

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: P196793

Luminaire Tested: **NAV-AF-05-D-UNV-T3-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196793
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-05-D-UNV-T3-7030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 29090.3 lumens
Efficiency: N/A
Efficacy: 104.3 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

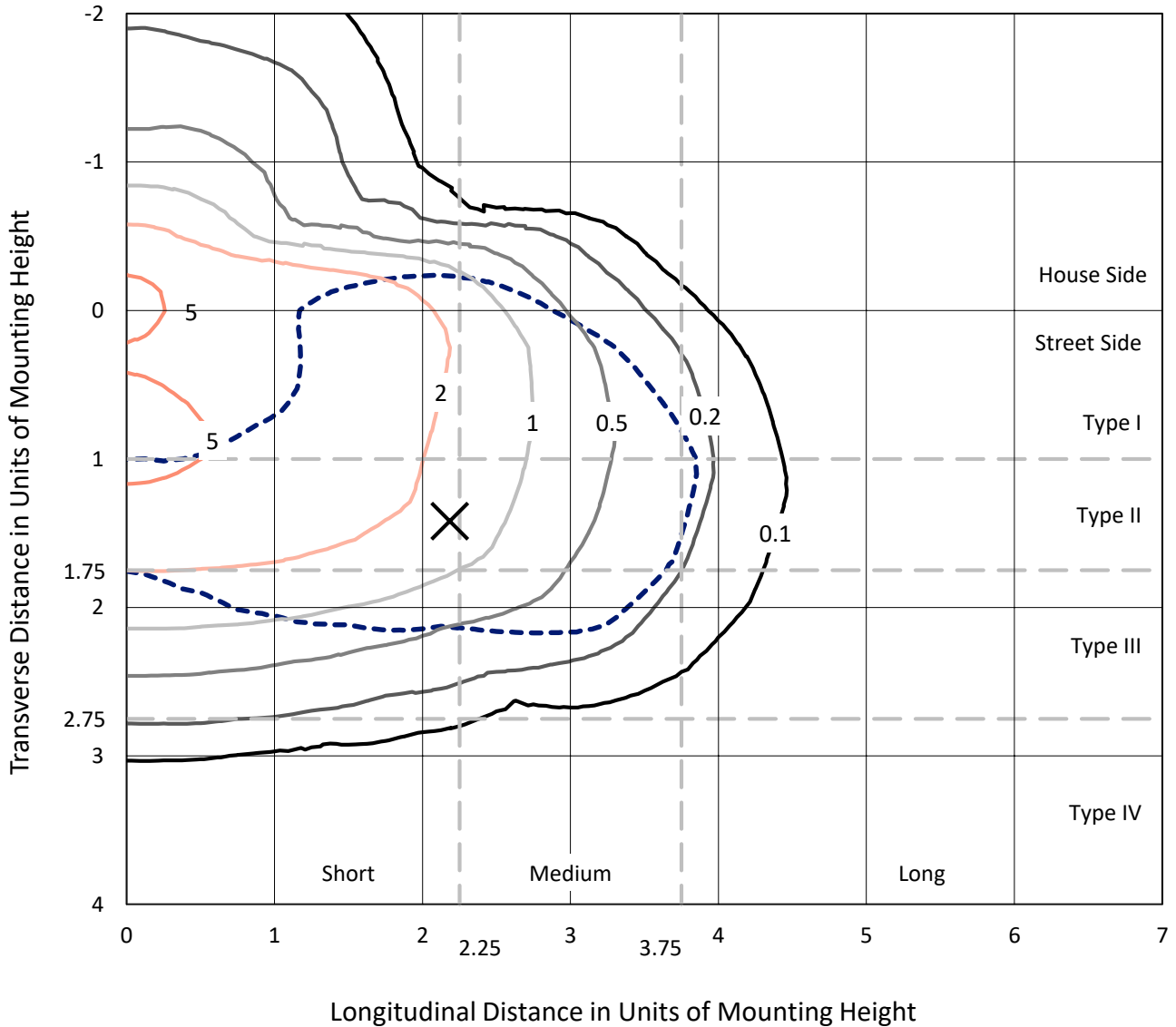
Input Watts (W): 279
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

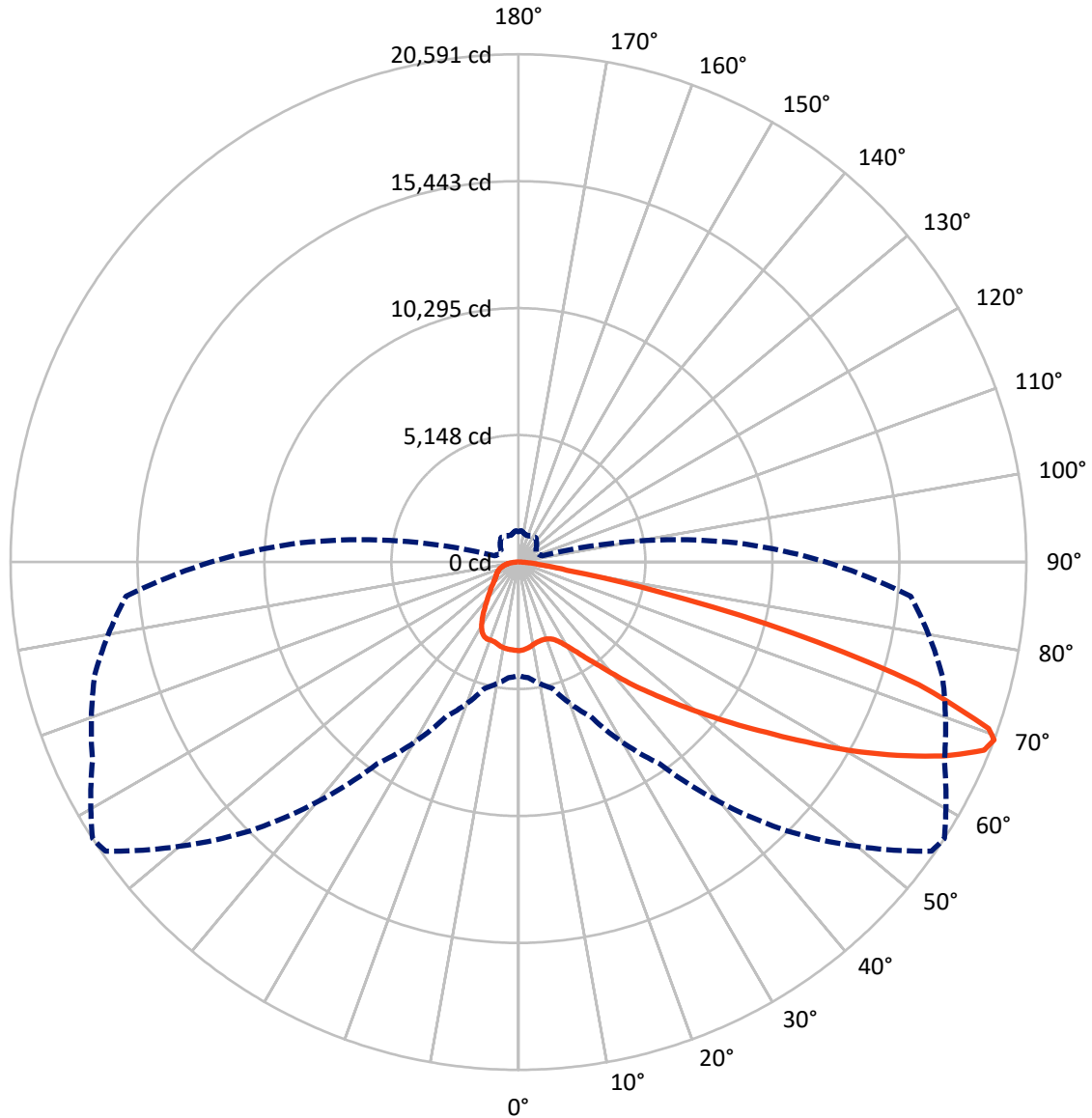
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.9 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	6419.2	0.0	6419.2
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	22671.1	0.0	22671.1
	% Fixture	77.9	0.0	77.9
Total	Lumens	29090.3	0.0	29090.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	336.5	1.2
10°-20°	956.8	3.3
20°-30°	1591.6	5.5
30°-40°	2599.0	8.9
40°-50°	4386.5	15.1
50°-60°	6823.4	23.5
60°-70°	8128.2	27.9
70°-80°	3786.6	13.0
80°-90°	481.6	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°	29090.3	100.0
0°-180°	29090.3	100.0



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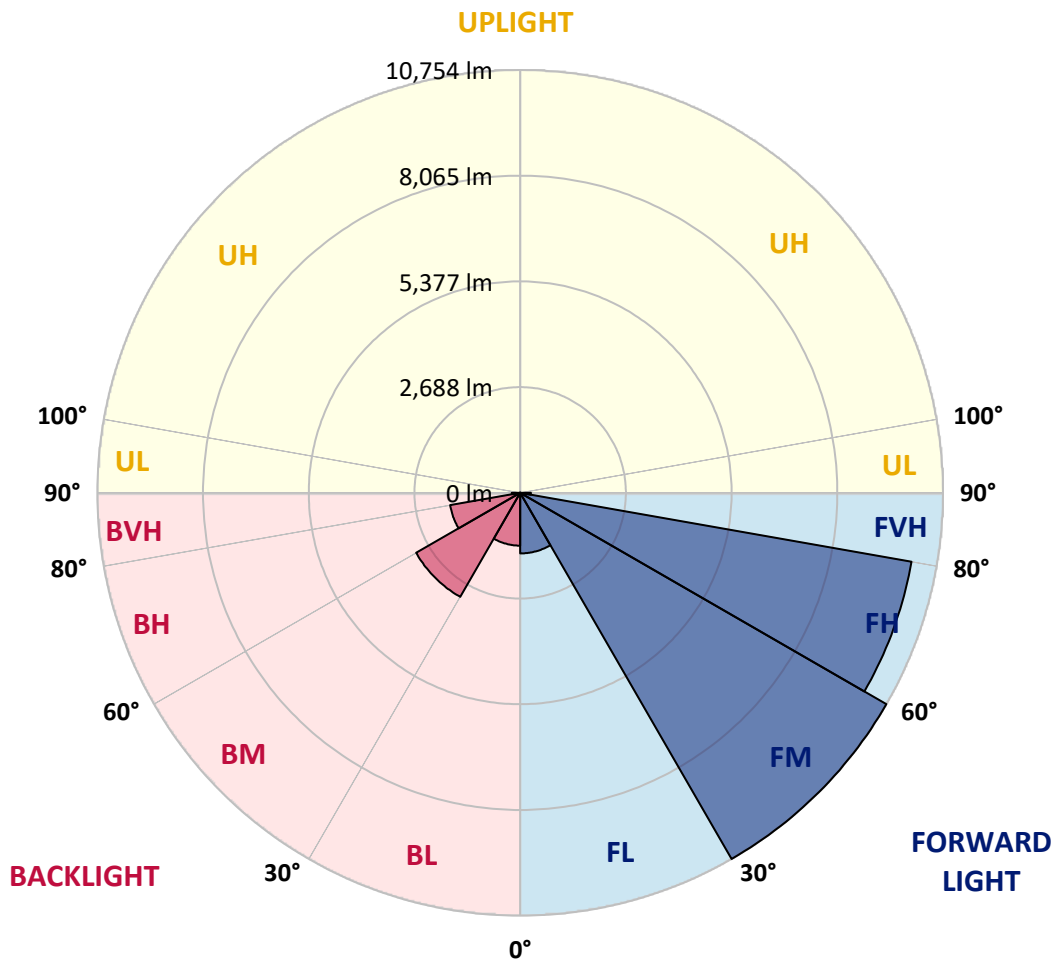
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1540.6	5.3			
FM	(30°-60°)	10753.8	37.0			
FH	(60°-80°)	10106.0	34.7			G4/12000
FVH	(80°-90°)	270.7	0.9			G3/500
BL	(0°-30°)	1344.3	4.6	B3/2500		
BM	(30°-60°)	3055.2	10.5	B3/5000		
BH	(60°-80°)	1808.8	6.2	B3/2500		G3/2500
