

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: P196492

Luminaire Tested: **NAV-AF-04-D-UNV-AFL-7030-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196492  
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-04-D-UNV-AFL-7030-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 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: 15928.9 lumens  
Efficiency: N/A  
Efficacy: 123.5 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Short - Full Cutoff  
BUG Rating: B2 - U0 - G2

Input Watts (W): 129  
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

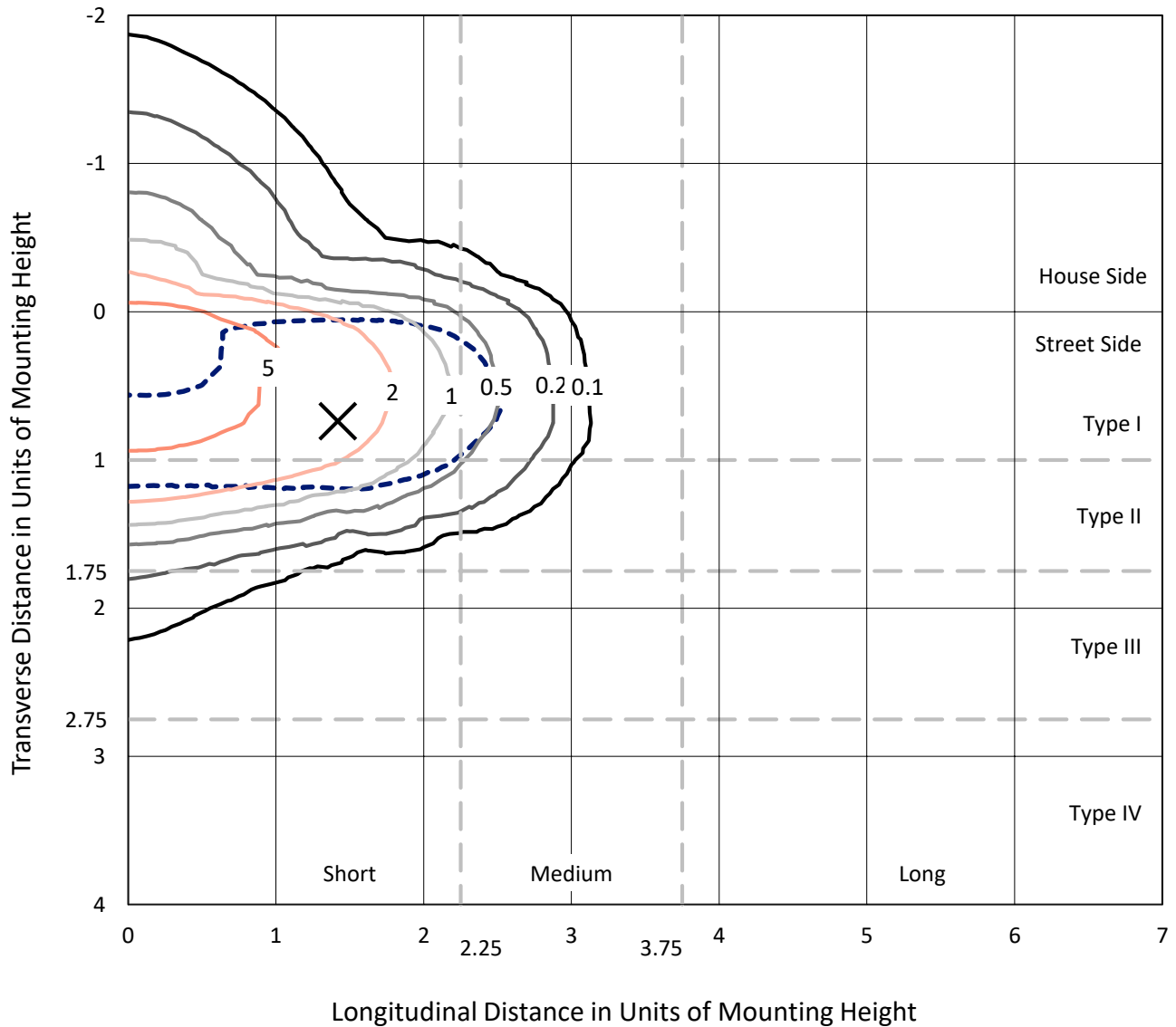


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### Iso-Footcandle Lines of Horizontal Illumination

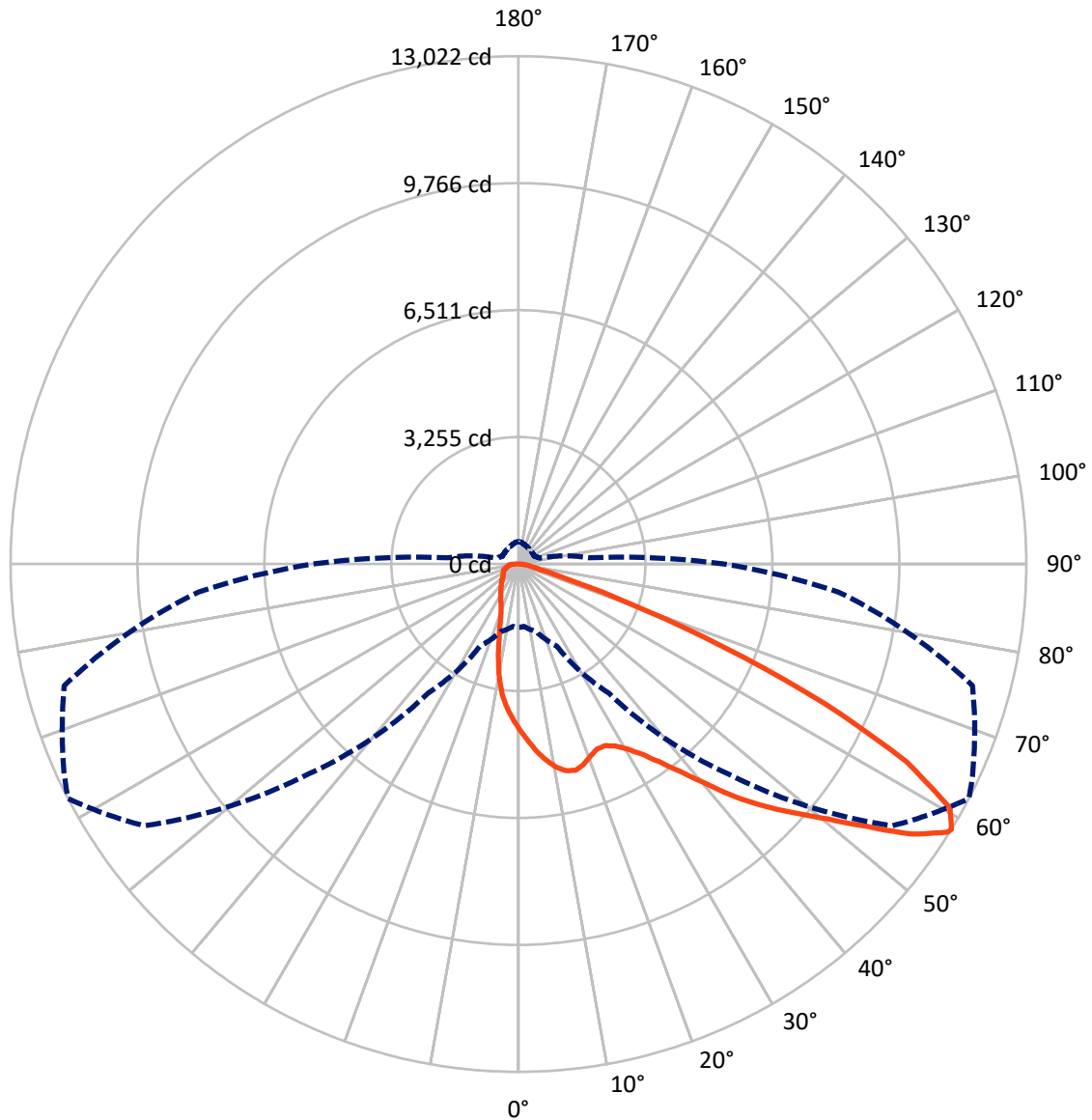
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8 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
<b>House Side</b>	Lumens	2445.7	0.0	2445.7
	% Fixture	15.4	0.0	15.4
<b>Street Side</b>	Lumens	13483.2	0.0	13483.2
	% Fixture	84.6	0.0	84.6
<b>Total</b>	Lumens	15928.9	0.0	15928.9
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	380.1	2.4
10°-20°	959.4	6.0
20°-30°	1554.8	9.8
30°-40°	2482.3	15.6
40°-50°	3610.7	22.7
50°-60°	3778.2	23.7
60°-70°	2303.3	14.5
70°-80°	644.1	4.0
80°-90°	215.9	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°	15928.9	100.0
0°-180°	15928.9	100.0



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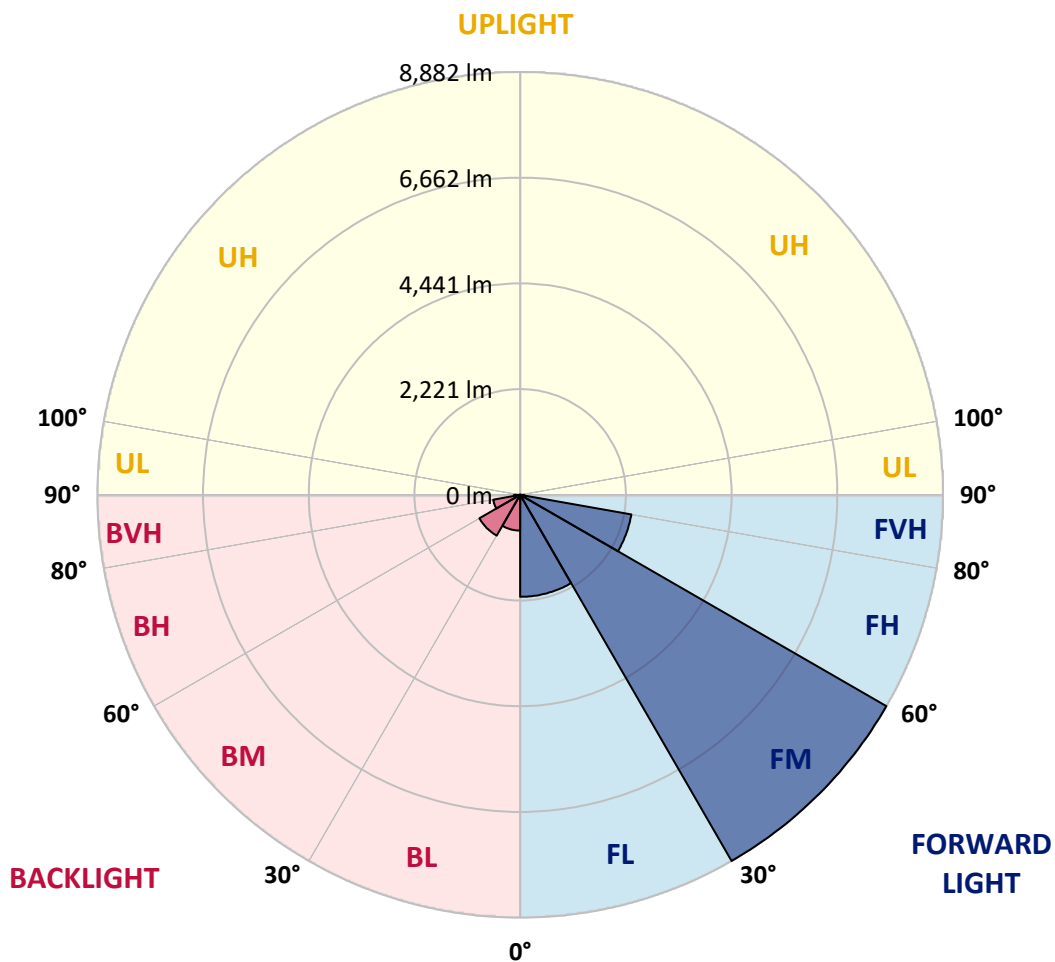
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2142.5	13.5			
