

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: P197297

Luminaire Tested: **NAV-AF-05-D-UNV-T3R-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197297
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-8030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 80 CRI, 3000K, 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: 24957 lumens
Efficiency: N/A
Efficacy: 89.5 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

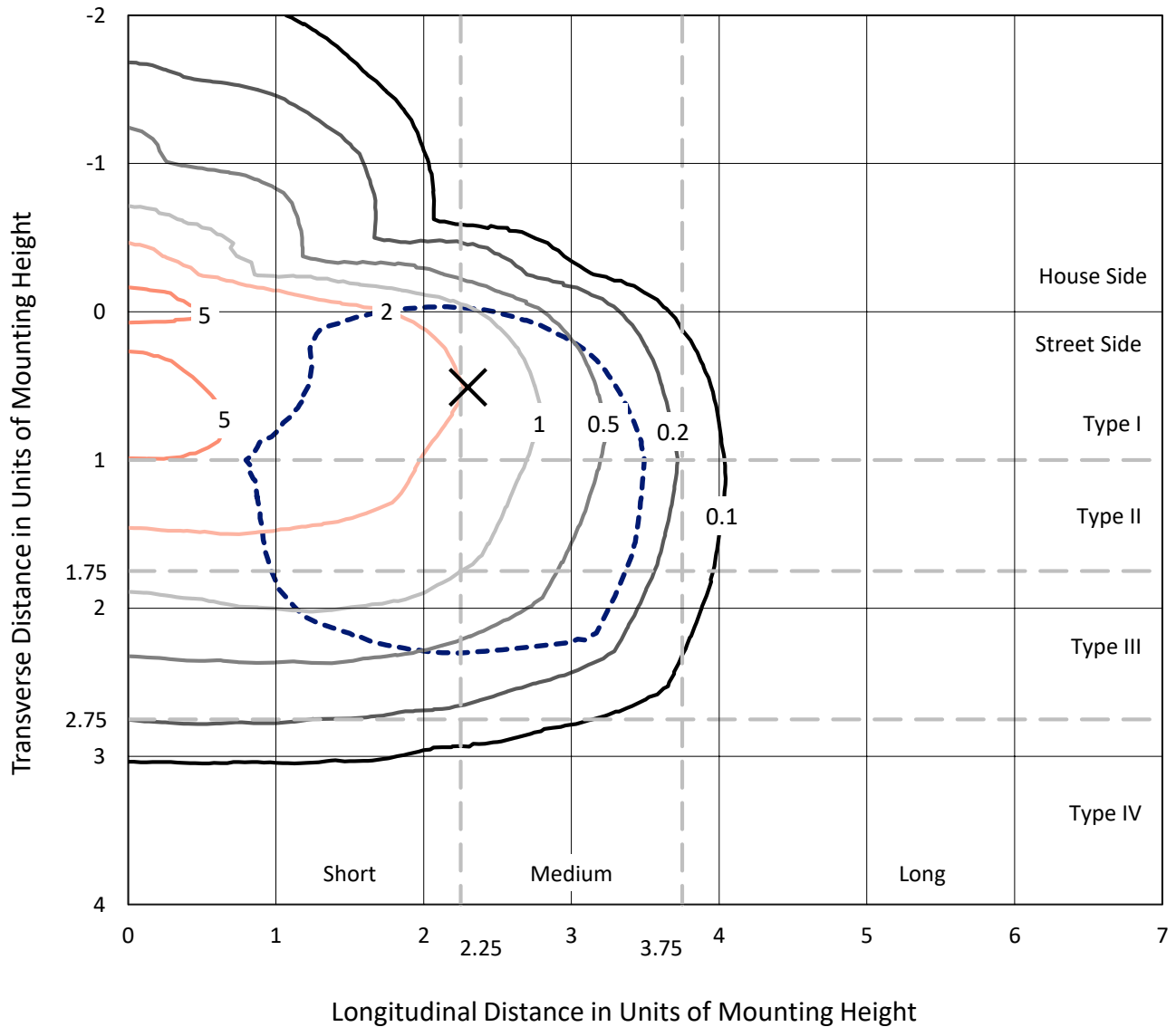
Input Watts (W): 279
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P197297
 CATALOG NUMBER: NAV-AF-05-D-UNV-T3R-8030

