

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: P196811

Luminaire Tested: **NAV-AF-05-D-UNV-T3R-7030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196811
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-7030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 23899.3 lumens
Efficiency: N/A
Efficacy: 113.8 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): 210
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

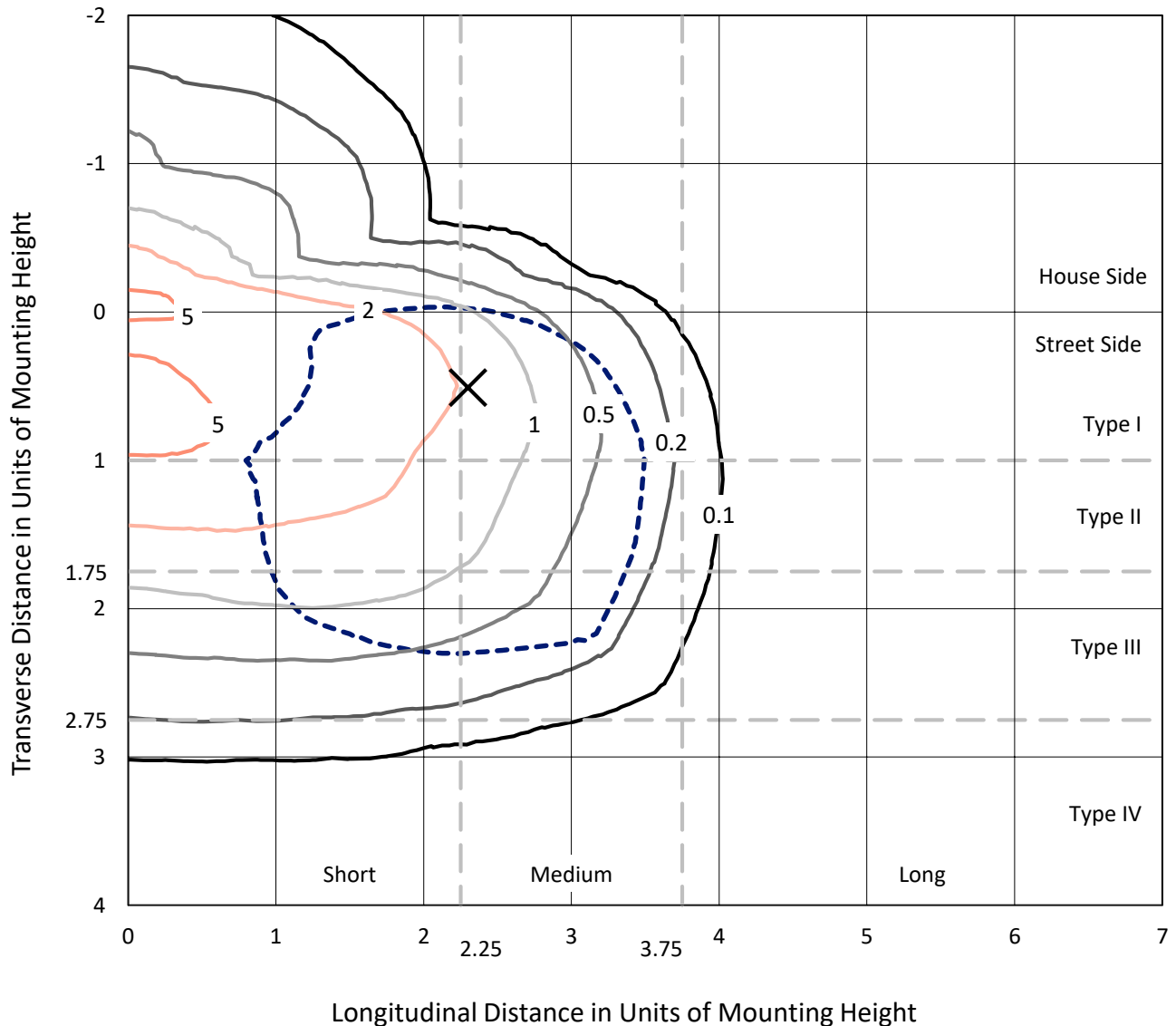


REPORT NUMBER: P196811

CATALOG NUMBER: NAV-AF-05-D-UNV-T3R-7030-800

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

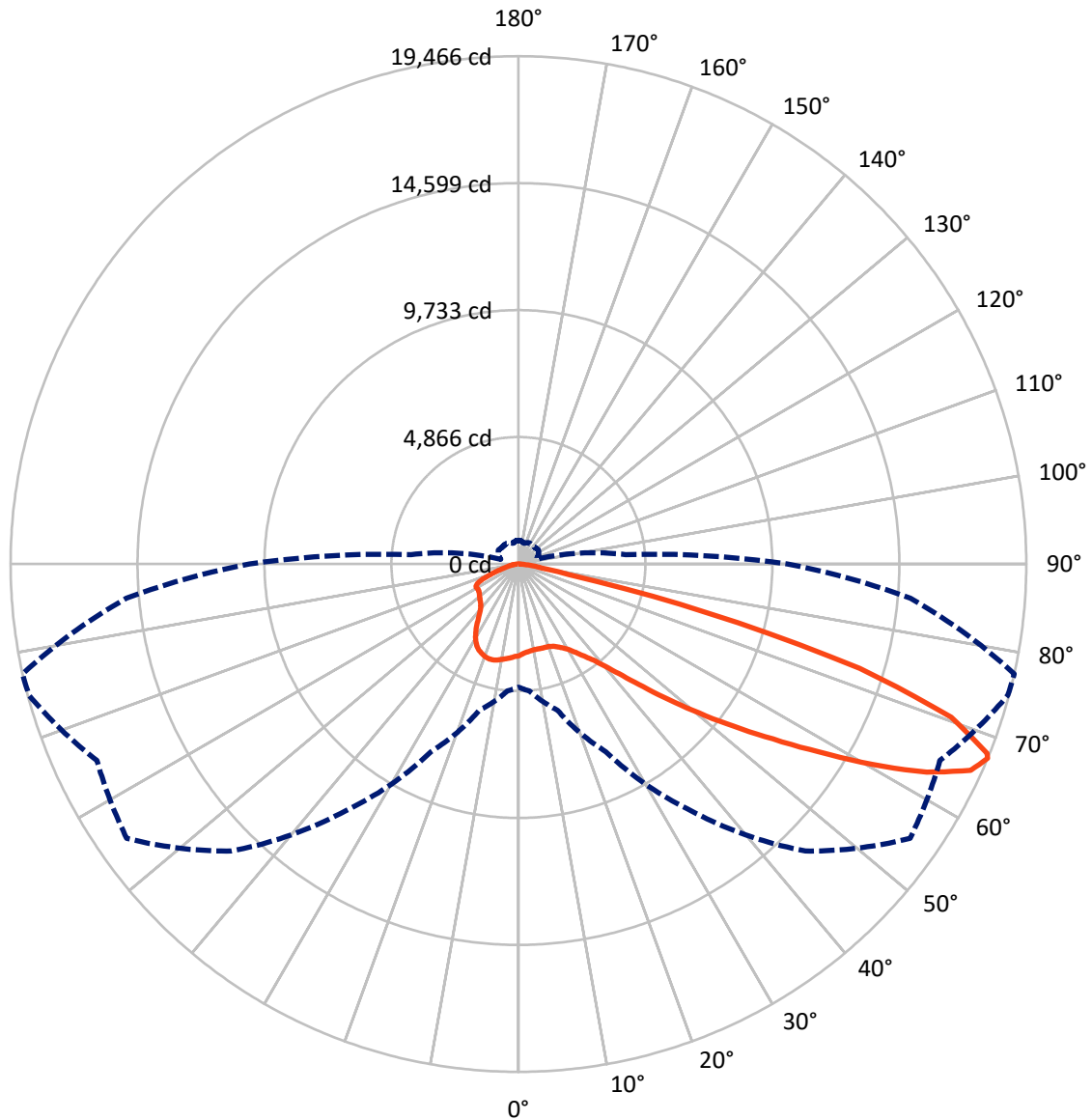


Based on 25 foot mounting height. Maximum calculated value = 6.8 fc
 Type III - Medium - Full Cutoff

