

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: P196974

Luminaire Tested: **NAV-AF-06-D-UNV-AFL-8030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196974
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24160)
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-AFL-8030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19843 lumens
Efficiency: N/A
Efficacy: 102.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B2 - U0 - G2

Input Watts (W): 193
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

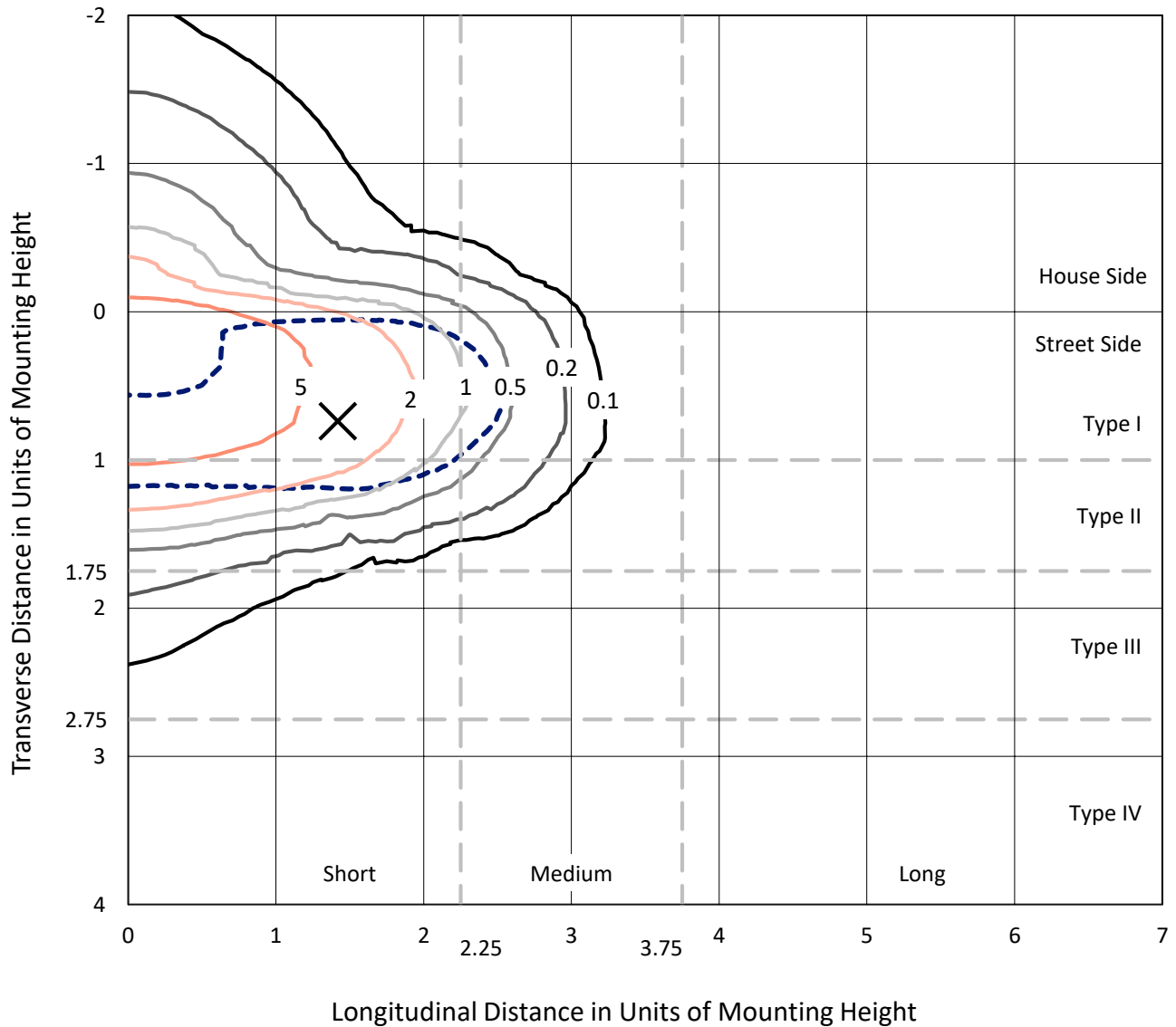


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Iso-Footcandle Lines of Horizontal Illumination

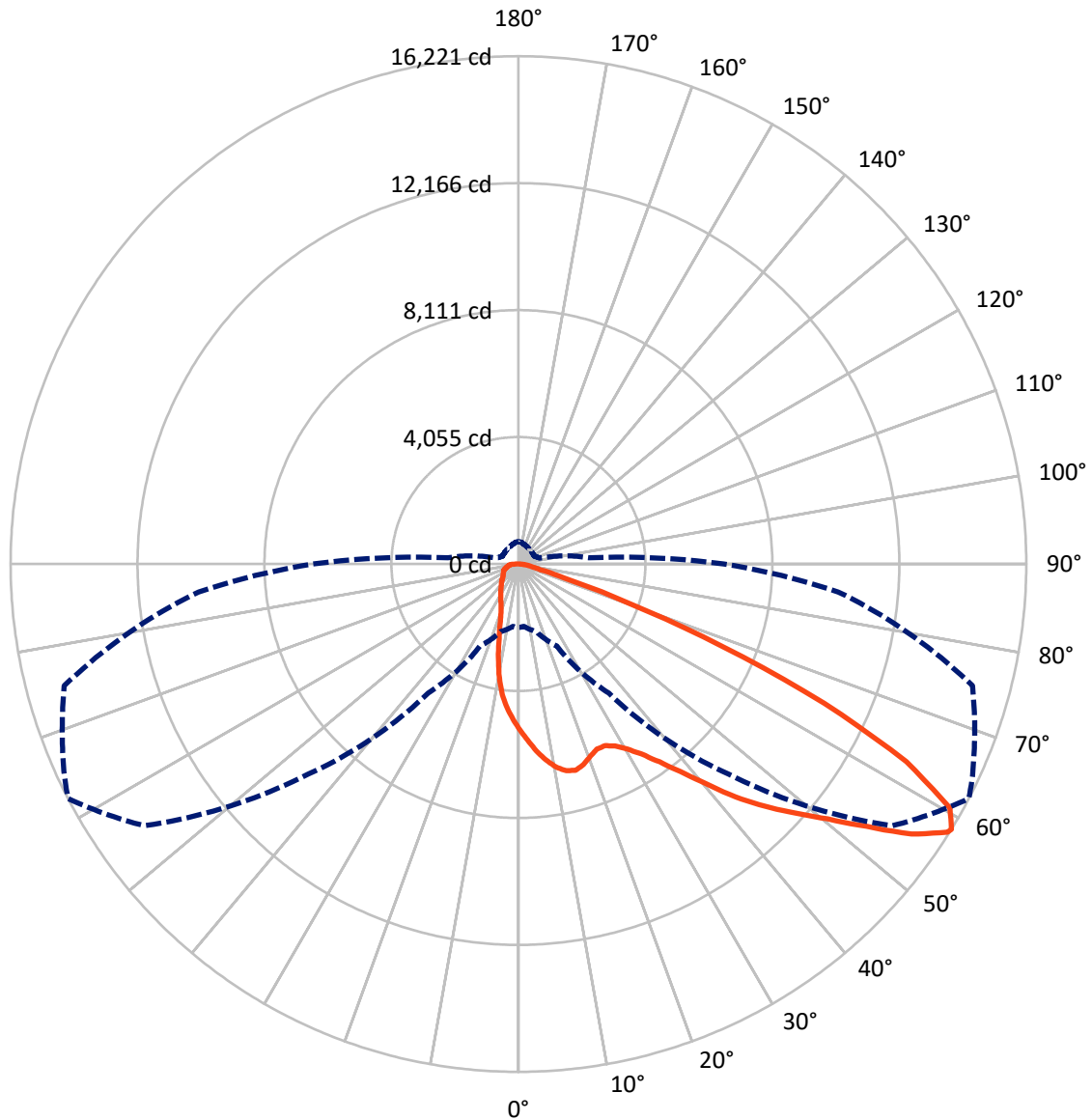
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.9 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 62.5-Deg Lateral - - - Horizontal Cone Through 58-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3046.7	0.0	3046.7
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	16796.4	0.0	16796.4
	% Fixture	84.6	0.0	84.6
Total	Lumens	19843.0	0.0	19843.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	473.5	2.4
10°-20°	1195.1	6.0
20°-30°	1936.8	9.8
30°-40°	3092.3	15.6
40°-50°	4497.9	22.7
50°-60°	4706.6	23.7
60°-70°	2869.3	14.5
70°-80°	802.4	4.0
80°-90°	269.0	1.4
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°	19843.0	100.0
0°-180°	19843.0	100.0



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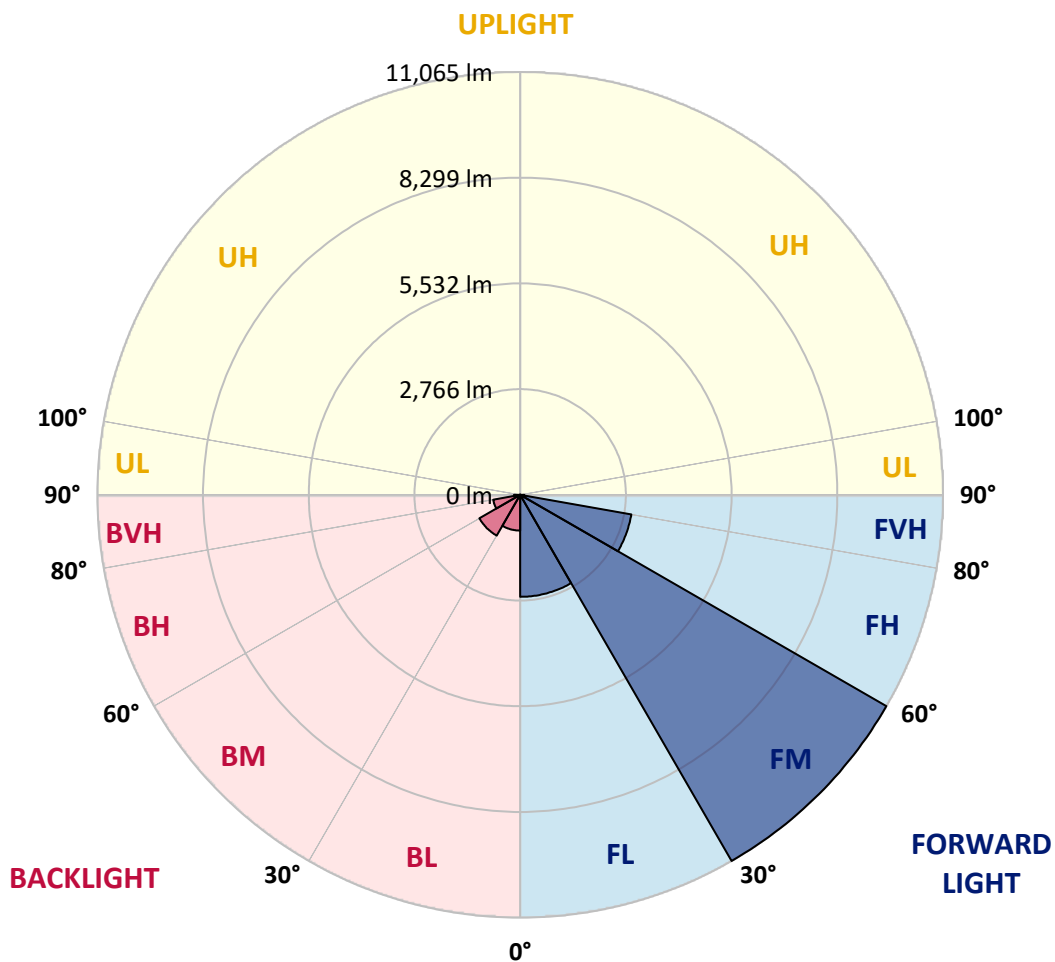
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2668.9	13.5			