Iso-Footcandle Lines of Horizontal Illumination

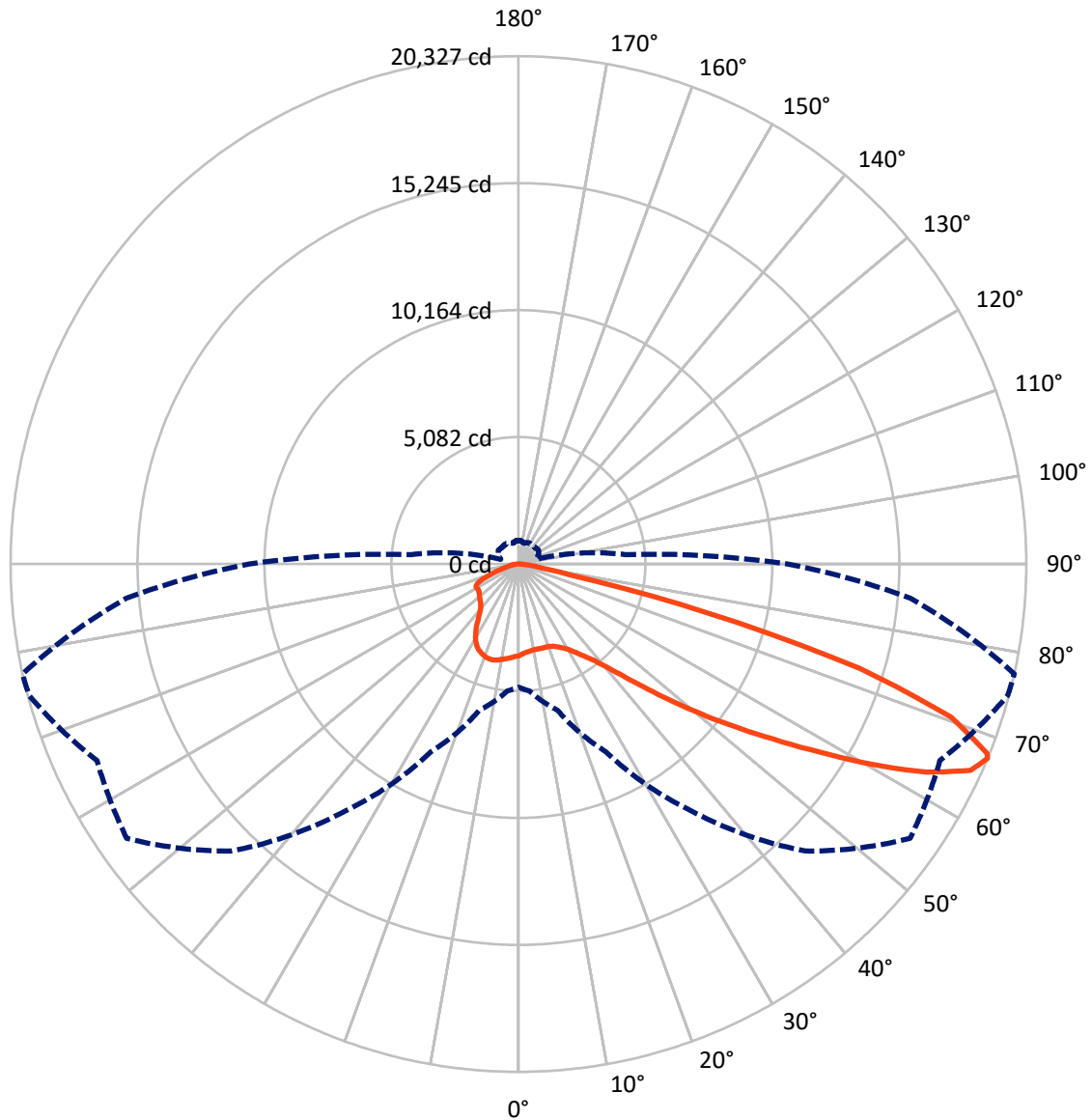
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.1 fc
 Type III - Medium - Full Cutoff