REPORT NUMBER: P196811

CATALOG NUMBER: NAV-AF-05-D-UNV-T3R-7030-800

Luminous Intensity Polar Plot



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

REPORT NUMBER: P196811

CATALOG NUMBER: NAV-AF-05-D-UNV-T3R-7030-800

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4107.1	0.0	4107.1
	% Fixture	17.2	0.0	17.2
Street Side	Lumens	19792.3	0.0	19792.3
	% Fixture	82.8	0.0	82.8
Total	Lumens	23899.3	0.0	23899.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	313.3	1.3
10°-20°	867.6	3.6
20°-30°	1474.1	6.2
30°-40°	2358.2	9.9
40°-50°	3630.4	15.2
50°-60°	5036.8	21.1
60°-70°	6718.8	28.1
70°-80°	3197.5	13.4
80°-90°	302.7	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°	23899.3	100.0
0°-180°	23899.3	100.0



REPORT NUMBER: P196811

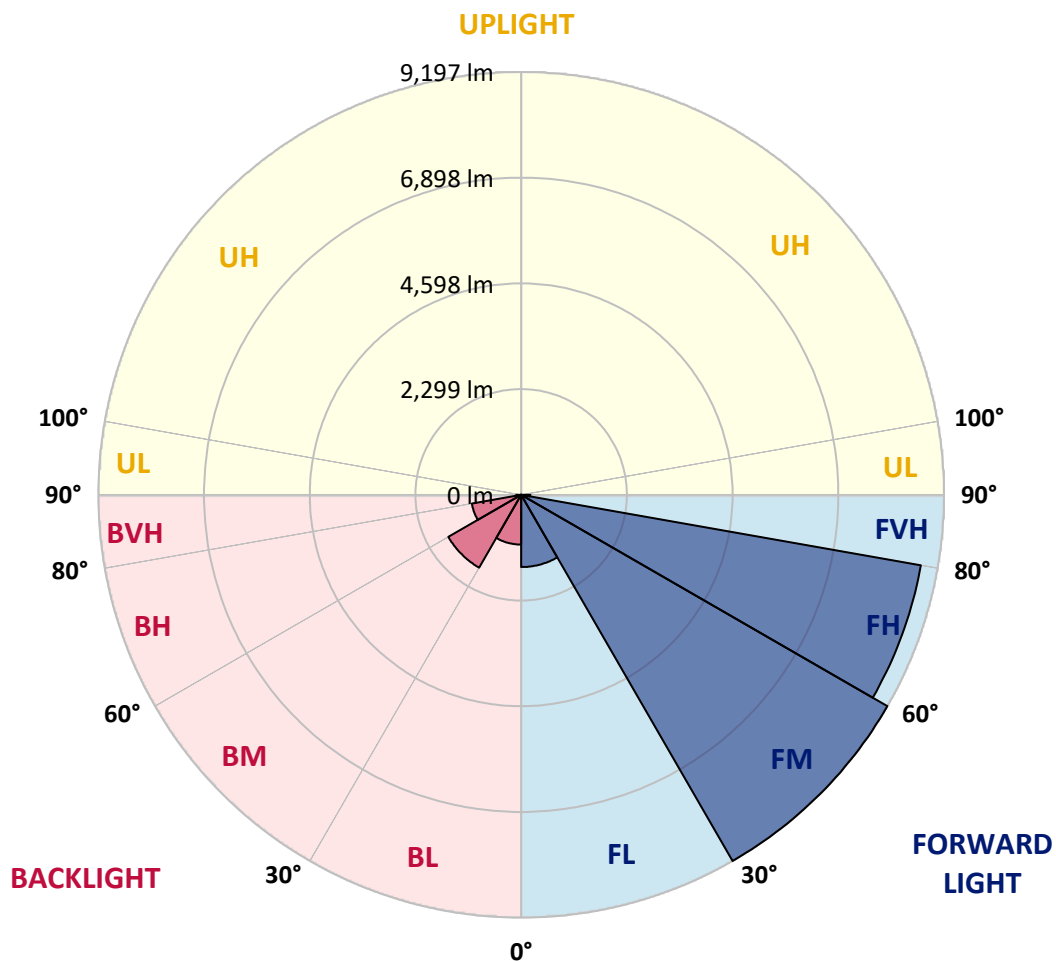
CATALOG NUMBER: NAV-AF-05-D-UNV-T3R-7030-800