FM	(30°-60°)	8882.1	55.8			
FH	(60°-80°)	2371.7	14.9			G2/5000
FVH	(80°-90°)	86.9	0.5			G1/100
BL	(0°-30°)	751.8	4.7	B2/1000		
BM	(30°-60°)	989.1	6.2	B1/1000		
BH	(60°-80°)	575.8	3.6	B2/1000		G2/1000
BVH	(80°-90°)	129.1	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°	4252.9	4252.9	4252.9	4252.9	4252.9	4252.9	4252.9	4252.9	4252.9	4252.9	4252.9
2.5°	4827.3	4824.4	4783.5	4756.6	4724.8	4651.1	4577.4	4522.7	4494.8	4388.3	4284.8
5°	5226.5	5214.6	5191.7	5162.8	5121.0	5028.4	4912.0	4811.4	4771.6	4582.5	4392.3
7.5°	5015.4	5034.4	5105.1	5184.7	5268.4	5274.4	5191.7	5072.3	5028.4	4775.6	4496.8
10°	4431.1	4423.2	4511.8	4667.0	4942.8	5215.6	5351.9	5293.3	5247.5	4958.7	4601.4
12.5°	4253.9	4252.0	4266.9	4306.7	4479.8	4854.2	5311.2	5438.6	5422.6	5152.8	4712.9
15°	4307.6	4309.6	4308.6	4313.7	4361.4	4539.6	5083.2	5487.3	5537.2	5345.0	4826.3
17.5°	4479.8	4473.0	4451.0	4427.1	4434.1	4497.7	4837.4	5403.8	5553.1	5516.3	4921.9
20°	4745.6	4745.6	4687.0	4620.2	4576.5	4590.4	4734.8	5260.4	5479.5	5661.6	4993.5
22.5°	5079.3	5084.2	4997.5	4876.1	4776.6	4738.7	4793.5	5153.9	5389.8	5795.9	5057.3
25°	5493.3	5492.4	5365.9	5191.7	5034.4	4943.8	4942.8	5158.9	5361.9	5953.3	5124.0
27.5°	6006.1	5959.2	5811.9	5564.0	5342.0	5203.7	5140.9	5284.4	5420.7	6146.4	5213.7
30°	6584.4	6536.7	6343.5	6025.0	5724.3	5522.2	5418.7	5501.3	5599.9	6392.3	5349.0
32.5°	7156.9	7167.9	6940.8	6581.4	6195.2	5910.5	5757.2	5807.9	5876.6	6693.0	5532.2
35°	7995.1	7994.2	7697.5	7248.5	6789.5	6395.3	6201.1	6228.0	6290.8	7117.0	5789.0
