

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: P196497

Luminaire Tested: **NAV-AF-03-D-UNV-AFL-7030-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196497  
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-03-D-UNV-AFL-7030-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 14503.1 lumens  
Efficiency: N/A  
Efficacy: 117.0 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type II - Short - Full Cutoff  
BUG Rating: B2 - U0 - G2

Input Watts (W): 124  
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

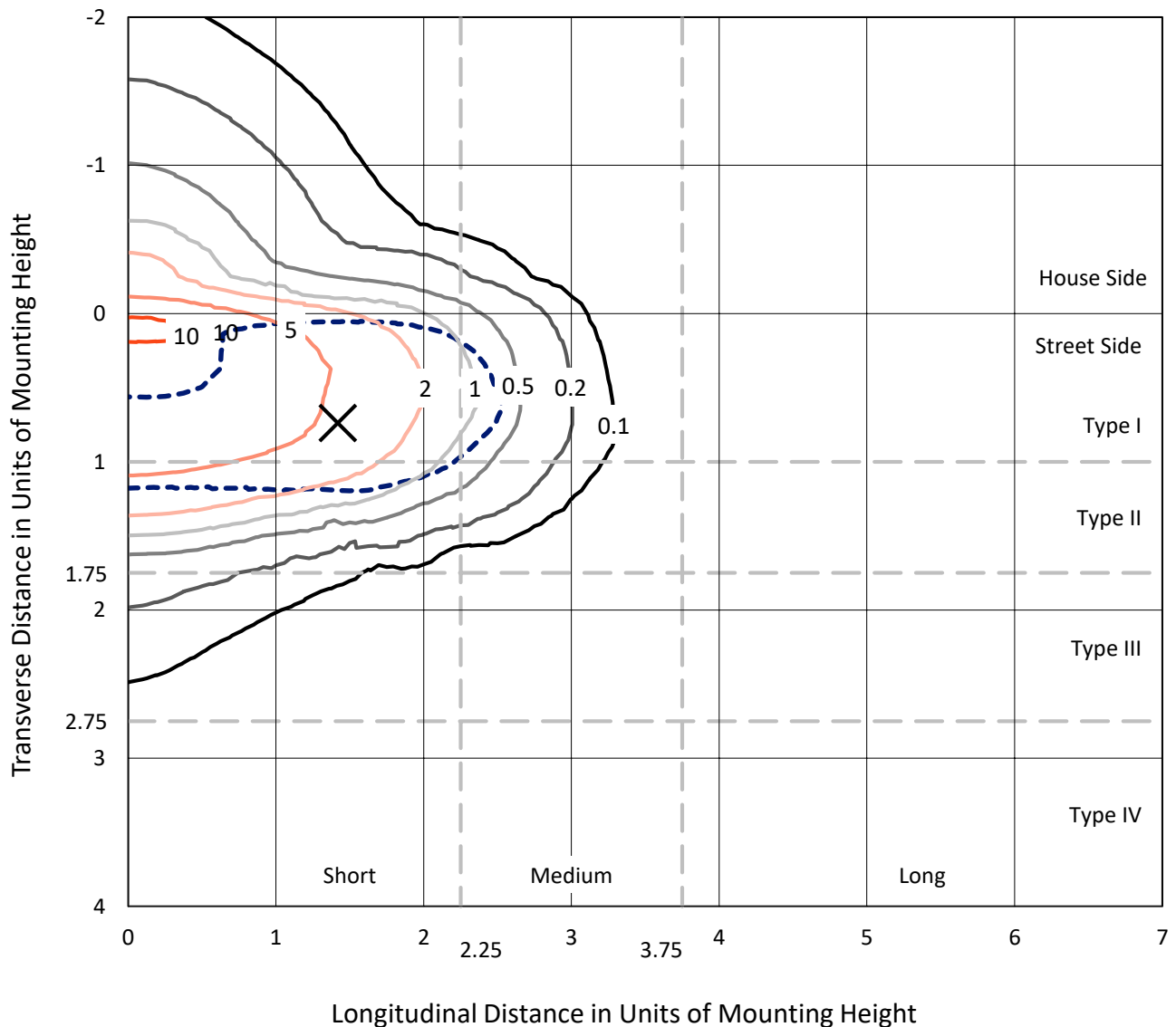


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### Iso-Footcandle Lines of Horizontal Illumination

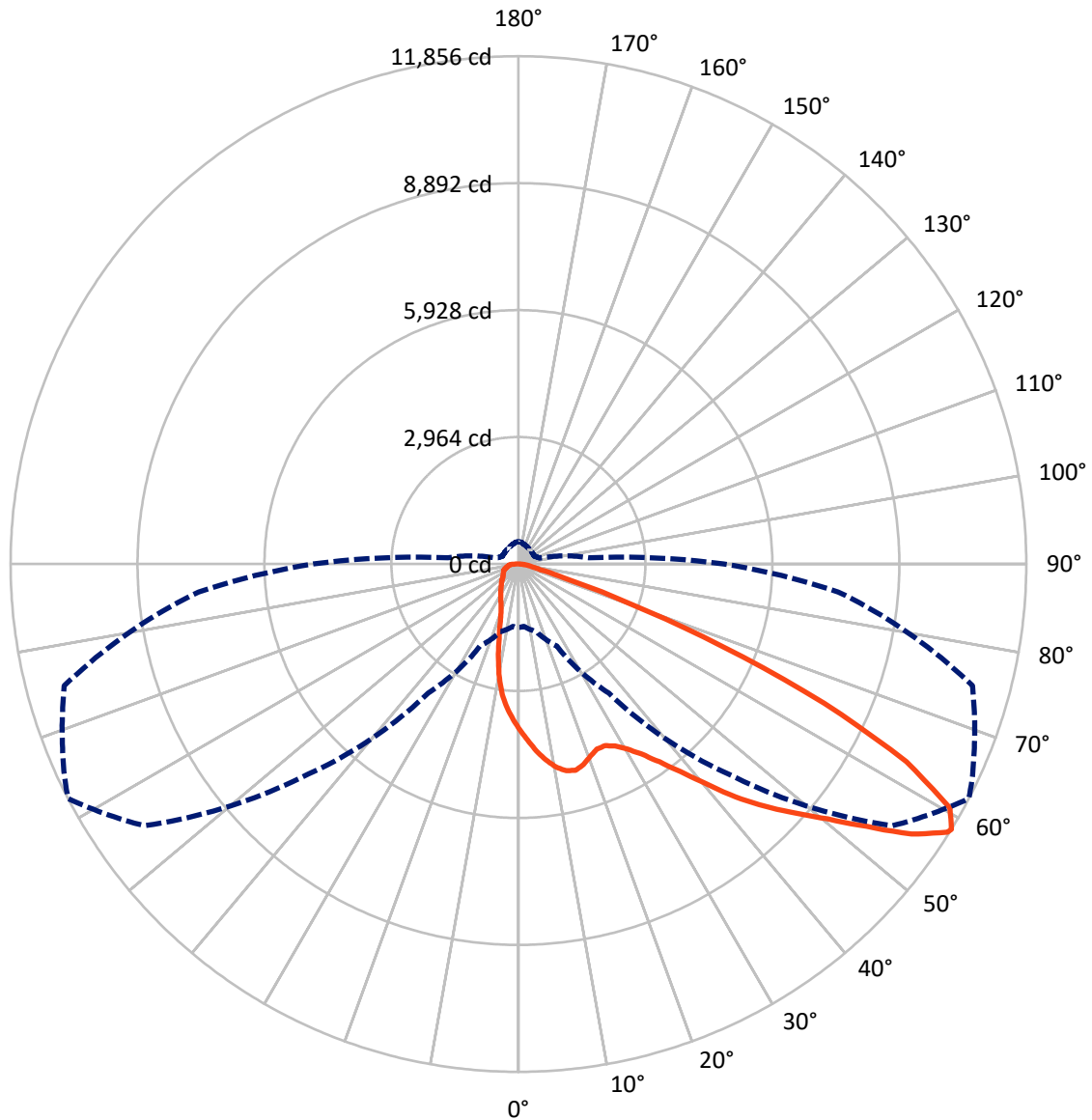
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 11.3 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	2226.8	0.0	2226.8
	% Fixture	15.4	0.0	15.4
<b>Street Side</b>	Lumens	12276.3	0.0	12276.3
	% Fixture	84.6	0.0	84.6
<b>Total</b>	Lumens	14503.1	0.0	14503.1
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	346.1	2.4
10°-20°	873.5	6.0
20°-30°	1415.6	9.8
30°-40°	2260.1	15.6
40°-50°	3287.5	22.7
50°-60°	3440.0	23.7
60°-70°	2097.2	14.5
70°-80°	586.5	4.0
80°-90°	196.6	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°	14503.1	100.0
0°-180°	14503.1	100.0

**Coefficient of Utilization**



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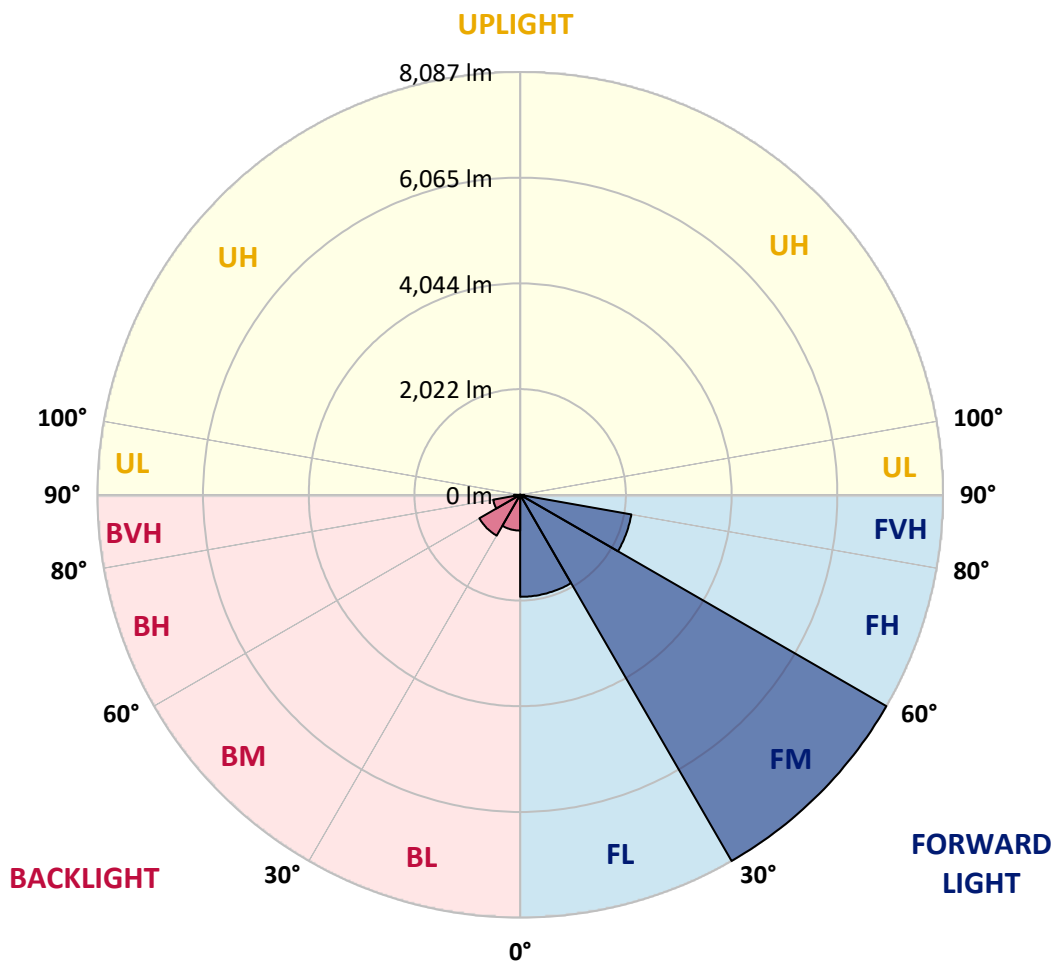
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1950.7	13.5			
FM	(30°-60°)	8087.1	55.8			