FM	(30°-60°)	11064.7	55.8			
FH	(60°-80°)	2954.5	14.9			G2/5000
FVH	(80°-90°)	108.2	0.5			G2/225
BL	(0°-30°)	936.5	4.7	B2/1000		
BM	(30°-60°)	1232.1	6.2	B2/2500		
BH	(60°-80°)	717.2	3.6	B2/1000		G2/1000
BVH	(80°-90°)	160.8	0.8			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	62.5°	65°	75°	85°
0°	5298.0	5298.0	5298.0	5298.0	5298.0	5298.0	5298.0	5298.0	5298.0	5298.0	5298.0
2.5°	6013.5	6009.8	5959.0	5925.5	5885.8	5794.0	5702.2	5634.0	5599.3	5466.6	5337.6
5°	6510.8	6495.9	6467.4	6431.5	6379.4	6264.0	6118.9	5993.7	5944.1	5708.4	5471.6
7.5°	6247.9	6271.5	6359.5	6458.7	6562.9	6570.4	6467.4	6318.6	6264.0	5949.0	5601.8
10°	5519.9	5510.0	5620.4	5813.9	6157.4	6497.2	6667.1	6593.9	6536.9	6177.2	5732.0
12.5°	5299.2	5296.7	5315.3	5364.9	5580.7	6047.0	6616.2	6775.0	6755.1	6419.1	5870.9
15°	5366.2	5368.6	5367.4	5373.6	5433.1	5655.1	6332.2	6835.7	6897.8	6658.4	6012.3
17.5°	5580.7	5572.0	5544.7	5515.0	5523.7	5603.0	6025.9	6731.6	6917.6	6871.7	6131.3
20°	5911.8	5911.8	5838.7	5755.6	5701.0	5718.4	5898.2	6553.0	6825.8	7052.8	6220.6
22.5°	6327.3	6333.5	6225.6	6074.3	5950.3	5903.1	5971.4	6420.3	6714.2	7220.2	6300.0
25°	6843.2	6841.9	6684.4	6467.4	6271.5	6158.6	6157.4	6426.5	6679.5	7416.1	6383.1
27.5°	7481.9	7423.6	7240.0	6931.2	6654.7	6482.3	6404.2	6582.8	6752.7	7656.7	6494.7
30°	8202.4	8142.9	7902.3	7505.4	7130.9	6879.2	6750.2	6853.1	6975.9	7963.0	6663.4
32.5°	8915.5	8929.1	8646.4	8198.7	7717.5	7362.8	7171.8	7235.1	7320.6	8337.6	6891.6
35°	9959.7	9958.5	9588.9	9029.6	8457.9	7966.8	7724.9	7758.4	7836.6	8865.9	7211.5