BVH	(80°-90°)	210.9	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°	3594.4	3594.4	3594.4	3594.4	3594.4	3594.4	3594.4	3594.4	3594.4	3594.4	3594.4
2.5°	3573.9	3573.9	3583.2	3583.2	3583.2	3579.5	3568.3	3572.0	3564.6	3559.0	3549.8
5°	3501.3	3505.0	3516.2	3519.9	3525.5	3527.3	3527.3	3525.5	3527.3	3527.3	3521.8
7.5°	3400.7	3404.4	3417.4	3425.0	3441.6	3456.5	3464.1	3464.1	3473.4	3480.8	3482.6
10°	3339.3	3339.3	3346.7	3346.7	3359.7	3367.2	3391.4	3389.6	3415.6	3439.8	3451.0
12.5°	3331.8	3331.8	3328.0	3315.0	3307.6	3305.7	3329.9	3333.6	3372.8	3415.6	3436.1
15°	3356.0	3356.0	3344.9	3318.7	3290.8	3277.8	3302.1	3309.5	3352.3	3402.6	3434.2
17.5°	3434.2	3432.4	3408.2	3356.0	3307.6	3287.1	3294.5	3302.1	3341.1	3398.8	3438.0
20°	3607.4	3607.4	3555.3	3460.3	3376.4	3328.0	3316.9	3322.5	3350.4	3404.4	3454.7
22.5°	3911.1	3916.6	3823.4	3667.1	3523.6	3421.2	3376.4	3382.1	3395.1	3447.2	3503.2
25°	4358.0	4343.0	4210.9	3989.2	3765.7	3590.7	3499.3	3505.0	3505.0	3553.4	3611.1
27.5°	4831.0	4834.7	4644.7	4406.4	4112.1	3851.4	3706.2	3704.2	3702.4	3749.0	3810.4
30°	5365.5	5367.4	5147.6	4872.0	4535.0	4201.6	3983.6	3981.7	3965.0	4022.7	4102.8
32.5°	5950.3	5948.4	5693.3	5382.2	5007.9	4629.9	4346.8	4344.9	4331.9	4410.1	4507.0
35°	6598.3	6598.3	6345.1	5961.5	5557.4	5136.4	4808.6	4806.8	4814.3	4920.4	5011.6
37.5°	7378.8	7395.5	7090.1	6624.5	6183.1	5734.3	5352.5	5341.2	5285.4	5464.2	5615.1
40°	8192.6	8239.1	7922.5	7378.8	6902.0	6438.2	6017.4	6010.0	5961.5	6151.4	6395.4
42.5°	9073.6	9179.6	8827.7	8272.7	7753.0	7252.1	6829.4	6808.8	6622.6	6918.8	7300.4
45°	10228.2	10297.0	9786.8	9284.0	8794.2	8222.5	7719.6	7609.7	7423.4	7803.4	8298.8