FH	(60°-80°)	2159.4	14.9			G2/5000
FVH	(80°-90°)	79.1	0.5			G1/100
BL	(0°-30°)	684.5	4.7	B2/1000		
BM	(30°-60°)	900.5	6.2	B1/1000		
BH	(60°-80°)	524.2	3.6	B2/1000		G2/1000
BVH	(80°-90°)	117.5	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°	3872.2	3872.2	3872.2	3872.2	3872.2	3872.2	3872.2	3872.2	3872.2	3872.2	3872.2
2.5°	4395.3	4392.6	4355.4	4330.9	4301.9	4234.8	4167.7	4117.9	4092.6	3995.5	3901.2
5°	4758.7	4747.9	4727.0	4700.7	4662.6	4578.3	4472.3	4380.8	4344.4	4172.3	3999.1
7.5°	4566.5	4583.8	4648.1	4720.6	4796.8	4802.2	4727.0	4618.2	4578.3	4348.1	4094.3
10°	4034.5	4027.2	4107.9	4249.3	4500.4	4748.7	4873.0	4819.4	4777.7	4514.9	4189.4
12.5°	3873.1	3871.3	3884.9	3921.2	4078.8	4419.7	4835.7	4951.7	4937.3	4691.6	4290.9
15°	3922.1	3923.9	3923.0	3927.6	3971.0	4133.3	4628.2	4996.2	5041.6	4866.5	4394.3
17.5°	4078.8	4072.5	4052.7	4030.9	4037.2	4095.2	4404.2	4920.1	5056.0	5022.4	4481.4
20°	4320.8	4320.8	4267.4	4206.7	4166.8	4179.5	4311.0	4789.5	4988.9	5154.9	4546.6
22.5°	4624.5	4629.1	4550.2	4439.6	4348.9	4314.5	4364.4	4692.5	4907.4	5277.2	4604.6
25°	5001.7	5000.7	4885.6	4727.0	4583.8	4501.3	4500.4	4697.0	4882.0	5420.4	4665.4
27.5°	5468.4	5425.9	5291.7	5066.1	4863.9	4737.8	4680.7	4811.2	4935.5	5596.3	4746.9
30°	5995.0	5951.6	5775.7	5485.7	5211.8	5027.9	4933.6	5008.9	5098.6	5820.1	4870.2
32.5°	6516.2	6526.3	6319.5	5992.4	5640.6	5381.4	5241.8	5288.0	5350.7	6093.8	5037.0
35°	7279.5	7278.6	7008.4	6599.7	6181.8	5822.9	5646.1	5670.5	5727.7	6479.9	5270.8
37.5°	7848.6	7839.7	7665.6	7304.0	6833.5	6402.9	6147.4	6151.0	6199.9	6964.9	5579.0