37.5°	10738.5	10726.1	10488.0	9993.2	9349.5	8760.5	8410.7	8415.7	8482.7	9529.4	7633.2
40°	10817.9	10815.4	10814.2	10743.5	10303.2	9747.6	9309.9	9219.3	9246.6	10233.8	8080.9
42.5°	10211.5	10302.0	10562.4	10961.7	11084.5	10793.1	10378.9	10176.7	10117.2	11042.4	8554.6
45°	9347.1	9392.9	9849.3	10747.2	11477.7	11775.3	11464.0	11037.4	10935.7	11828.6	8940.3
47.5°	8945.3	8925.4	9189.6	10168.0	11439.2	12556.6	12578.9	11879.5	11707.1	12507.0	9268.9
50°	8083.3	8057.3	8390.9	9316.1	11020.0	12944.8	13723.6	12797.2	12478.5	13151.9	9566.6
52.5°	6365.7	6340.9	6788.6	7980.4	10082.5	12799.7	14688.4	13923.2	13380.1	13773.2	9844.4
55°	4142.1	4144.6	4571.2	5800.2	8159.0	11953.9	15141.1	15224.2	14615.3	14394.5	10068.8
57.5°	2280.6	2259.6	2563.4	3318.7	5613.0	10032.9	14764.1	16161.7	15844.2	14927.8	10231.3
58°	2027.7	2002.9	2237.2	2888.3	5032.6	9490.9	14574.3	16221.3	16001.7	15015.8	10254.9
60°	1444.8	1402.6	1366.7	1628.3	2899.5	6843.2	13309.4	15835.6	16047.6	15191.9	10232.5
62.5°	1217.8	1169.5	1040.5	1030.6	1365.4	3347.2	10525.2	13907.1	14501.2	14786.4	9872.9
65°	1131.0	1082.7	912.8	852.0	926.4	1444.8	6508.3	10738.5	11532.2	13376.3	8967.6
67.5°	1069.0	1012.0	829.7	750.3	765.2	864.4	2761.8	7023.0	7943.2	10431.0	7194.2
70°	1013.2	950.0	763.9	672.2	659.8	657.3	1078.9	3667.1	4553.9	6825.8	4819.3
72.5°	950.0	888.0	705.6	607.7	580.4	533.3	648.6	1515.5	2077.3	3345.9	2208.7
75°	858.2	807.3	641.2	554.4	507.2	432.8	478.7	726.7	895.4	1281.1	1025.6
77.5°	755.3	714.3	575.4	509.7	446.5	353.4	365.8	492.3	553.1	721.8	594.0
80°	534.5	549.4	502.3	448.9	393.1	285.2	281.5	360.9	396.9	484.9	399.3
