

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: P270574

Luminaire Tested: **NAV-AF-05-D-UNV-AFL-7027-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270574  
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-05-D-UNV-AFL-7027-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 17636.2 lumens  
Efficiency: N/A  
Efficacy: 108.9 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): 162  
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

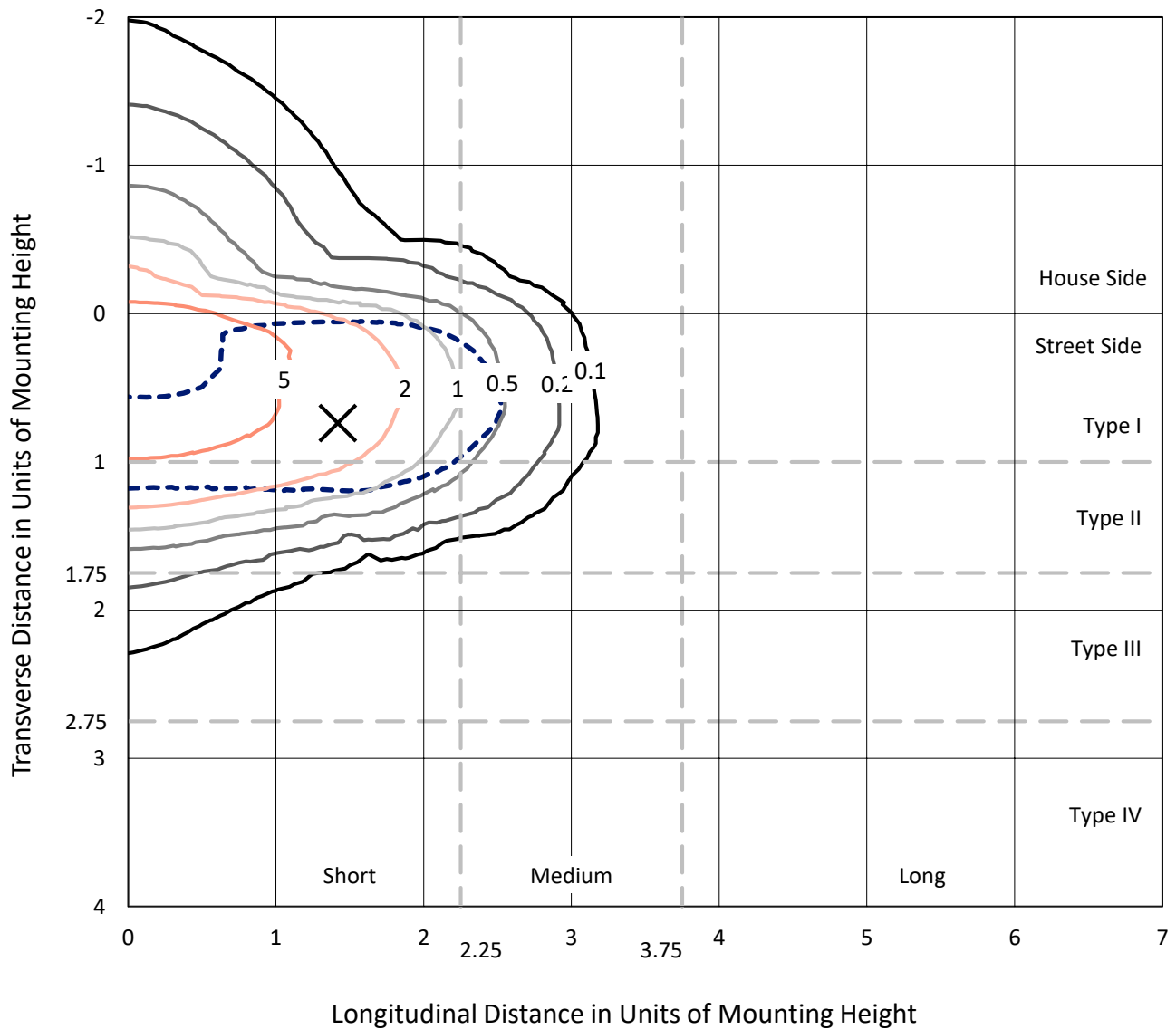


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### Iso-Footcandle Lines of Horizontal Illumination

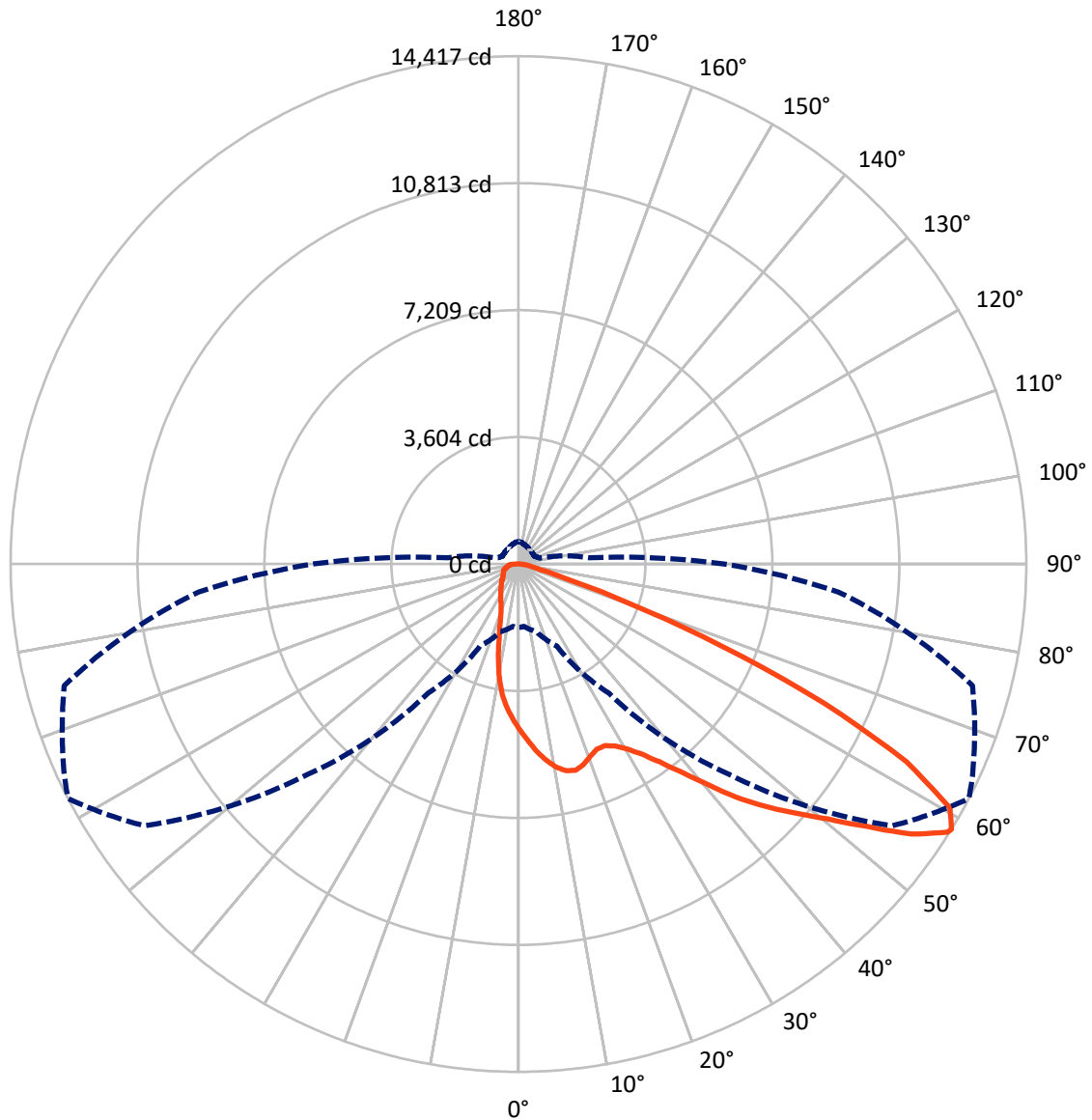
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.8 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	2707.8	0.0	2707.8
	% Fixture	15.4	0.0	15.4
<b>Street Side</b>	Lumens	14928.4	0.0	14928.4
	% Fixture	84.6	0.0	84.6
<b>Total</b>	Lumens	17636.2	0.0	17636.2
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	420.9	2.4
10°-20°	1062.2	6.0
20°-30°	1721.4	9.8
30°-40°	2748.4	15.6
40°-50°	3997.7	22.7
50°-60°	4183.2	23.7
60°-70°	2550.2	14.5
70°-80°	713.2	4.0
80°-90°	239.1	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°	17636.2	100.0
0°-180°	17636.2	100.0



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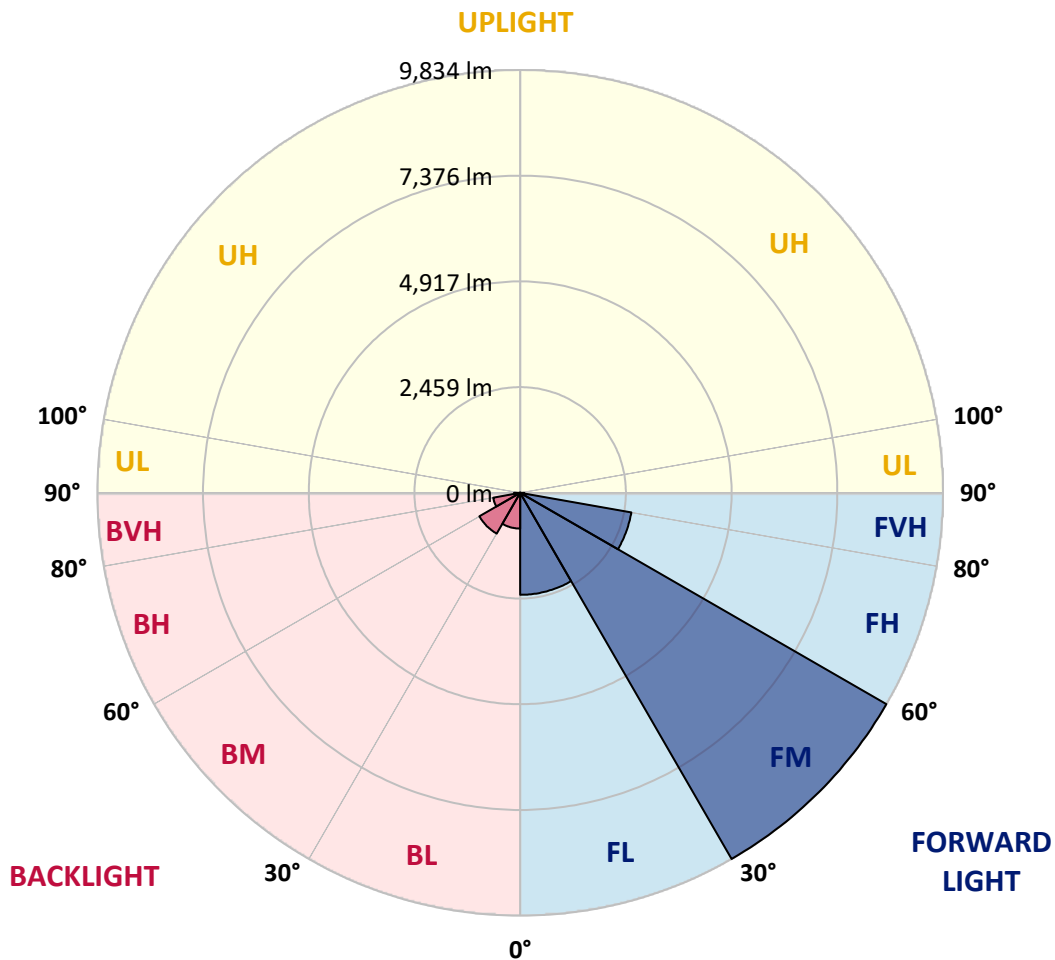
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2372.1	13.5			
FM	(30°-60°)	9834.2	55.8			
FH	(60°-80°)	2625.9	14.9			G2/5000
FVH	(80°-90°)	96.2	0.5			G1/100
BL	(0°-30°)	832.4	4.7	B2/1000		
