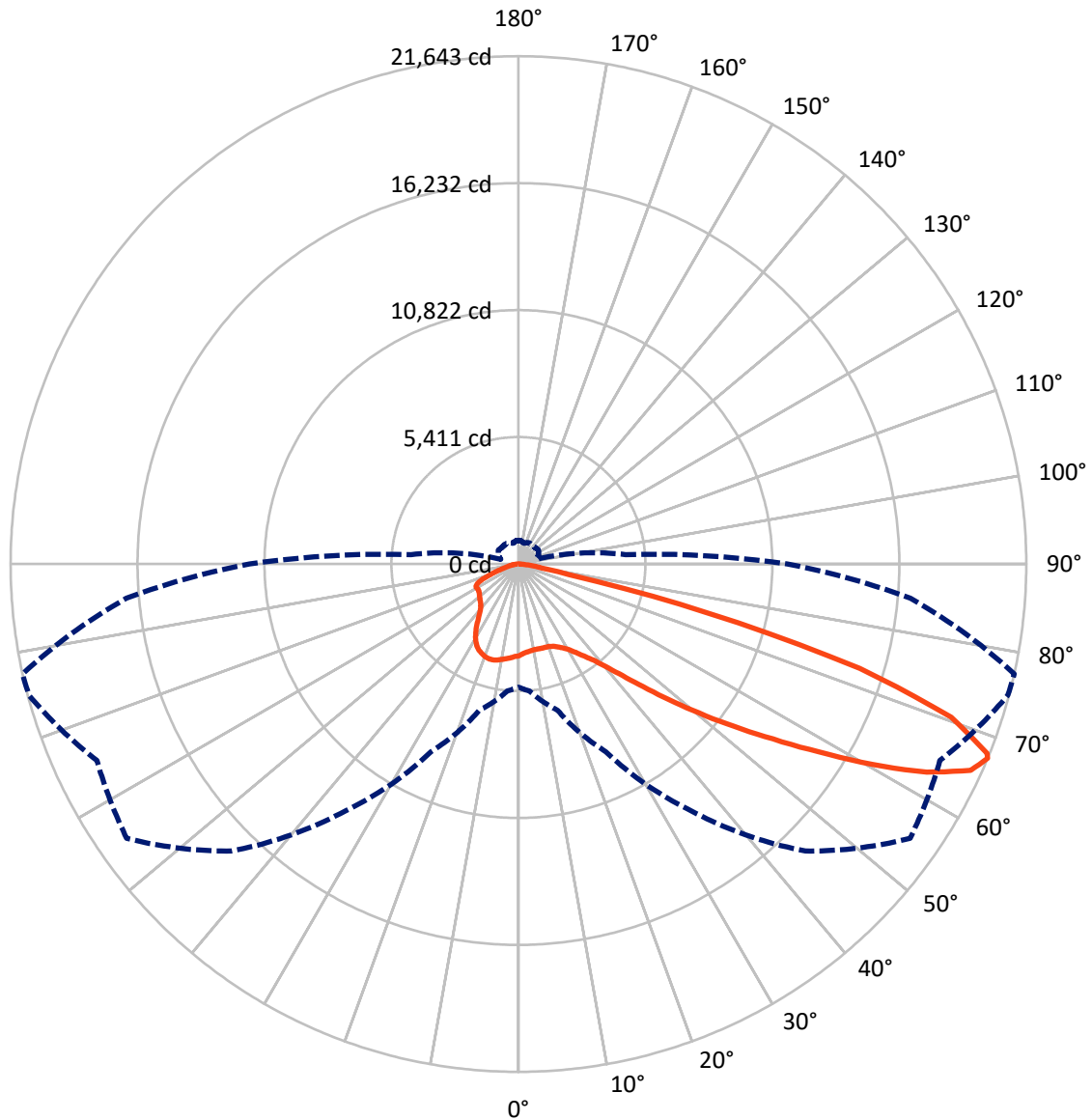
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.5 fc
 Type III - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4566.5	0.0	4566.5
	% Fixture	17.2	0.0	17.2
Street Side	Lumens	22006.1	0.0	22006.1
	% Fixture	82.8	0.0	82.8
Total	Lumens	26572.6	0.0	26572.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	348.3	1.3
10°-20°	964.6	3.6
20°-30°	1638.9	6.2
30°-40°	2621.9	9.9
40°-50°	4036.5	15.2
50°-60°	5600.2	21.1
60°-70°	7470.3	28.1
70°-80°	3555.1	13.4
80°-90°	336.6	1.3
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°	26572.6	100.0
0°-180°	26572.6	100.0



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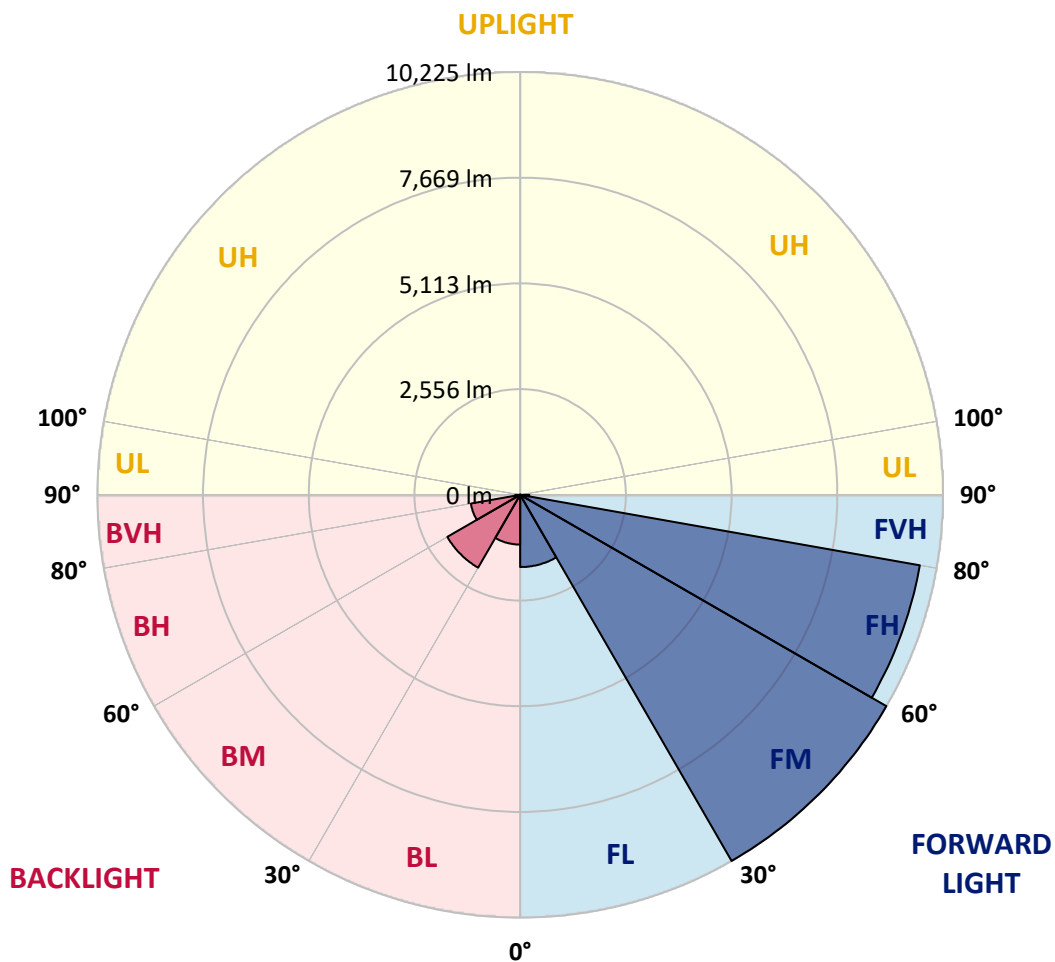
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1747.4	6.6			
FM	(30°-60°)	10225.4	38.5			
FH	(60°-80°)	9814.7	36.9			G4/12000
FVH	(80°-90°)	218.6	0.8			G2/225
BL	(0°-30°)	1204.5	4.5	B3/2500		
BM	(30°-60°)	2033.3	7.7	B2/2500		
BH	(60°-80°)	1210.8	4.6	B3/2500		G3/2500
BVH	(80°-90°)	118.0	0.4			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 Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	3910.9	3910.9	3910.9	3910.9	3910.9	3910.9	3910.9	3910.9	3910.9	3910.9	3910.9
2.5°	3506.8	3523.2	3524.8	3572.4	3593.8	3647.9	3707.1	3759.6	3805.7	3822.1	3851.7
5°	3155.2	3155.2	3160.1	3191.4	3252.1	3339.2	3462.3	3597.1	3738.3	3772.8	3859.8
7.5°	2971.2	2974.6	2977.8	3009.1	3056.8	3133.8	3257.1	3441.0	3676.0	3733.4	3886.2
10°	2987.8	2982.8	2966.4	2959.7	2979.5	3028.7	3135.5	3324.4	3623.4	3712.1	3933.8
12.5°	3245.5	3235.8	3181.5	3102.7	3030.4	3012.3	3086.2	3265.2	3598.7	3712.1	4014.3
15°	3687.5	3694.0	3587.2	3423.0	3234.1	3106.0	3096.1	3243.9	3590.5	3721.9	4107.9
17.5°	4262.3	4265.6	4117.7	3879.6	3565.8	3301.5	3163.4	3243.9	3590.5	3731.7	4198.1