37.5°	8620.3	8610.4	8419.2	8022.1	7505.3	7032.5	6751.6	6755.7	6809.5	7649.7	6127.5
40°	8684.0	8682.1	8681.0	8624.3	8270.9	7824.9	7473.5	7400.7	7422.6	8215.1	6486.9
42.5°	8197.1	8269.9	8478.9	8799.5	8898.1	8664.1	8331.6	8169.4	8121.6	8864.2	6867.2
45°	7503.4	7540.2	7906.5	8627.3	9213.7	9452.6	9202.7	8860.3	8778.7	9495.4	7176.8
47.5°	7180.7	7164.9	7376.8	8162.3	9182.8	10079.7	10097.6	9536.2	9397.8	10040.0	7440.5
50°	6488.9	6467.9	6735.8	7478.5	8846.2	10391.3	11016.6	10272.9	10017.0	10557.6	7679.5
52.5°	5110.0	5090.2	5449.6	6406.2	8093.7	10274.8	11791.0	11176.9	10740.8	11056.4	7902.5
55°	3325.1	3327.1	3669.6	4656.1	6549.6	9595.9	12154.4	12221.2	11732.4	11555.1	8082.7
57.5°	1830.7	1813.8	2057.8	2664.1	4505.8	8053.8	11851.8	12973.8	12718.9	11983.2	8213.1
58°	1627.8	1607.7	1795.9	2318.6	4039.9	7618.7	11699.5	13021.5	12845.4	12053.9	8232.0
60°	1159.8	1125.9	1097.1	1307.2	2327.5	5493.3	10684.0	12712.0	12882.2	12195.3	8214.1
62.5°	977.7	938.7	835.3	827.3	1096.1	2686.9	8449.1	11163.9	11640.8	11869.7	7925.4
65°	908.0	869.0	732.7	684.0	743.6	1159.8	5224.6	8620.3	9257.4	10737.8	7198.6
67.5°	858.1	812.4	666.1	602.3	614.2	693.9	2217.1	5637.7	6376.4	8373.4	5775.1
70°	813.3	762.6	613.3	539.6	529.6	527.6	866.1	2943.8	3655.6	5479.5	3868.7
72.5°	762.6	712.8	566.5	487.9	465.9	428.1	520.6	1216.5	1667.6	2685.9	1773.1
75°	688.9	648.1	514.7	445.0	407.2	347.5	384.3	583.3	718.8	1028.3	823.3
77.5°	606.3	573.4	461.9	409.1	358.4	283.7	293.7	395.2	444.0	579.4	476.8
80°	429.1	441.0	403.1	360.3	315.5	229.0	225.9	289.6	318.6	389.3	320.5