REPORT NUMBER: P197297
CATALOG NUMBER: NAV-AF-05-D-UNV-T3R-8030

Luminous Intensity Polar Plot



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

REPORT NUMBER: P197297

CATALOG NUMBER: NAV-AF-05-D-UNV-T3R-8030

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4288.9	0.0	4288.9
	% Fixture	17.2	0.0	17.2
Street Side	Lumens	20668.1	0.0	20668.1
	% Fixture	82.8	0.0	82.8
Total	Lumens	24957.0	0.0	24957.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	327.1	1.3
10°-20°	906.0	3.6
20°-30°	1539.3	6.2
30°-40°	2462.5	9.9
40°-50°	3791.1	15.2
50°-60°	5259.7	21.1
60°-70°	7016.1	28.1
70°-80°	3339.0	13.4
80°-90°	316.2	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°	24957.0	100.0
0°-180°	24957.0	100.0



REPORT NUMBER: P197297

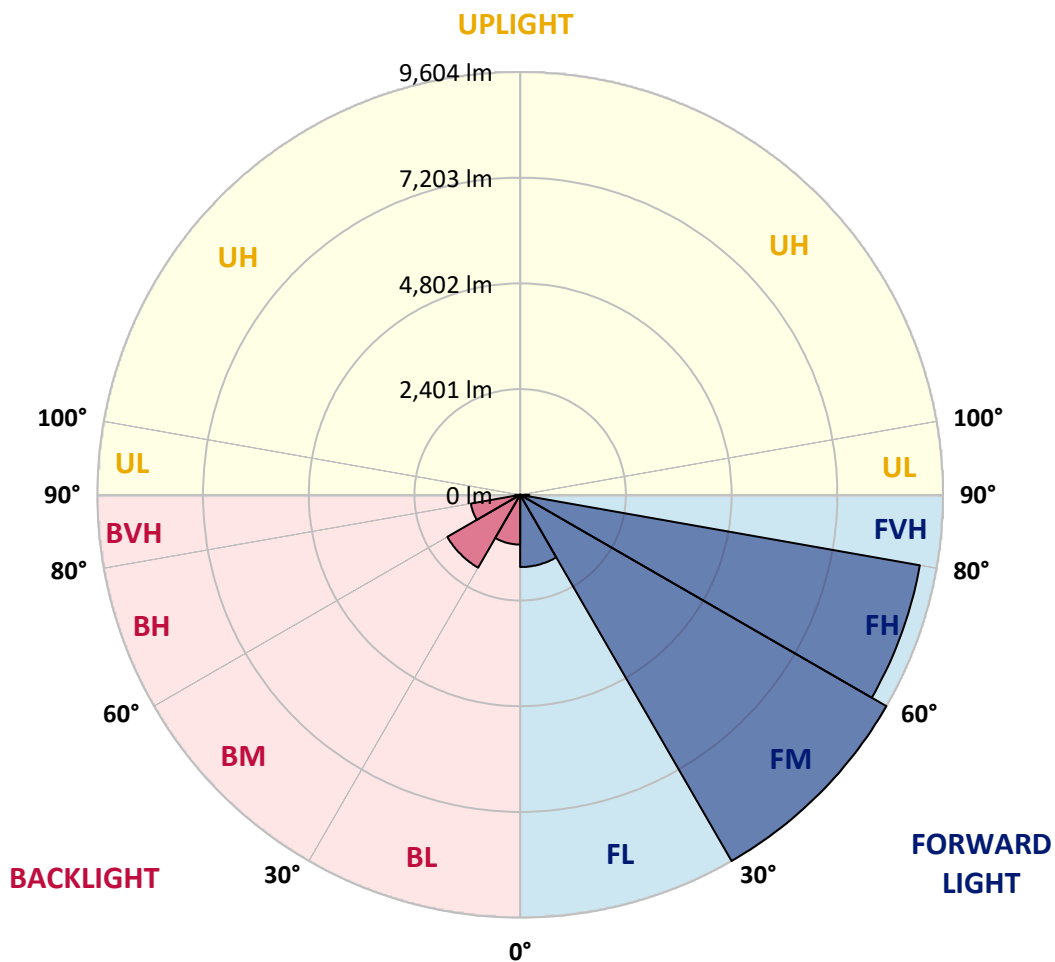
CATALOG NUMBER: NAV-AF-05-D-UNV-T3R-8030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1641.2	6.6			
FM	(30°-60°)	9603.7	38.5			
FH	(60°-80°)	9217.9	36.9			G4/12000
FVH	(80°-90°)	205.3	0.8			G2/225
BL	(0°-30°)	1131.2	4.5	B3/2500		
BM	(30°-60°)	1909.6	7.7	B2/2500		
BH	(60°-80°)	1137.2	4.6	B3/2500		G3/2500
BVH	(80°-90°)	110.8	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