BM	(30°-60°)	1095.1	6.2	B2/2500		
BH	(60°-80°)	637.5	3.6	B2/1000		G2/1000
BVH	(80°-90°)	142.9	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°	4708.7	4708.7	4708.7	4708.7	4708.7	4708.7	4708.7	4708.7	4708.7	4708.7	4708.7
2.5°	5344.7	5341.4	5296.2	5266.6	5231.2	5149.7	5068.1	5007.4	4976.6	4858.7	4743.9
5°	5786.7	5773.5	5748.2	5716.3	5669.9	5567.3	5438.5	5327.0	5283.0	5073.5	4863.1
7.5°	5553.1	5574.1	5652.2	5740.4	5833.1	5839.6	5748.2	5615.9	5567.3	5287.5	4978.8
10°	4906.1	4897.2	4995.4	5167.3	5472.7	5774.7	5925.6	5860.6	5809.9	5490.3	5094.6
12.5°	4709.9	4707.7	4724.1	4768.3	4960.1	5374.5	5880.5	6021.5	6003.9	5705.1	5218.0
15°	4769.5	4771.5	4770.4	4776.0	4828.8	5026.1	5628.1	6075.5	6130.7	5917.9	5343.7
17.5°	4960.1	4952.4	4928.1	4901.6	4909.3	4979.9	5355.8	5982.9	6148.3	6107.4	5449.5
20°	5254.4	5254.4	5189.2	5115.5	5067.0	5082.4	5242.2	5824.3	6066.8	6268.5	5528.8
22.5°	5623.6	5629.0	5533.2	5398.8	5288.5	5246.6	5307.2	5706.4	5967.5	6417.2	5599.3
25°	6082.2	6081.0	5941.1	5748.2	5574.1	5473.7	5472.7	5711.9	5936.7	6591.4	5673.2
27.5°	6649.9	6598.1	6434.9	6160.3	5914.6	5761.4	5692.0	5850.8	6001.7	6805.2	5772.4
30°	7290.3	7237.3	7023.5	6670.8	6337.9	6114.1	5999.5	6091.0	6200.1	7077.4	5922.3
32.5°	7923.9	7936.2	7684.8	7287.0	6859.2	6544.1	6374.3	6430.4	6506.6	7410.4	6125.2
35°	8852.1	8851.0	8522.5	8025.4	7517.2	7080.8	6865.8	6895.6	6965.1	7879.9	6409.4
37.5°	9544.3	9533.3	9321.6	8881.8	8309.9	7786.1	7475.3	7479.7	7539.4	8469.6	6784.3