82.5°	295.6	304.7	328.6	284.7	254.9	178.2	166.3	201.1	216.0	234.9	155.2
85°	211.1	205.1	228.1	204.1	187.2	113.5	106.5	127.4	136.3	143.3	74.7
87.5°	128.4	127.4	131.4	105.6	97.6	57.7	52.8	60.7	64.7	62.8	35.8
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°	4252.9	4252.9	4252.9	4252.9	4252.9	4252.9	4252.9	4252.9	4252.9	4252.9	4252.9
2.5°	4246.0	4197.2	4090.6	4005.0	3912.5	3841.8	3771.1	3731.2	3687.5	3662.6	3659.5
5°	4292.7	4193.2	3966.2	3755.1	3538.2	3343.0	3151.8	3010.5	2895.1	2829.3	2825.3
7.5°	4344.4	4188.2	3837.7	3472.4	3086.1	2701.9	2362.4	2122.5	1968.2	1896.5	1891.5
10°	4384.3	4167.2	3681.5	3113.1	2500.7	1993.1	1684.4	1543.1	1496.3	1484.3	1482.3
12.5°	4432.1	4152.4	3484.4	2652.0	1911.4	1517.2	1423.6	1414.7	1424.6	1430.5	1431.7
15°	4476.9	4123.5	3218.6	2141.4	1496.3	1355.9	1357.9	1376.7	1396.8	1405.7	1406.7
17.5°	4497.7	4052.9	2869.1	1687.4	1309.2	1283.2	1306.0	1331.0	1349.0	1355.9	1355.9
20°	4497.7	3939.4	2463.9	1366.9	1211.5	1216.5	1244.5	1263.4	1267.3	1261.3	1258.3
22.5°	4478.9	3799.0	2069.7	1192.7	1131.9	1150.8	1172.8	1159.8	1113.1	1077.2	1070.2
25°	4461.9	3632.7	1690.5	1086.1	1062.2	1087.1	1078.2	989.6	917.9	881.0	875.0
27.5°	4434.1	3431.7	1373.8	998.5	994.6	1014.5	925.9	840.2	804.3	784.5	780.5
30°	4427.1	3213.6	1149.9	920.8	927.8	900.0	798.4	770.5	762.6	751.6	746.7
32.5°	4450.0	2995.6	1009.4	857.1	864.1	772.6	733.6	737.7	736.7	722.8	717.9
35°	4512.7	2783.5	919.9	799.4	779.4	691.9	696.8	708.8	708.8	691.9	685.9
37.5°	4622.2	2586.3	863.1	750.6	681.9	650.1	662.9	678.9	678.9	667.0	662.0
40°	4738.7	2394.3	820.3	711.9	620.3	621.2	634.1	646.0	651.0	653.1	649.1