REPORT NUMBER: P197297

CATALOG NUMBER: NAV-AF-05-D-UNV-T3R-8030

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	3673.0	3673.0	3673.0	3673.0	3673.0	3673.0	3673.0	3673.0	3673.0	3673.0	3673.0
2.5°	3293.5	3309.0	3310.5	3355.2	3375.3	3426.2	3481.7	3531.1	3574.3	3589.7	3617.5
5°	2963.4	2963.4	2968.0	2997.3	3054.4	3136.2	3251.9	3378.4	3511.0	3543.4	3625.2
7.5°	2790.6	2793.7	2796.8	2826.1	2870.8	2943.3	3059.0	3231.8	3452.4	3506.4	3649.9
10°	2806.1	2801.4	2786.0	2779.8	2798.3	2844.6	2944.9	3122.3	3403.1	3486.4	3694.6
12.5°	3048.2	3039.0	2988.1	2914.0	2846.2	2829.2	2898.6	3066.8	3379.9	3486.4	3770.2
15°	3463.2	3469.4	3369.1	3214.9	3037.4	2917.1	2907.9	3046.7	3372.2	3495.6	3858.1
17.5°	4003.1	4006.2	3867.4	3643.7	3349.1	3100.7	2971.1	3046.7	3372.2	3504.9	3943.0
20°	4577.0	4555.4	4398.1	4117.3	3734.7	3355.2	3086.8	3065.2	3381.5	3518.8	4023.2
22.5°	5069.1	5049.0	4884.0	4589.3	4151.2	3656.0	3242.6	3126.9	3432.4	3575.8	4135.8
25°	5499.5	5511.8	5351.4	5019.7	4566.2	3995.4	3475.6	3268.8	3538.8	3679.2	4274.6
27.5°	6022.4	5999.3	5814.2	5498.0	4993.5	4347.1	3767.1	3447.8	3665.3	3804.1	4444.3
30°	6627.2	6616.4	6366.5	6041.0	5464.0	4740.5	4055.6	3640.6	3830.4	3975.4	4657.2
32.5°	7361.5	7359.9	7091.5	6692.0	5993.1	5184.8	4396.5	3904.4	4071.0	4217.6	4939.5
35°	8192.9	8191.4	7913.7	7386.1	6602.5	5676.9	4797.6	4225.3	4368.7	4523.0	5275.8
37.5°	8769.9	8760.6	8615.6	8103.5	7276.6	6249.2	5299.0	4657.2	4706.6	4879.4	5681.5
40°	8881.0	8936.5	9061.4	8759.1	8012.4	6884.8	5801.9	5121.5	5167.8	5390.0	6192.1
42.5°	8760.6	8833.1	9248.1	9332.9	8748.3	7654.6	6431.2	5764.8	5823.4	6099.6	6792.2
45°	8655.7	8719.0	9238.8	9650.7	9474.9	8493.8	7216.4	6550.0	6661.1	7003.6	7477.2