40°	7906.6	7904.9	7904.1	7852.4	7530.5	7124.5	6804.4	6738.3	6758.2	7479.8	5906.2
42.5°	7463.5	7529.6	7719.9	8011.9	8101.6	7888.5	7585.9	7438.1	7394.5	8070.8	6252.5
45°	6831.7	6865.2	7198.8	7855.0	8388.9	8606.5	8379.0	8067.1	7992.9	8645.4	6534.4
47.5°	6538.0	6523.6	6716.6	7431.7	8360.8	9177.4	9193.8	8682.7	8556.6	9141.2	6774.6
50°	5908.0	5889.0	6132.8	6809.0	8054.5	9461.2	10030.4	9353.3	9120.4	9612.6	6992.1
52.5°	4652.7	4634.6	4961.8	5832.8	7369.2	9355.1	10735.6	10176.4	9779.4	10066.7	7195.2
55°	3027.5	3029.2	3341.0	4239.4	5963.4	8737.0	11066.5	11127.2	10682.2	10520.8	7359.2
57.5°	1666.9	1651.5	1873.6	2425.5	4102.4	7332.9	10790.9	11812.4	11580.4	10910.6	7477.9
58°	1482.0	1463.8	1635.2	2111.0	3678.2	6936.9	10652.2	11855.9	11695.5	10975.0	7495.1
60°	1056.0	1025.2	998.8	1190.2	2119.2	5001.7	9727.7	11574.1	11729.1	11103.7	7478.9
62.5°	890.1	854.7	760.5	753.3	998.0	2446.5	7692.8	10164.6	10598.8	10807.3	7216.0
65°	826.6	791.2	667.1	622.7	677.1	1056.0	4756.9	7848.6	8428.8	9776.6	6554.4
67.5°	781.3	739.6	606.4	548.4	559.3	631.7	2018.6	5133.1	5805.6	7623.9	5258.1
70°	740.6	694.4	558.4	491.2	482.2	480.4	788.7	2680.2	3328.4	4988.9	3522.3
72.5°	694.4	649.0	515.7	444.1	424.3	389.7	474.0	1107.7	1518.2	2445.5	1614.3
75°	627.2	590.1	468.6	405.2	370.7	316.3	349.8	531.1	654.5	936.4	749.6
77.5°	552.0	522.1	420.5	372.6	326.3	258.3	267.3	359.9	404.3	527.5	434.2
80°	390.7	401.5	367.1	328.1	287.4	208.4	205.7	263.8	290.1	354.4	291.8
82.5°	269.3	277.4	299.2	259.3	232.0	162.2	151.4	183.1	196.6	213.9	141.4