47.5°	11014.1	10980.5	10662.1	10325.0	10010.3	9462.7	8689.8	8550.2	8323.0	8825.9	9371.5
50°	11502.0	11526.2	11347.4	11330.7	11313.9	10932.2	9784.9	9617.3	9354.7	9950.7	10587.7
52.5°	11824.2	11714.3	11746.0	12125.9	12585.9	12403.4	11023.3	10837.2	10567.1	11163.1	11882.0
55°	11690.2	11544.9	11837.2	12585.9	13668.0	13709.0	12382.9	12191.1	11960.2	12451.8	13438.9
57.5°	11135.1	11207.9	11669.7	12710.6	14407.4	14878.5	13945.6	13750.0	13295.5	13794.6	14917.6
60°	10354.8	10501.9	11207.9	12513.4	14925.2	15789.3	15660.6	15530.3	14748.2	15102.1	16470.9
62.5°	9516.7	9662.1	10529.9	12176.2	14692.3	16595.6	17344.4	17264.3	16351.6	16361.0	17456.1
65°	8278.2	8337.9	9224.3	11256.2	14046.1	17323.8	19029.8	18959.0	17884.4	17435.6	17731.6
67.5°	6252.1	6326.5	7054.7	8885.4	12079.3	16928.9	20376.3	20365.1	18806.2	17834.2	17076.1
69°	4616.9	4708.1	5302.2	6898.2	9987.9	15424.2	20439.5	20590.5	19055.8	17793.2	15968.0
70°	3378.4	3482.6	4032.0	5475.4	8319.2	13763.0	19897.6	20221.7	18960.9	17534.3	15103.9
72.5°	1435.8	1471.2	1741.4	2471.3	4220.1	8298.8	16297.6	16979.3	17124.5	15711.1	11800.0
75°	899.5	910.6	1016.8	1268.3	1877.3	3432.4	10554.1	11483.3	12785.2	12189.3	7900.2
77.5°	678.0	687.2	748.7	873.4	1165.8	1281.3	4896.2	5838.6	7322.9	7170.1	3931.4
80°	519.6	525.2	566.2	635.2	821.3	802.7	1588.6	1996.5	3056.2	2696.7	1391.2
82.5°	407.9	409.7	445.1	458.2	573.6	540.1	797.0	888.4	1234.7	1026.2	679.8
85°	361.3	366.9	402.3	335.2	366.9	325.9	437.7	474.9	655.5	618.3	257.0
87.5°	184.4	193.7	337.1	286.8	184.4	154.6	191.9	206.7	266.4	288.7	124.8