47.5°	8476.8	8535.4	9056.8	9707.8	9889.8	9302.1	8162.1	7494.1	7685.4	8100.4	8257.7
50°	8467.5	8493.8	8808.4	9516.5	10033.3	9916.1	9209.5	8598.6	8891.7	9370.0	9121.6
52.5°	8233.0	8416.6	8702.0	9211.1	10036.4	10274.0	10241.6	9809.6	10261.6	10790.7	10068.8
55°	6798.4	7009.7	8347.2	9061.4	10017.9	10580.9	11184.1	11097.7	11804.2	12361.1	11130.1
57.5°	6347.9	6437.4	7322.9	9106.2	10172.1	11088.5	12126.7	12481.5	13569.0	14176.8	12402.8
60°	6224.5	6318.6	7117.7	9127.8	10590.2	12012.5	13405.5	14044.2	15643.9	16288.7	13848.2
62.5°	6087.2	6209.1	7133.1	9147.8	11324.5	13379.3	15102.4	15739.5	17774.2	18349.6	15202.7
65°	5686.2	5848.1	6847.8	9021.3	12128.2	15094.7	17345.4	17507.4	19534.4	19900.0	16020.3
67°	4925.6	5103.0	6064.1	8290.1	12054.2	16250.1	19139.5	18613.4	20282.6	20327.3	15754.9
67.5°	4685.0	4868.6	5798.8	7986.2	11842.8	16401.3	19457.3	18766.2	20276.4	20227.0	15508.1
70°	3154.7	3361.4	4106.5	5863.6	9499.5	15264.4	19380.1	18295.7	18946.6	18380.5	13323.7
72.5°	1565.8	1571.9	2048.6	3211.8	5755.6	10948.1	16166.8	15651.6	15358.5	14289.4	9777.2
75°	754.3	768.2	967.2	1419.2	2426.6	5652.2	11025.2	10560.9	8992.0	7785.7	4893.2
77.5°	575.4	589.3	751.3	924.0	1012.0	1843.4	5460.9	4413.5	2605.5	2081.0	1379.1
80°	444.3	470.5	634.0	709.6	669.5	738.9	1717.0	1351.3	1013.5	930.2	683.4
82.5°	347.1	362.5	538.4	538.4	462.8	495.2	799.1	780.6	629.4	567.7	367.1
85°	245.3	276.1	433.5	401.1	303.9	307.0	478.2	458.2	324.0	260.7	143.5
87.5°	109.5	140.4	308.5	262.2	162.0	125.0	195.9	168.1	128.0	98.7	66.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P197297
 CATALOG NUMBER: NAV-AF-05-D-UNV-T3R-8030