20°	4873.2	4850.3	4682.8	4383.8	3976.4	3572.4	3286.7	3263.6	3600.3	3746.6	4283.7
22.5°	5397.2	5375.8	5200.2	4886.4	4420.0	3892.7	3452.5	3329.4	3654.6	3807.3	4403.5
25°	5855.5	5868.6	5697.8	5344.6	4861.7	4254.1	3700.6	3480.5	3767.9	3917.4	4551.4
27.5°	6412.3	6387.7	6190.6	5853.9	5316.8	4628.5	4011.0	3671.1	3902.5	4050.4	4732.0
30°	7056.1	7044.7	6778.6	6432.0	5817.8	5047.3	4318.2	3876.2	4078.3	4232.8	4958.7
32.5°	7838.0	7836.4	7550.6	7125.1	6381.1	5520.4	4681.1	4157.1	4334.5	4490.5	5259.2
35°	8723.4	8721.6	8426.0	7864.3	7029.9	6044.3	5108.2	4498.8	4651.6	4815.9	5617.3
37.5°	9337.6	9327.8	9173.3	8628.0	7747.7	6653.7	5642.0	4958.7	5011.3	5195.3	6049.4
40°	9455.9	9514.9	9648.1	9326.2	8531.2	7330.4	6177.5	5453.2	5502.4	5738.9	6593.0
42.5°	9327.8	9405.0	9846.9	9937.1	9314.6	8150.1	6847.6	6137.9	6200.5	6494.4	7232.0
45°	9216.2	9283.4	9836.9	10275.5	10088.2	9043.5	7683.7	6974.0	7092.3	7456.9	7961.1
47.5°	9025.5	9088.0	9643.1	10336.3	10530.0	9904.3	8690.5	7979.3	8182.9	8624.7	8792.3
50°	9015.7	9043.5	9378.7	10132.6	10682.9	10558.0	9805.7	9155.3	9467.3	9976.5	9712.1
52.5°	8766.0	8961.5	9265.4	9807.3	10686.1	10939.0	10904.5	10444.7	10925.9	11489.3	10720.6
55°	7238.5	7463.5	8887.7	9648.1	10666.4	11266.0	11908.1	11816.1	12568.5	13161.3	11850.6
57.5°	6758.8	6854.2	7797.0	9695.6	10830.7	11806.3	12911.7	13289.4	14447.4	15094.6	13205.8
60°	6627.4	6727.6	7578.6	9718.7	11275.7	12790.2	14273.3	14953.4	16656.6	17343.1	14744.7
62.5°	6481.4	6611.0	7594.9	9740.1	12057.6	14245.4	16080.1	16758.4	18925.0	19537.5	16186.9
65°	6054.2	6226.7	7291.1	9605.3	12913.3	16071.8	18468.3	18640.6	20798.9	21188.2	17057.3
67°	5244.6	5433.4	6456.7	8826.7	12834.5	17302.2	20378.5	19818.3	21595.7	21643.3	16774.9
67.5°	4988.3	5183.7	6174.2	8503.3	12609.5	17463.1	20716.8	19981.0	21589.1	21536.4	16512.0
70°	3358.9	3578.9	4372.3	6243.1	10114.6	16252.6	20634.7	19480.0	20173.1	19570.4	14186.3