40°	9614.7	9612.7	9611.5	9548.8	9157.4	8663.7	8274.5	8194.0	8218.2	9095.7	7182.2
42.5°	9075.8	9156.3	9387.7	9742.7	9851.8	9592.8	9224.6	9044.9	8992.0	9814.3	7603.3
45°	8307.5	8348.4	8754.0	9551.9	10201.2	10465.8	10189.0	9809.9	9719.5	10513.1	7946.0
47.5°	7950.4	7932.8	8167.6	9037.3	10167.0	11160.2	11179.9	10558.4	10405.1	11116.0	8238.1
50°	7184.4	7161.3	7457.8	8279.9	9794.5	11505.1	12197.4	11374.0	11090.7	11689.3	8502.6
52.5°	5657.7	5635.7	6033.6	7092.8	8961.2	11376.1	13054.9	12374.8	11892.0	12241.5	8749.6
55°	3681.4	3683.7	4062.9	5155.2	7251.6	10624.4	13457.1	13531.1	12989.9	12793.8	8949.0
57.5°	2027.0	2008.3	2278.3	2949.6	4988.7	8917.1	13122.1	14364.3	14082.2	13267.6	9093.5
58°	1802.2	1780.1	1988.5	2567.0	4472.9	8435.4	12953.5	14417.3	14222.1	13345.8	9114.5
60°	1284.0	1246.7	1214.7	1447.2	2577.1	6082.2	11829.2	14074.5	14263.0	13502.5	9094.6
62.5°	1082.4	1039.3	924.7	915.9	1213.6	2974.9	9354.7	12360.5	12888.4	13141.9	8775.0
65°	1005.3	962.3	811.3	757.2	823.3	1284.0	5784.5	9544.3	10249.8	11888.8	7970.3
67.5°	950.1	899.5	737.4	666.8	680.0	768.3	2454.7	6242.0	7059.8	9270.9	6394.0
70°	900.6	844.2	678.9	597.5	586.5	584.2	958.9	3259.3	4047.5	6066.8	4283.3
72.5°	844.2	789.3	627.1	540.2	515.8	473.9	576.4	1346.9	1846.2	2973.7	1963.1
75°	762.8	717.6	569.9	492.7	450.8	384.7	425.4	645.9	795.8	1138.6	911.5
77.5°	671.3	634.9	511.5	453.0	396.8	314.1	325.1	437.6	491.6	641.5	527.9
80°	475.1	488.3	446.4	398.9	349.4	253.5	250.2	320.8	352.8	430.9	354.9
82.5°	327.3	337.3	363.8	315.2	282.2	197.3	184.1	222.7	239.2	260.1	171.9