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°	3594.4	3594.4	3594.4	3594.4	3594.4	3594.4	3594.4	3594.4	3594.4	3594.4	3594.4
2.5°	3551.6	3553.4	3559.0	3568.3	3583.2	3601.8	3624.2	3646.5	3659.5	3668.9	3665.2
5°	3521.8	3523.6	3534.7	3551.6	3570.1	3598.1	3635.4	3663.3	3683.7	3696.8	3694.9
7.5°	3484.5	3490.1	3512.4	3531.0	3557.2	3579.5	3609.3	3635.4	3655.9	3668.9	3667.1
10°	3456.5	3462.2	3490.1	3514.4	3536.6	3540.3	3534.7	3527.3	3525.5	3534.7	3531.0
12.5°	3443.6	3454.7	3480.8	3497.5	3488.2	3452.8	3411.8	3395.1	3389.6	3408.2	3410.0
15°	3447.2	3456.5	3479.0	3467.8	3417.4	3357.9	3335.4	3348.6	3359.7	3370.8	3372.8
17.5°	3456.5	3462.2	3467.8	3426.8	3356.0	3316.9	3309.5	3296.5	3262.9	3244.2	3242.4
20°	3473.4	3480.8	3471.5	3406.2	3343.0	3290.8	3201.4	3121.3	3044.9	3004.0	2987.2
22.5°	3531.0	3536.6	3508.8	3445.4	3348.6	3179.1	2998.4	2860.6	2743.3	2679.9	2655.8
25°	3644.7	3653.9	3614.9	3534.7	3281.5	2985.4	2730.3	2544.0	2396.9	2320.5	2300.0
27.5°	3844.0	3853.2	3810.4	3601.8	3125.1	2726.6	2417.4	2233.0	2106.3	2041.2	2031.9
30°	4141.9	4154.9	4115.9	3600.0	2886.6	2396.9	2112.0	2004.0	1931.2	1886.6	1884.7
32.5°	4555.3	4603.7	4443.7	3536.6	2592.4	2063.5	1881.0	1843.7	1808.4	1778.5	1778.5
35°	5080.5	5194.1	4767.6	3404.4	2268.3	1836.3	1752.5	1717.1	1672.4	1640.7	1637.0
37.5°	5708.1	5885.1	4998.6	3169.7	1989.1	1726.4	1674.3	1616.5	1545.8	1484.3	1469.4
40°	6570.5	6611.4	5112.2	2788.0	1780.4	1666.9	1601.6	1529.0	1439.6	1370.6	1363.2
42.5°	7436.5	7302.4	5089.9	2378.2	1661.3	1612.7	1527.1	1447.0	1367.0	1309.3	1309.3
