

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: P196081

Luminaire Tested: **NAV-AF-01-D-UNV-SL2-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196081  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24257)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-01-D-UNV-SL2-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 4000K, 615mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE II SPILL  
LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4036.6 lumens  
Efficiency: N/A  
Efficacy: 118.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type II - Medium - Semi-Cutoff  
BUG Rating: B1 - U0 - G1

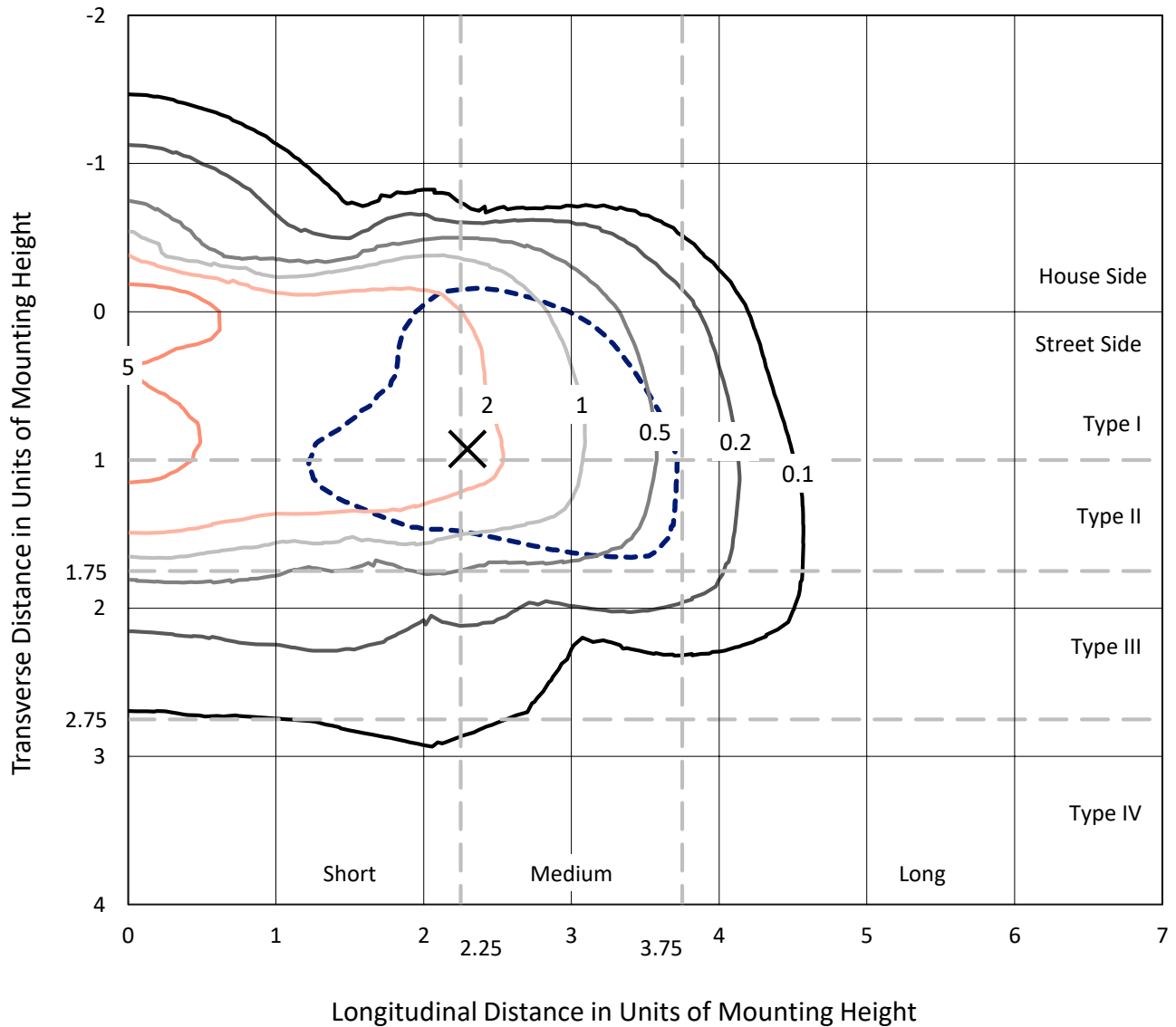
Input Watts (W): 34  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

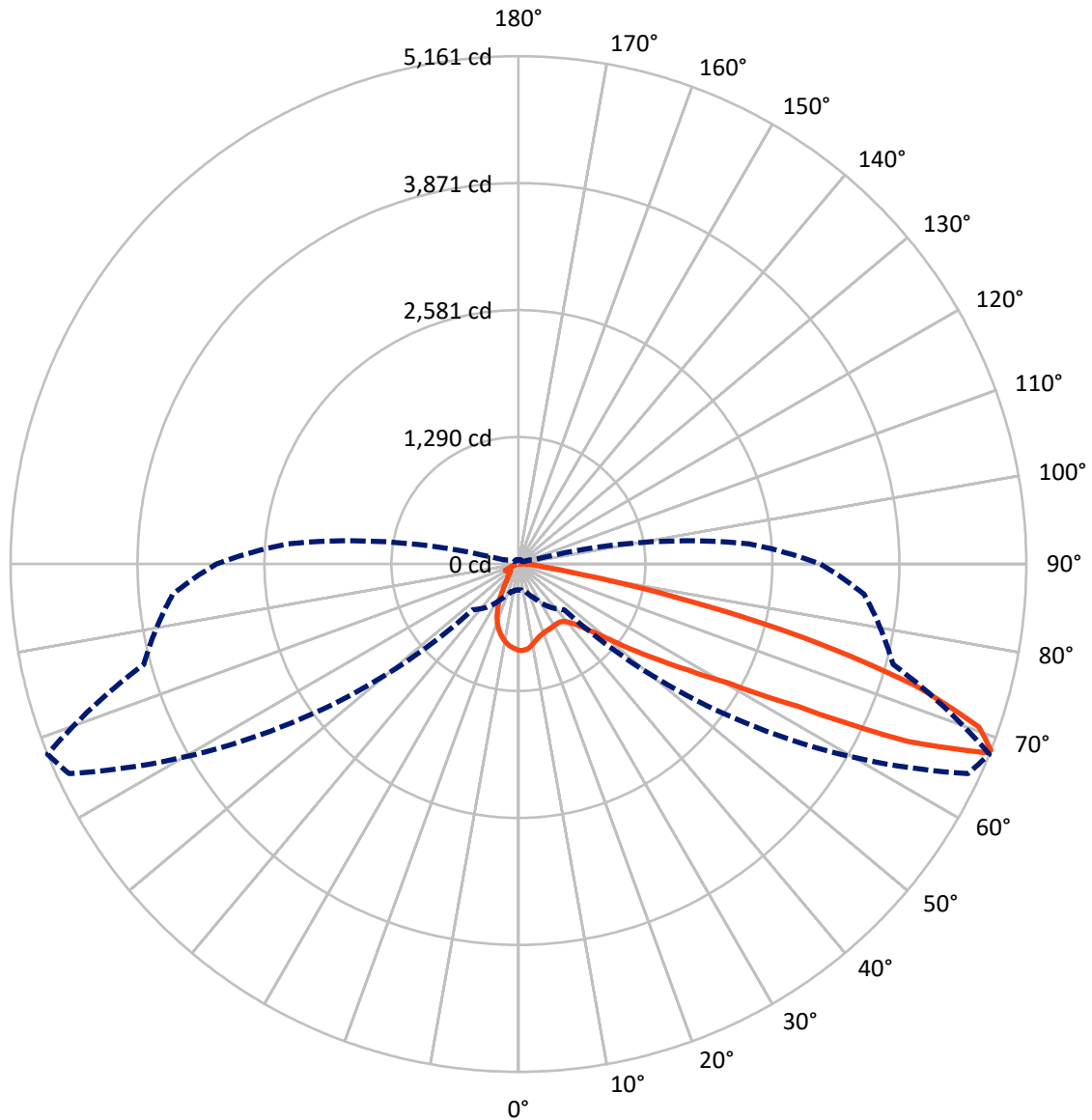
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.8 fc  
 Type II - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral    - - - Horizontal Cone Through 68-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	660.4	0.0	660.4
	% Fixture	16.4	0.0	16.4
<b>Street Side</b>	Lumens	3376.2	0.0	3376.2
	% Fixture	83.6	0.0	83.6
<b>Total</b>	Lumens	4036.6	0.0	4036.6
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.3	1.9
10°-20°	174.5	4.3
20°-30°	236.1	5.8
30°-40°	332.9	8.2
40°-50°	547.3	13.6
50°-60°	848.4	21.0
60°-70°	1100.0	27.3
70°-80°	631.3	15.6
80°-90°	90.8	2.2
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°	4036.6	100.0