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1571.6	6.6			
FM	(30°-60°)	9196.7	38.5			
FH	(60°-80°)	8827.3	36.9			G4/12000
FVH	(80°-90°)	196.6	0.8			G2/225
BL	(0°-30°)	1083.3	4.5	B3/2500		
BM	(30°-60°)	1828.7	7.7	B2/2500		
BH	(60°-80°)	1089.0	4.6	B3/2500		G3/2500
BVH	(80°-90°)	106.1	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: P196811

CATALOG NUMBER: NAV-AF-05-D-UNV-T3R-7030-800

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	3517.4	3517.4	3517.4	3517.4	3517.4	3517.4	3517.4	3517.4	3517.4	3517.4	3517.4
2.5°	3154.0	3168.7	3170.1	3213.1	3232.2	3280.9	3334.1	3381.5	3422.8	3437.7	3464.2
5°	2837.8	2837.8	2842.3	2870.3	2925.0	3003.3	3114.1	3235.1	3362.2	3393.3	3471.6
7.5°	2672.4	2675.3	2678.3	2706.4	2749.2	2818.6	2929.5	3094.9	3306.0	3357.9	3495.2
10°	2687.1	2682.8	2667.9	2662.0	2679.8	2724.1	2820.1	2990.0	3258.8	3338.6	3538.1
12.5°	2919.1	2910.2	2861.5	2790.6	2725.6	2709.3	2775.7	2936.8	3236.7	3338.6	3610.5
15°	3316.4	3322.3	3226.3	3078.6	2908.7	2793.5	2784.7	2917.5	3229.2	3347.4	3694.6
17.5°	3833.5	3836.4	3703.5	3489.3	3207.1	2969.3	2845.2	2917.5	3229.2	3356.3	3775.9
20°	4383.1	4362.4	4211.7	3942.8	3576.5	3213.1	2956.0	2935.4	3238.1	3369.7	3852.7
22.5°	4854.3	4835.0	4677.1	4394.9	3975.3	3501.1	3105.2	2994.4	3286.9	3424.3	3960.5
25°	5266.4	5278.2	5124.6	4807.0	4372.7	3826.2	3328.2	3130.3	3388.7	3523.3	4093.5
27.5°	5767.2	5745.1	5567.9	5264.9	4781.8	4162.9	3607.5	3301.7	3510.0	3642.9	4255.9
30°	6346.4	6336.0	6096.6	5784.9	5232.4	4539.6	3883.7	3486.4	3668.1	3806.9	4459.9
32.5°	7049.5	7048.0	6791.0	6408.4	5739.2	4965.1	4210.2	3739.0	3898.5	4038.9	4730.2
35°	7845.7	7844.3	7578.3	7073.1	6322.8	5436.3	4594.3	4046.2	4183.6	4331.4	5052.2
37.5°	8398.2	8389.4	8250.5	7760.0	6968.2	5984.3	5074.4	4459.9	4507.2	4672.6	5440.8