85°	192.2	186.8	207.6	185.8	170.5	103.4	97.0	116.1	124.2	130.6	68.0
87.5°	116.9	116.1	119.6	96.0	88.8	52.6	48.1	55.2	58.9	57.2	32.7
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°	3872.2	3872.2	3872.2	3872.2	3872.2	3872.2	3872.2	3872.2	3872.2	3872.2	3872.2
2.5°	3865.9	3821.5	3724.4	3646.5	3562.2	3497.8	3433.5	3397.3	3357.4	3334.7	3332.0
5°	3908.5	3817.8	3611.1	3419.0	3221.4	3043.8	2869.7	2741.0	2635.9	2576.0	2572.4
7.5°	3955.6	3813.2	3494.2	3161.6	2809.9	2460.0	2151.0	1932.5	1792.0	1726.8	1722.2
10°	3991.9	3794.2	3352.0	2834.4	2277.0	1814.7	1533.7	1405.0	1362.4	1351.4	1349.7
12.5°	4035.4	3780.7	3172.5	2414.7	1740.3	1381.4	1296.2	1288.0	1297.1	1302.5	1303.5
15°	4076.1	3754.3	2930.5	1949.7	1362.4	1234.5	1236.4	1253.5	1271.7	1279.9	1280.7
17.5°	4095.2	3690.0	2612.3	1536.4	1191.9	1168.4	1189.2	1211.9	1228.2	1234.5	1234.5
20°	4095.2	3586.7	2243.4	1244.5	1103.1	1107.7	1133.0	1150.3	1153.9	1148.5	1145.7
22.5°	4078.0	3458.9	1884.4	1085.9	1030.7	1047.8	1067.8	1056.0	1013.4	980.7	974.4
25°	4062.6	3307.5	1539.1	988.9	967.2	989.8	981.7	901.0	835.8	802.2	796.7
27.5°	4037.2	3124.4	1250.9	909.1	905.5	923.7	842.9	765.1	732.4	714.2	710.6
30°	4030.9	2926.0	1046.9	838.4	844.8	819.5	726.9	701.6	694.4	684.4	679.8
32.5°	4051.7	2727.4	919.1	780.4	786.7	703.4	668.0	671.6	670.8	658.1	653.5
35°	4108.8	2534.4	837.6	727.8	709.7	630.0	634.5	645.4	645.4	630.0	624.5
37.5°	4208.5	2354.9	785.9	683.4	620.9	591.8	603.6	618.2	618.2	607.3	602.8
40°	4314.5	2179.9	746.9	648.1	564.7	565.6	577.4	588.3	592.8	594.6	591.0