0°-180°	4036.6	100.0



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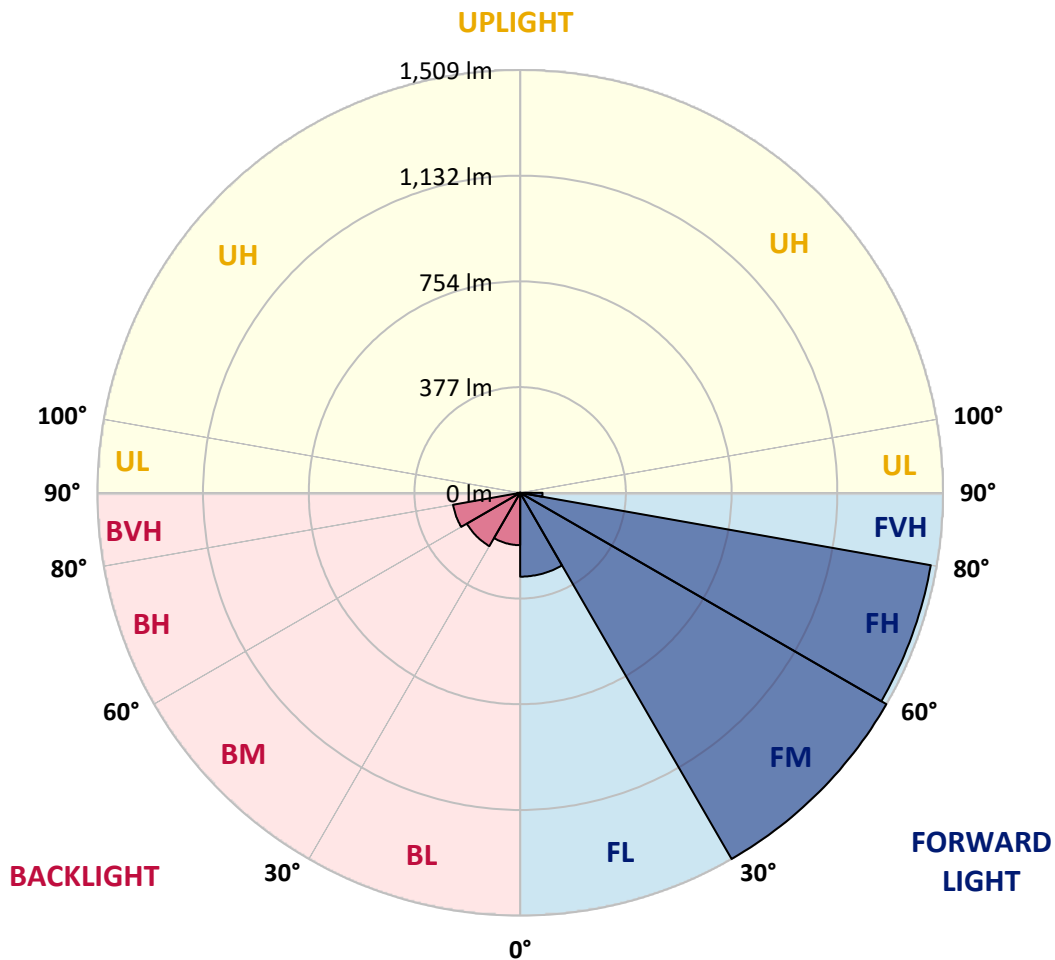
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	299.2	7.4			
FM	(30°-60°)	1508.9	37.4			
FH	(60°-80°)	1488.1	36.9			G1/1800
FVH	(80°-90°)	80.0	2.0			G1/100
BL	(0°-30°)	186.7	4.6	B1/500		
BM	(30°-60°)	219.7	5.4	B0/220		
BH	(60°-80°)	243.2	6.0	B1/500		G1/500
BVH	(80°-90°)	10.8	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G1**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	878.3	878.3	878.3	878.3	878.3	878.3	878.3	878.3	878.3	878.3	878.3
2.5°	854.9	861.7	861.7	866.7	871.2	874.9	878.1	878.1	878.1	876.0	874.1
5°	765.0	774.2	775.5	788.2	804.8	825.0	847.7	867.8	871.8	879.1	882.0
7.5°	702.5	705.3	710.3	719.0	735.9	761.0	796.6	841.4	852.2	875.4	887.5
10°	658.2	660.5	664.7	673.4	688.8	711.4	746.4	804.8	822.7	863.8	887.8
12.5°	625.7	627.6	631.5	639.4	655.0	675.2	711.2	771.8	793.9	852.2	891.5
15°	600.4	603.5	606.7	614.4	630.2	649.7	686.1	747.8	771.8	843.0	898.4
17.5°	590.3	592.0	592.5	596.5	610.7	630.4	666.9	730.9	755.8	835.6	903.7
20°	596.7	597.0	591.7	589.0	597.2	615.4	650.8	718.3	743.6	829.0	905.7
22.5°	624.4	624.4	610.7	599.0	593.5	604.9	640.0	709.5	737.0	824.0	905.7
25°	677.1	674.7	653.4	630.4	605.9	601.2	633.1	704.0	732.0	821.3	902.3
27.5°	746.4	744.4	717.2	683.2	638.9	609.1	630.8	699.5	727.0	817.4	895.0
30°	830.8	829.0	798.2	753.6	688.2	634.1	636.3	696.4	723.0	810.8	882.5