40°	8504.6	8557.7	8677.5	8388.0	7672.9	6593.0	5556.0	4904.5	4948.8	5161.5	5929.7
42.5°	8389.4	8458.9	8856.2	8937.4	8377.6	7330.2	6158.7	5520.6	5576.7	5841.1	6504.4
45°	8289.0	8349.5	8847.3	9241.7	9073.3	8133.8	6910.6	6272.5	6378.8	6706.8	7160.3
47.5°	8117.5	8173.6	8673.0	9296.5	9470.7	8907.9	7816.2	7176.5	7359.7	7757.1	7907.7
50°	8108.6	8133.8	8435.2	9113.2	9608.1	9495.8	8819.3	8234.3	8514.9	8972.9	8735.1
52.5°	7884.1	8059.9	8333.2	8820.7	9611.1	9838.6	9807.5	9393.9	9826.8	10333.4	9642.1
55°	6510.3	6712.7	7993.4	8677.5	9593.3	10132.4	10710.1	10627.4	11304.0	11837.2	10658.5
57.5°	6078.9	6164.6	7012.6	8720.3	9741.0	10618.6	11612.7	11952.5	12993.9	13576.0	11877.1
60°	5960.7	6050.9	6816.0	8741.0	10141.5	11503.5	12837.4	13448.9	14980.9	15598.4	13261.4
62.5°	5829.3	5946.0	6830.9	8760.2	10844.5	12812.3	14462.4	15072.6	17021.0	17572.0	14558.4
65°	5445.2	5600.3	6557.5	8639.0	11614.3	14455.0	16610.3	16765.4	18706.6	19056.7	15341.3
67°	4716.9	4886.7	5807.1	7938.8	11543.4	15561.5	18328.4	17824.7	19423.0	19465.8	15087.3
67.5°	4486.4	4662.2	5553.0	7647.8	11340.9	15706.2	18632.7	17970.9	19417.1	19369.8	14850.9
70°	3021.0	3219.0	3932.5	5615.1	9096.9	14617.5	18558.9	17520.3	18143.7	17601.5	12759.1
72.5°	1499.5	1505.4	1961.7	3075.6	5511.7	10484.1	15481.7	14988.3	14707.6	13683.8	9362.9
75°	722.4	735.7	926.2	1359.0	2323.7	5412.7	10557.9	10113.4	8610.9	7455.8	4685.9
77.5°	551.0	564.4	719.5	884.9	969.1	1765.3	5229.4	4226.4	2495.1	1992.8	1320.7
80°	425.4	450.5	607.2	679.6	641.2	707.6	1644.3	1294.0	970.6	890.8	654.5
82.5°	332.3	347.1	515.6	515.6	443.1	474.1	765.3	747.5	602.7	543.7	351.6
85°	234.9	264.4	415.0	384.0	291.0	294.0	457.9	438.7	310.2	249.6	137.3
87.5°	104.9	134.4	295.4	251.2	155.1	119.6	187.6	161.0	122.6	94.5	63.5
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: P196811