85°	233.6	227.0	252.5	226.0	207.1	125.7	117.9	141.0	151.1	158.7	82.6
87.5°	142.2	141.0	145.4	116.8	108.1	63.9	58.4	67.3	71.7	69.4	39.6
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°	4708.7	4708.7	4708.7	4708.7	4708.7	4708.7	4708.7	4708.7	4708.7	4708.7	4708.7
2.5°	4701.0	4647.0	4529.2	4434.4	4331.7	4253.6	4175.3	4131.1	4082.6	4055.0	4051.9
5°	4752.8	4642.6	4391.4	4157.6	3917.4	3701.3	3489.6	3333.3	3205.3	3132.6	3128.2
7.5°	4810.2	4637.1	4249.2	3844.6	3417.0	2991.4	2615.7	2350.0	2179.1	2099.8	2094.3
10°	4854.3	4614.0	4076.1	3446.6	2768.8	2206.6	1865.1	1708.4	1656.7	1643.4	1641.3
12.5°	4907.3	4597.4	3857.9	2936.4	2116.2	1679.8	1576.2	1566.3	1577.3	1583.9	1585.0
15°	4956.8	4565.5	3563.5	2370.8	1656.7	1501.2	1503.5	1524.5	1546.4	1556.4	1557.4
17.5°	4979.9	4487.3	3176.6	1868.3	1449.4	1420.8	1446.1	1473.7	1493.5	1501.2	1501.2
20°	4979.9	4361.5	2728.1	1513.4	1341.3	1346.9	1377.8	1398.8	1403.2	1396.5	1393.2
22.5°	4959.0	4206.1	2291.5	1320.5	1253.2	1274.2	1298.4	1284.0	1232.4	1192.6	1185.0
25°	4940.1	4022.2	1871.6	1202.6	1176.2	1203.6	1193.7	1095.7	1016.3	975.5	968.8
27.5°	4909.3	3799.4	1521.1	1105.5	1101.1	1123.2	1025.1	930.3	890.6	868.7	864.2
30°	4901.6	3558.0	1273.1	1019.5	1027.3	996.4	884.0	853.1	844.2	832.2	826.7
32.5°	4927.1	3316.6	1117.8	949.0	956.8	855.4	812.3	816.7	815.7	800.2	794.7
35°	4996.5	3081.8	1018.5	885.1	863.0	766.1	771.6	784.8	784.8	766.1	759.4
37.5°	5117.7	2863.5	955.6	831.1	755.0	719.7	734.0	751.7	751.7	738.4	732.9
40°	5246.6	2650.9	908.2	788.2	686.8	687.8	702.1	715.3	720.9	723.0	718.6