72.5°	1667.2	1673.7	2181.3	3419.7	6128.1	11656.9	17213.4	16664.7	16352.7	15214.5	10410.2
75°	803.2	817.9	1029.8	1511.0	2583.6	6018.1	11739.0	11244.5	9574.1	8289.6	5210.0
77.5°	612.6	627.5	799.9	983.9	1077.4	1962.7	5814.5	4699.3	2774.1	2215.7	1468.4
80°	473.0	501.0	675.0	755.6	712.9	786.7	1828.1	1438.8	1079.1	990.4	727.6
82.5°	369.6	386.0	573.2	573.2	492.7	527.2	850.9	831.1	670.1	604.4	390.9
85°	261.1	294.0	461.5	427.1	323.6	326.9	509.2	487.8	344.9	277.5	152.7
87.5°	116.6	149.5	328.5	279.3	172.5	133.0	208.5	179.0	136.4	105.1	70.6
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°	3910.9	3910.9	3910.9	3910.9	3910.9	3910.9	3910.9	3910.9	3910.9	3910.9	3910.9
2.5°	3884.5	3910.9	3951.9	3976.4	4009.3	4022.5	4035.6	4058.6	4076.7	4071.7	4063.6
5°	3920.7	3964.9	4016.0	4032.3	4032.3	4016.0	4006.0	4007.7	4002.8	3999.4	3989.6
7.5°	3973.3	4034.0	4070.1	4053.7	4002.8	3938.7	3878.0	3841.8	3807.3	3785.9	3792.6
10°	4047.1	4114.4	4116.2	4043.8	3922.3	3782.7	3662.7	3585.6	3511.7	3478.9	3488.7
12.5°	4153.9	4221.2	4163.7	4007.7	3794.3	3575.8	3355.6	3196.3	3053.3	3018.9	3009.1
15°	4268.8	4321.4	4193.3	3930.5	3610.2	3250.4	2881.0	2642.8	2483.5	2455.5	2445.6
17.5°	4369.0	4398.6	4178.6	3792.6	3319.4	2752.9	2322.5	2161.5	2128.7	2145.2	2145.2
20°	4457.7	4447.9	4114.4	3578.9	2861.2	2200.9	1951.3	1949.6	1994.0	2035.1	2038.3
22.5°	4569.5	4492.2	4012.5	3262.0	2314.3	1836.3	1793.6	1836.3	1885.6	1931.5	1936.4
25°	4702.4	4541.6	3876.2	2810.3	1861.0	1667.2	1685.2	1721.3	1752.6	1788.6	1790.3
27.5°	4835.5	4579.3	3684.0	2279.8	1614.6	1558.6	1578.4	1593.2	1601.5	1624.5	1624.5
30°	4989.9	4608.8	3406.6	1826.4	1501.2	1463.5	1452.0	1445.5	1452.0	1483.2	1484.8
32.5°	5183.7	4661.5	3027.1	1567.0	1448.6	1396.1	1336.9	1304.2	1327.2	1383.0	1392.8