82.5°	368.3	379.5	409.3	354.7	317.5	222.0	207.1	250.5	269.1	292.7	193.5
85°	262.9	255.5	284.0	254.2	233.1	141.4	132.7	158.7	169.9	178.6	93.0
87.5°	160.0	158.7	163.7	131.5	121.5	71.9	65.7	75.6	80.6	78.1	44.6
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°	5298.0	5298.0	5298.0	5298.0	5298.0	5298.0	5298.0	5298.0	5298.0	5298.0	5298.0
2.5°	5289.3	5228.5	5095.8	4989.2	4873.8	4785.8	4697.7	4648.1	4593.5	4562.5	4558.8
5°	5347.6	5223.5	4940.8	4677.9	4407.5	4164.4	3926.3	3750.2	3606.4	3524.5	3519.6
7.5°	5412.0	5217.3	4780.8	4325.7	3844.5	3365.8	2942.9	2644.0	2451.8	2362.5	2356.3
10°	5461.7	5191.3	4586.1	3878.0	3115.3	2482.8	2098.3	1922.2	1864.0	1849.1	1846.6
12.5°	5521.2	5172.7	4340.5	3303.8	2381.1	1890.0	1773.4	1762.3	1774.7	1782.1	1783.3
15°	5577.0	5136.7	4009.4	2667.6	1864.0	1689.1	1691.6	1715.1	1739.9	1751.1	1752.3
17.5°	5603.0	5048.7	3574.1	2102.1	1630.8	1598.6	1627.1	1658.1	1680.4	1689.1	1689.1
20°	5603.0	4907.3	3069.4	1702.7	1509.3	1515.5	1550.2	1573.8	1578.7	1571.3	1567.6
22.5°	5579.5	4732.4	2578.3	1485.7	1410.1	1433.6	1460.9	1444.8	1386.5	1341.8	1333.2
25°	5558.4	4525.3	2105.8	1353.0	1323.2	1354.3	1343.1	1232.7	1143.4	1097.5	1090.1
27.5°	5523.7	4274.8	1711.4	1243.9	1238.9	1263.7	1153.3	1046.7	1002.0	977.2	972.3
30°	5515.0	4003.2	1432.4	1147.1	1155.8	1121.1	994.6	959.9	950.0	936.3	930.1
32.5°	5543.5	3731.6	1257.5	1067.8	1076.5	962.4	914.0	919.0	917.7	900.4	894.2
35°	5621.6	3467.5	1145.9	995.8	971.0	861.9	868.1	883.0	883.0	861.9	854.5
37.5°	5758.0	3221.9	1075.2	935.1	849.5	809.8	825.9	845.8	845.8	830.9	824.7