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3673.0	3673.0	3673.0	3673.0	3673.0	3673.0	3673.0	3673.0	3673.0	3673.0	3673.0
2.5°	3648.3	3673.0	3711.6	3734.7	3765.6	3777.9	3790.3	3811.9	3828.8	3824.2	3816.5
5°	3682.3	3723.9	3771.7	3787.2	3787.2	3771.7	3762.5	3764.0	3759.4	3756.3	3747.1
7.5°	3731.6	3788.7	3822.7	3807.2	3759.4	3699.2	3642.2	3608.2	3575.8	3555.8	3561.9
10°	3801.1	3864.3	3865.8	3798.0	3683.8	3552.7	3440.1	3367.6	3298.2	3267.3	3276.6
12.5°	3901.3	3964.6	3910.6	3764.0	3563.5	3358.3	3151.6	3002.0	2867.8	2835.4	2826.1
15°	4009.3	4058.7	3938.3	3691.5	3390.7	3052.9	2705.8	2482.1	2332.5	2306.2	2297.0
17.5°	4103.4	4131.2	3924.5	3561.9	3117.7	2585.5	2181.3	2030.1	1999.3	2014.7	2014.7
20°	4186.7	4177.5	3864.3	3361.4	2687.3	2067.1	1832.7	1831.1	1872.8	1911.3	1914.4
22.5°	4291.6	4219.1	3768.7	3063.7	2173.6	1724.7	1684.6	1724.7	1770.9	1814.1	1818.8
25°	4416.6	4265.4	3640.6	2639.4	1747.8	1565.8	1582.7	1616.7	1646.0	1679.9	1681.5
27.5°	4541.5	4300.9	3460.1	2141.2	1516.4	1464.0	1482.5	1496.4	1504.1	1525.7	1525.7
30°	4686.5	4328.6	3199.4	1715.4	1410.0	1374.5	1363.7	1357.5	1363.7	1393.0	1394.5
32.5°	4868.6	4378.0	2843.1	1471.7	1360.6	1311.2	1255.7	1224.9	1246.4	1298.9	1308.2
35°	5075.3	4436.6	2415.8	1374.5	1343.6	1280.4	1178.6	1130.8	1138.5	1186.3	1194.0
37.5°	5334.4	4512.2	1994.6	1351.3	1360.6	1277.3	1143.1	1075.2	1041.3	1042.8	1041.3
40°	5666.1	4587.8	1661.4	1357.5	1397.6	1285.0	1126.1	1019.7	948.7	951.8	958.0
42.5°	6013.2	4637.2	1450.1	1376.0	1442.4	1295.8	1120.0	965.7	904.0	956.4	1004.3
45°	6418.9	4623.3	1340.6	1393.0	1476.3	1300.4	1096.8	959.5	908.6	1066.0	1155.4
47.5°	6884.8	4563.1	1278.8	1400.7	1485.6	1298.9	1079.8	979.6	947.2	1220.2	1322.0
50°	7390.8	4469.0	1229.5	1388.4	1480.9	1292.7	1098.4	1004.3	962.6	1254.2	1332.8
52.5°	7944.6	4382.6	1178.6	1360.6	1457.8	1274.2	1121.5	993.5	919.4	1155.4	1215.6
55°	8600.2	4362.6	1121.5	1312.8	1419.2	1254.2	1109.2	959.5	871.6	1024.3	1061.3
57.5°	9349.9	4487.5	1047.4	1254.2	1366.8	1214.1	1079.8	941.0	854.6	931.8	951.8
60°	10301.7	4763.7	968.8	1192.5	1302.0	1153.9	1053.6	945.6	859.2	917.9	922.5
62.5°	11045.3	5012.0	897.8	1116.9	1215.6	1081.4	1025.9	950.3	873.1	936.4	928.7
65°	11315.2	4890.2	809.9	1004.3	1093.7	1001.2	987.3	953.3	873.1	947.2	930.2
67°	10761.4	4308.6	726.6	891.6	978.0	930.2	950.3	941.0	857.7	945.6	916.3
67.5°	10497.6	4103.4	705.0	873.1	947.2	908.6	941.0	934.8	853.1	942.6	908.6
70°	8657.3	2943.3	595.5	732.8	792.9	800.6	883.9	894.7	816.1	885.5	823.8
72.5°	6159.7	1841.9	513.7	567.7	640.2	684.9	806.8	840.7	766.7	769.8	718.9
75°	3048.2	988.8	458.2	438.1	498.3	570.8	703.4	766.7	694.2	641.7	624.8
77.5°	1028.9	560.0	387.2	353.3	387.2	458.2	583.1	669.5	612.4	543.0	532.2
80°	532.2	407.3	302.4	283.8	305.4	354.8	456.6	556.9	523.0	526.0	433.5
82.5°	331.7	248.4	217.5	216.0	231.4	271.5	336.3	452.0	448.9	384.1	279.2
85°	154.3	143.5	138.8	143.5	148.1	154.3	219.1	322.4	340.9	206.7	183.6
87.5°	64.8	63.2	55.5	60.2	66.3	64.8	87.9	137.3	191.3	129.6	118.8
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)