45°	8421.7	7905.8	4920.4	1966.6	1553.2	1551.4	1458.3	1381.9	1320.4	1277.6	1268.3
47.5°	9364.1	8447.7	4628.0	1663.2	1441.4	1489.9	1413.6	1352.1	1296.3	1255.3	1247.7
50°	10507.6	9075.4	4317.0	1450.8	1333.5	1435.8	1394.9	1363.2	1309.3	1238.5	1231.1
52.5°	11643.5	9809.2	4076.8	1290.7	1238.5	1393.0	1406.0	1409.8	1359.5	1221.7	1212.4
55°	12863.4	10593.2	3823.4	1165.8	1160.3	1372.7	1432.2	1428.4	1404.2	1225.5	1210.6
57.5°	14023.7	11381.0	3445.4	1078.3	1098.8	1352.1	1437.8	1378.2	1335.3	1244.0	1219.9
60°	14984.7	12032.8	2890.5	1016.8	1046.7	1311.1	1400.4	1311.1	1238.5	1240.3	1218.0
62.5°	15452.1	12215.3	2210.7	946.0	1003.9	1244.0	1346.5	1260.9	1193.7	1247.7	1234.7
65°	15096.5	11695.7	1575.5	880.9	951.6	1165.8	1314.8	1218.0	1171.5	1285.0	1270.1
67.5°	13818.8	10280.3	1143.5	823.2	901.4	1085.8	1255.3	1178.9	1149.1	1313.0	1279.4
69°	12461.1	8876.1	990.8	789.6	866.0	1042.9	1216.2	1158.3	1132.4	1273.9	1225.5
70°	11332.6	7794.0	914.4	769.1	836.2	1018.8	1186.3	1145.4	1115.5	1227.3	1169.6
72.5°	8125.5	5037.7	769.1	707.7	758.0	964.8	1121.1	1097.0	1052.2	1108.1	1070.8
75°	4909.2	2629.7	653.7	644.4	676.1	890.3	1044.8	1015.0	970.3	975.9	957.2
77.5°	2255.3	1214.3	547.5	569.9	590.3	797.0	951.6	918.1	877.2	862.3	864.1
80°	988.9	709.5	458.2	486.1	497.2	717.1	851.1	813.9	769.1	849.3	787.8
82.5°	534.5	411.6	357.6	376.2	407.9	623.9	739.3	690.9	648.1	754.2	609.0
85°	216.0	210.5	242.1	260.7	283.1	448.8	618.3	568.0	515.9	461.8	450.7
87.5°	93.1	100.5	119.2	126.6	150.9	279.3	415.3	363.2	365.0	312.9	307.3
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)