CATALOG NUMBER: NAV-AF-05-D-UNV-T3R-7030-800

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3517.4	3517.4	3517.4	3517.4	3517.4	3517.4	3517.4	3517.4	3517.4	3517.4	3517.4
2.5°	3493.7	3517.4	3554.3	3576.5	3606.0	3617.8	3629.6	3650.4	3666.5	3662.2	3654.7
5°	3526.3	3566.1	3611.9	3626.7	3626.7	3611.9	3603.1	3604.6	3600.1	3597.2	3588.3
7.5°	3573.6	3628.2	3660.6	3645.9	3600.1	3542.5	3487.8	3455.4	3424.3	3405.1	3411.0
10°	3640.0	3700.5	3702.0	3637.0	3527.7	3402.2	3294.2	3224.9	3158.3	3128.8	3137.7
12.5°	3736.0	3796.5	3744.9	3604.6	3412.5	3216.0	3018.1	2874.7	2746.2	2715.2	2706.4
15°	3839.4	3886.7	3771.4	3535.1	3246.9	2923.4	2591.1	2376.9	2233.6	2208.4	2199.6
17.5°	3929.5	3956.1	3758.2	3411.0	2985.5	2476.0	2088.8	1944.0	1914.5	1929.3	1929.3
20°	4009.3	4000.4	3700.5	3219.0	2573.4	1979.6	1755.0	1753.5	1793.4	1830.3	1833.3
22.5°	4109.8	4040.3	3609.0	2933.8	2081.5	1651.6	1613.2	1651.6	1695.9	1737.2	1741.7
25°	4229.4	4084.6	3486.4	2527.6	1673.8	1499.5	1515.7	1548.2	1576.3	1608.8	1610.3
27.5°	4349.1	4118.6	3313.5	2050.5	1452.2	1401.9	1419.6	1432.9	1440.4	1461.1	1461.1
30°	4488.0	4145.2	3063.8	1642.7	1350.2	1316.2	1305.8	1299.9	1305.8	1333.9	1335.4
32.5°	4662.2	4192.5	2722.6	1409.3	1302.9	1255.7	1202.5	1172.9	1193.6	1243.8	1252.7
35°	4860.2	4248.6	2313.3	1316.2	1286.7	1226.1	1128.6	1082.9	1090.2	1136.0	1143.4
37.5°	5108.4	4320.9	1910.1	1294.0	1302.9	1223.1	1094.7	1029.7	997.1	998.6	997.1
40°	5426.1	4393.5	1591.1	1299.9	1338.4	1230.6	1078.4	976.4	908.5	911.4	917.3
42.5°	5758.4	4440.7	1388.5	1317.6	1381.2	1240.8	1072.5	924.8	865.7	915.9	961.7
45°	6146.9	4427.4	1283.7	1333.9	1413.7	1245.3	1050.3	918.9	870.1	1020.8	1106.5
47.5°	6593.0	4369.8	1224.7	1341.3	1422.5	1243.8	1034.0	938.1	907.1	1168.5	1266.0
50°	7077.6	4279.5	1177.4	1329.5	1418.1	1237.9	1051.8	961.7	921.8	1201.0	1276.3
52.5°	7607.9	4196.8	1128.6	1302.9	1396.0	1220.2	1074.0	951.3	880.4	1106.5	1164.0
55°	8235.8	4177.7	1074.0	1257.1	1359.0	1201.0	1062.1	918.9	834.6	980.9	1016.3
57.5°	8953.7	4297.3	1003.1	1201.0	1308.8	1162.6	1034.0	901.2	818.4	892.3	911.4
60°	9865.1	4561.8	927.7	1141.9	1246.7	1104.9	1009.0	905.5	822.8	879.0	883.4
62.5°	10577.2	4799.6	859.8	1069.5	1164.0	1035.6	982.4	910.0	836.2	896.7	889.3
65°	10835.7	4683.0	775.5	961.7	1047.4	958.7	945.4	913.0	836.2	907.1	890.8
67°	10305.4	4125.9	695.8	853.9	936.6	890.8	910.0	901.2	821.4	905.5	877.5
67.5°	10052.7	3929.5	675.1	836.2	907.1	870.1	901.2	895.3	816.9	902.6	870.1
70°	8290.4	2818.6	570.3	701.7	759.4	766.7	846.4	856.8	781.4	848.0	788.9
72.5°	5898.7	1763.9	491.8	543.7	613.1	655.9	772.6	805.1	734.2	737.2	688.5
75°	2919.1	947.0	438.7	419.5	477.1	546.7	673.6	734.2	664.8	614.6	598.3
77.5°	985.3	536.3	370.8	338.2	370.8	438.7	558.5	641.2	586.5	520.0	509.7
80°	509.7	389.9	289.5	271.8	292.5	339.8	437.2	533.3	500.9	503.8	415.0
82.5°	317.6	237.8	208.2	206.8	221.6	260.0	322.1	432.8	429.9	367.8	267.3
85°	147.7	137.3	133.0	137.3	141.8	147.7	209.8	308.7	326.4	198.0	175.8
87.5°	62.1	60.5	53.2	57.6	63.5	62.1	84.2	131.4	183.2	124.1	113.7
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)