42.5°	5363.5	2430.5	857.5	741.8	655.9	663.6	670.1	680.0	703.3	718.6	716.5
45°	5431.8	2208.9	802.5	684.5	634.9	638.2	636.0	653.6	681.2	704.4	704.4
47.5°	5494.7	2027.0	757.2	627.1	613.9	613.9	607.3	625.0	650.4	678.0	680.0
50°	5554.2	1909.1	725.3	583.1	587.5	584.2	582.0	598.5	632.6	665.7	671.3
52.5°	5614.8	1869.5	696.6	551.1	560.0	555.5	557.8	580.8	619.4	653.6	659.1
55°	5699.7	1894.7	666.8	529.1	533.5	532.3	541.1	567.6	601.9	636.0	638.2
57.5°	5804.4	1987.3	641.5	512.6	508.1	514.8	529.1	554.4	587.5	628.3	631.6
58°	5825.2	2009.4	637.1	508.1	502.6	512.6	526.9	551.1	585.2	628.3	631.6
60°	5857.3	2087.7	626.1	499.3	483.8	501.6	519.1	543.5	580.8	633.8	640.4
62.5°	5703.0	2103.1	622.7	489.3	464.1	486.2	507.1	534.6	576.4	652.4	666.8
65°	5168.4	1944.3	599.6	472.9	447.5	473.9	496.0	527.9	589.6	708.8	715.3
67.5°	4148.8	1614.8	543.5	447.5	428.9	459.7	487.2	527.9	595.1	717.6	722.0
70°	2852.6	1213.6	472.9	420.0	406.8	442.0	483.8	540.2	576.4	678.9	665.7
72.5°	1490.2	844.2	414.5	388.0	380.3	426.5	515.8	527.9	554.4	633.8	620.5
75°	750.7	574.2	364.8	351.5	350.5	421.0	577.6	508.1	531.3	596.4	625.0
77.5°	443.1	449.7	325.1	317.5	322.9	411.2	578.7	488.3	504.8	549.0	579.8
80°	303.1	371.4	294.4	292.0	296.5	378.0	533.5	464.1	473.9	519.1	552.2
82.5°	170.9	205.1	258.0	272.2	270.0	309.7	460.7	422.2	434.3	613.9	649.3
85°	82.6	123.4	216.0	254.6	230.3	206.2	374.8	374.8	378.0	439.8	445.3
87.5°	30.8	55.2	145.4	201.7	160.9	123.4	254.6	265.7	295.5	304.3	310.9
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)