32.5°	914.9	913.9	889.4	843.7	756.3	676.6	650.8	695.8	720.9	802.9	867.5
35°	999.6	999.6	984.6	946.1	847.7	740.4	681.1	705.6	724.9	798.7	854.6
37.5°	1124.6	1119.6	1091.6	1051.8	963.0	823.2	730.2	726.2	740.1	805.8	850.4
40°	1318.2	1303.6	1233.8	1166.8	1088.7	929.2	801.9	766.0	774.5	830.0	860.4
42.5°	1520.6	1497.7	1405.1	1298.1	1218.7	1060.0	896.0	830.6	830.3	877.0	892.3
45°	1694.4	1682.5	1582.3	1446.6	1367.2	1207.1	1014.9	926.6	917.1	949.8	953.7
47.5°	1795.4	1787.5	1727.2	1603.7	1543.3	1380.9	1165.8	1059.8	1041.8	1061.3	1055.3
50°	1767.5	1775.1	1757.7	1694.7	1732.7	1625.1	1358.0	1242.2	1208.2	1227.7	1212.9
52.5°	1620.4	1640.9	1656.5	1668.5	1841.5	1951.8	1599.5	1470.0	1441.8	1438.4	1424.2
55°	1355.3	1388.0	1437.0	1526.1	1812.3	2214.2	2021.4	1745.6	1704.4	1682.9	1688.4
57.5°	922.4	971.9	1077.7	1247.2	1660.1	2325.9	2645.2	2101.6	2031.9	1955.0	1972.9
60°	508.1	549.5	675.2	846.2	1312.9	2309.3	3198.2	2680.0	2460.9	2256.8	2293.8
62.5°	328.8	337.8	431.4	578.0	805.8	2038.7	3505.3	3646.9	3182.6	2655.0	2706.9
65°	264.2	270.6	316.4	466.2	561.4	1311.5	3519.1	4650.0	4343.9	3196.1	3197.6
67.5°	258.2	261.1	287.7	392.1	526.6	714.0	3041.8	5045.5	5116.5	3834.7	3525.9
68°	261.9	265.3	292.2	379.9	526.3	658.2	2811.4	5039.5	5161.0	3941.5	3525.9
70°	231.0	235.2	298.0	393.1	503.9	565.9	1925.1	4771.9	4967.4	4186.9	3345.6
72.5°	120.8	117.3	147.4	310.4	567.2	589.6	1017.0	3986.5	4215.0	3877.7	2890.4
75°	94.1	85.7	82.6	122.7	498.9	611.5	590.7	2833.5	3005.9	2795.3	1931.9