42.5°	4844.2	2195.1	774.5	670.0	592.3	599.3	605.3	614.2	635.2	649.1	647.2
45°	4906.0	1995.1	724.7	618.2	573.4	576.5	574.3	590.3	615.2	636.1	636.1
47.5°	4962.8	1830.7	684.0	566.5	554.5	554.5	548.6	564.5	587.4	612.3	614.2
50°	5016.5	1724.2	655.0	526.6	530.7	527.6	525.6	540.7	571.4	601.3	606.3
52.5°	5071.3	1688.4	629.3	497.7	505.8	501.7	503.6	524.7	559.5	590.3	595.4
55°	5147.9	1711.3	602.3	477.9	481.9	480.8	488.8	512.8	543.6	574.3	576.5
57.5°	5242.5	1794.9	579.4	462.9	458.9	464.9	477.9	500.7	530.7	567.5	570.5
58°	5261.4	1814.9	575.5	458.9	454.0	462.9	475.9	497.7	528.6	567.5	570.5
60°	5290.3	1885.5	565.4	451.0	437.0	453.0	468.9	490.8	524.7	572.4	578.4
62.5°	5150.9	1899.5	562.4	442.1	419.1	439.0	457.9	482.8	520.6	589.4	602.3
65°	4668.1	1756.2	541.6	427.1	404.2	428.1	448.0	476.8	532.6	640.1	646.0
67.5°	3747.1	1458.5	490.8	404.2	387.3	415.1	440.0	476.8	537.5	648.1	652.1
70°	2576.5	1096.1	427.1	379.3	367.3	399.3	437.0	487.9	520.6	613.3	601.3
72.5°	1346.0	762.6	374.3	350.4	343.5	385.2	465.9	476.8	500.7	572.4	560.5
75°	678.0	518.7	329.5	317.6	316.7	380.3	521.7	458.9	479.8	538.5	564.5
77.5°	400.2	406.2	293.7	286.7	291.7	371.4	522.7	441.0	455.9	495.8	523.7
80°	273.8	335.5	265.8	263.9	267.8	341.4	481.9	419.1	428.1	468.9	498.8
82.5°	154.3	185.2	232.9	246.0	243.8	279.7	416.2	381.4	392.2	554.5	586.4
85°	74.7	111.6	195.1	230.0	208.0	186.2	338.4	338.4	341.4	397.2	402.2
87.5°	27.9	49.8	131.4	182.1	145.4	111.6	230.0	240.0	266.8	274.8	280.7
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)