42.5°	4410.7	1998.7	705.2	610.0	539.3	545.6	551.1	559.3	578.3	591.0	589.1
45°	4466.8	1816.4	659.9	562.9	522.1	524.8	523.1	537.5	560.2	579.2	579.2
47.5°	4518.5	1666.9	622.7	515.7	504.9	504.9	499.5	513.9	534.9	557.4	559.3
50°	4567.5	1569.9	596.4	479.5	483.2	480.4	478.5	492.2	520.3	547.5	552.0
52.5°	4617.3	1537.3	572.8	453.2	460.4	456.8	458.7	477.7	509.3	537.5	542.0
55°	4687.1	1558.1	548.4	435.1	438.6	437.8	445.0	466.7	495.0	523.1	524.8
57.5°	4773.2	1634.3	527.5	421.5	417.8	423.3	435.1	455.9	483.2	516.7	519.4
58°	4790.5	1652.4	523.9	417.8	413.3	421.5	433.3	453.2	481.3	516.7	519.4
60°	4816.7	1716.8	514.8	410.6	397.9	412.5	426.8	446.9	477.7	521.1	526.6
62.5°	4689.9	1729.5	512.1	402.4	381.7	399.8	417.0	439.7	474.0	536.6	548.4
65°	4250.1	1598.9	493.1	388.9	367.9	389.7	407.9	434.2	484.9	582.8	588.3
67.5°	3411.7	1327.9	446.9	367.9	352.6	377.9	400.7	434.2	489.5	590.1	593.8
70°	2345.8	998.0	388.9	345.4	334.5	363.5	397.9	444.1	474.0	558.4	547.5
72.5°	1225.5	694.4	340.8	319.0	312.7	350.8	424.3	434.2	455.9	521.1	510.4
75°	617.4	472.2	300.0	289.1	288.2	346.3	474.9	417.8	436.9	490.3	513.9
77.5°	364.4	369.9	267.3	261.0	265.6	338.0	475.9	401.5	415.1	451.4	476.8
80°	249.2	305.5	242.0	240.2	243.8	311.0	438.6	381.7	389.7	426.8	454.1
82.5°	140.5	168.6	212.1	223.9	222.2	254.7	378.9	347.1	357.2	504.9	533.8
85°	68.0	101.5	177.6	209.3	189.4	169.5	308.2	308.2	311.0	361.6	366.2
87.5°	25.3	45.4	119.6	165.8	132.3	101.5	209.3	218.4	242.9	250.2	255.5
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)