77.5°	88.6	78.4	72.2	72.5	219.6	636.3	477.8	1667.5	1667.5	1333.4	616.5
80°	71.2	61.7	57.8	65.9	106.0	586.5	498.6	760.0	648.1	344.6	169.8
82.5°	47.0	41.9	42.1	53.5	80.4	391.6	577.5	375.2	281.9	152.6	99.9
85°	29.8	25.6	28.4	37.4	60.1	174.5	571.6	260.8	186.7	85.7	49.8
87.5°	15.0	11.6	14.2	19.5	36.6	50.1	470.7	232.8	138.4	35.6	27.1
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°	878.3	878.3	878.3	878.3	878.3	878.3	878.3	878.3	878.3	878.3	878.3
2.5°	874.1	868.3	865.4	860.6	854.9	849.0	845.1	843.2	842.2	842.7	842.5
5°	880.5	872.8	860.4	842.7	824.5	805.3	790.5	779.2	772.0	770.0	769.5
7.5°	885.2	874.1	850.9	818.8	787.6	753.8	725.2	702.2	686.6	679.5	679.2
10°	884.3	870.1	833.5	786.0	740.4	690.8	645.8	607.2	579.3	565.9	565.3
12.5°	885.2	865.6	812.1	747.8	682.4	611.5	544.5	484.7	442.9	423.2	422.4
15°	888.3	860.9	790.2	705.1	614.6	514.4	418.7	343.6	305.6	292.7	292.7
17.5°	888.1	853.0	765.0	655.5	534.2	400.0	285.8	239.5	235.7	247.6	249.4
20°	882.8	840.4	732.2	596.7	439.9	276.9	193.8	187.2	216.8	249.4	253.2
22.5°	874.6	824.0	694.6	528.5	329.9	180.3	149.6	159.5	199.6	240.2	246.0
25°	863.3	804.2	651.3	449.1	219.4	129.7	124.7	137.1	165.3	192.5	196.7
27.5°	846.7	779.2	604.1	363.0	140.0	106.8	108.6	117.3	129.5	141.1	143.4
30°	825.8	749.9	552.7	267.9	106.3	95.4	98.6	103.9	109.1	116.5	118.2
32.5°	804.8	720.2	499.1	184.0	92.8	89.4	92.6	95.4	99.9	105.0	106.0
35°	785.7	692.4	444.1	128.4	87.1	85.4	87.1	88.9	93.3	98.3	98.9