35°	5403.8	4723.8	2572.1	1463.5	1430.6	1363.3	1254.8	1204.0	1212.2	1263.0	1271.3
37.5°	5679.8	4804.3	2123.8	1438.8	1448.6	1360.0	1217.2	1144.8	1108.7	1110.3	1108.7
40°	6032.8	4884.9	1768.9	1445.5	1488.1	1368.2	1199.0	1085.7	1010.1	1013.4	1019.9
42.5°	6402.5	4937.4	1543.9	1465.1	1535.7	1379.6	1192.5	1028.2	962.5	1018.4	1069.3
45°	6834.5	4922.6	1427.3	1483.2	1571.9	1384.6	1167.8	1021.6	967.5	1135.0	1230.1
47.5°	7330.4	4858.6	1361.7	1491.4	1581.7	1383.0	1149.7	1043.0	1008.4	1299.2	1407.6
50°	7869.2	4758.3	1309.1	1478.3	1576.9	1376.5	1169.5	1069.3	1025.0	1335.3	1419.1
52.5°	8458.9	4666.3	1254.8	1448.6	1552.1	1356.7	1194.0	1057.8	979.0	1230.1	1294.3
55°	9157.0	4645.0	1194.0	1397.8	1511.0	1335.3	1180.9	1021.6	927.9	1090.6	1130.1
57.5°	9955.1	4778.1	1115.2	1335.3	1455.3	1292.7	1149.7	1001.9	910.0	992.1	1013.4
60°	10968.7	5072.0	1031.6	1269.7	1386.3	1228.6	1121.9	1006.8	914.8	977.3	982.1
62.5°	11760.3	5336.6	955.9	1189.1	1294.3	1151.4	1092.2	1011.9	929.7	996.9	988.8
65°	12047.8	5206.8	862.4	1069.3	1164.6	1066.0	1051.1	1015.1	929.7	1008.4	990.4
67°	11458.2	4587.6	773.6	949.4	1041.3	990.4	1011.9	1001.9	913.2	1006.8	975.6
67.5°	11177.3	4369.0	750.7	929.7	1008.4	967.5	1001.9	995.3	908.2	1003.5	967.5
70°	9217.7	3133.8	634.1	780.2	844.2	852.4	941.2	952.7	868.9	942.9	877.0
72.5°	6558.4	1961.1	547.0	604.4	681.6	729.2	859.0	895.3	816.3	819.7	765.4
75°	3245.5	1052.9	487.8	466.5	530.4	607.8	748.9	816.3	739.1	683.3	665.3
77.5°	1095.6	596.3	412.2	376.1	412.2	487.8	620.9	712.9	652.1	578.1	566.7
80°	566.7	433.6	322.0	302.2	325.2	377.7	486.3	592.9	556.8	560.2	461.5
82.5°	353.2	264.5	231.7	230.0	246.3	289.1	358.1	481.2	478.0	409.0	297.2
85°	164.2	152.7	147.9	152.7	157.7	164.2	233.2	343.3	362.9	220.1	195.4
87.5°	69.0	67.4	59.1	64.0	70.6	69.0	93.7	146.2	203.6	138.0	126.5
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)