40°	5903.1	2982.6	1021.9	886.7	772.6	773.9	790.0	804.9	811.1	813.5	808.6
42.5°	6034.6	2734.5	964.8	834.6	737.9	746.6	754.0	765.2	791.2	808.6	806.1
45°	6111.5	2485.3	902.8	770.1	714.3	718.1	715.6	735.4	766.4	792.5	792.5
47.5°	6182.2	2280.6	852.0	705.6	690.8	690.8	683.3	703.2	731.7	762.7	765.2
50°	6249.2	2148.0	816.0	656.0	661.0	657.3	654.8	673.4	711.9	749.1	755.3
52.5°	6317.4	2103.3	783.8	620.1	630.0	625.0	627.5	653.6	697.0	735.4	741.6
55°	6412.9	2131.8	750.3	595.3	600.2	599.0	608.9	638.7	677.1	715.6	718.1
57.5°	6530.7	2236.0	721.8	576.7	571.7	579.2	595.3	623.8	661.0	706.9	710.6
58°	6554.2	2260.8	716.8	571.7	565.5	576.7	592.8	620.1	658.5	706.9	710.6
60°	6590.2	2348.9	704.4	561.8	544.4	564.3	584.1	611.4	653.6	713.1	720.5
62.5°	6416.6	2366.2	700.7	550.6	522.1	546.9	570.5	601.5	648.6	734.2	750.3
65°	5815.1	2187.6	674.6	532.0	503.5	533.3	558.1	594.0	663.5	797.4	804.9
67.5°	4668.0	1816.8	611.4	503.5	482.4	517.1	548.1	594.0	669.7	807.3	812.3
70°	3209.5	1365.4	532.0	472.5	457.6	497.3	544.4	607.7	648.6	763.9	749.1
72.5°	1676.7	950.0	466.3	436.5	427.9	479.9	580.4	594.0	623.8	713.1	698.2
75°	844.5	646.1	410.5	395.6	394.4	473.7	649.8	571.7	597.8	670.9	703.2
77.5°	498.5	506.0	365.8	357.2	363.4	462.6	651.1	549.4	568.0	617.6	652.3
80°	341.0	417.9	331.1	328.6	333.6	425.4	600.2	522.1	533.3	584.1	621.3
82.5°	192.2	230.7	290.2	306.3	303.8	348.5	518.4	475.0	488.6	690.8	730.5
85°	93.0	138.9	243.1	286.5	259.2	231.9	421.7	421.7	425.4	494.8	501.0
87.5°	34.7	62.0	163.7	226.9	181.1	138.9	286.5	298.9	332.4	342.3	349.7
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)