37.5°	772.0	669.7	386.6	101.5	83.6	82.0	82.8	83.6	88.9	96.3	97.1
40°	770.2	654.7	328.3	91.2	80.9	78.9	78.4	78.9	85.7	94.1	94.9
42.5°	788.2	655.5	271.3	87.1	78.9	76.5	74.4	75.4	81.4	88.1	88.6
45°	830.6	673.9	222.0	85.2	77.0	75.2	72.0	72.5	75.4	78.9	79.4
47.5°	905.5	714.3	184.3	84.1	75.4	73.9	69.9	68.3	68.5	70.4	70.4
50°	1025.2	781.8	161.4	83.1	74.1	71.2	66.7	63.5	62.7	63.8	64.0
52.5°	1203.7	897.5	150.3	80.9	71.7	67.7	62.7	59.6	58.3	59.3	59.3
55°	1445.0	1082.4	145.1	78.1	68.8	63.5	59.0	56.5	55.3	56.2	56.2
57.5°	1720.0	1322.6	154.0	74.1	65.2	59.0	55.9	54.0	53.3	54.0	54.3
60°	2046.7	1636.9	215.7	69.0	61.2	55.1	53.3	52.2	51.7	52.5	52.5
62.5°	2481.0	2055.1	333.8	65.2	57.0	51.5	50.8	50.3	49.8	50.6	50.6
65°	2949.8	2435.6	343.6	62.7	53.3	48.3	48.5	48.5	48.0	48.8	48.8
67.5°	3099.0	2402.7	192.0	59.8	48.8	45.1	46.1	46.1	45.9	46.6	46.4
68°	3067.4	2350.4	167.2	59.0	48.0	44.3	45.3	45.6	45.3	46.1	45.9
70°	2831.6	2063.6	110.0	54.6	44.6	41.6	43.3	43.5	43.3	44.3	44.0
72.5°	2337.5	1547.8	81.2	47.8	40.3	38.3	39.8	40.1	40.3	41.4	41.1
75°	1484.5	854.9	64.0	40.6	36.1	34.3	35.9	36.6	37.1	38.8	38.0
77.5°	406.6	259.4	52.0	34.6	31.1	30.3	31.4	32.4	32.9	34.8	33.5
80°	142.4	114.7	43.3	29.3	25.9	25.6	26.6	27.7	28.2	29.8	28.2
82.5°	86.4	74.9	34.6	22.9	20.3	20.0	21.4	22.4	22.9	22.9	21.9
85°	45.1	39.6	25.3	16.1	14.0	13.2	15.5	16.9	17.2	16.9	16.1
87.5°	25.3	22.4	13.4	7.7	6.3	6.5	8.2	10.0	10.8	10.5	10.0
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)