

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: P195601

Luminaire Tested: **NAV-AF-01-D-UNV-SL2-7050-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195601
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-SL2-7050-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5000K, 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: 3946 lumens
Efficiency: N/A
Efficacy: 116.1 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

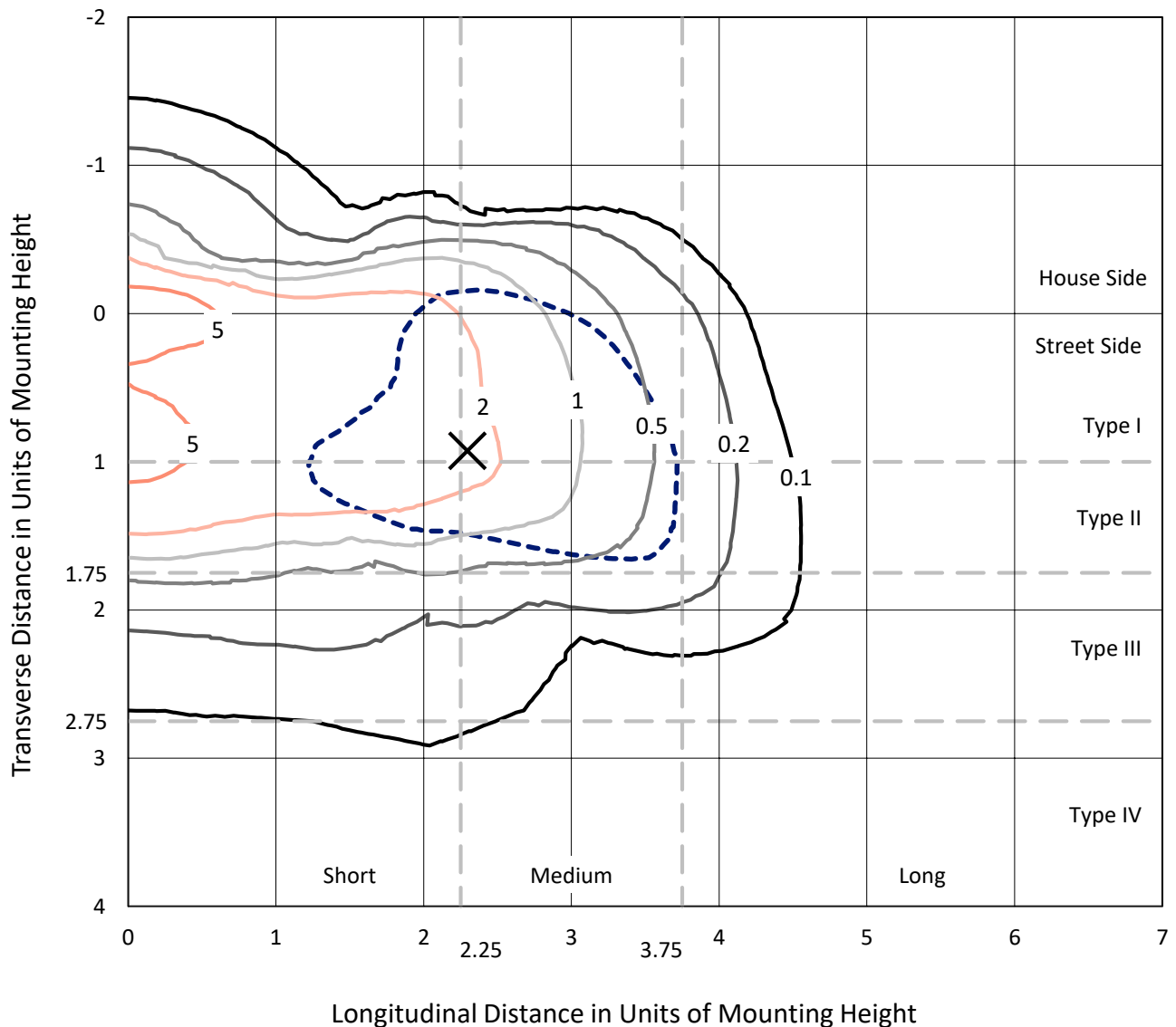
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

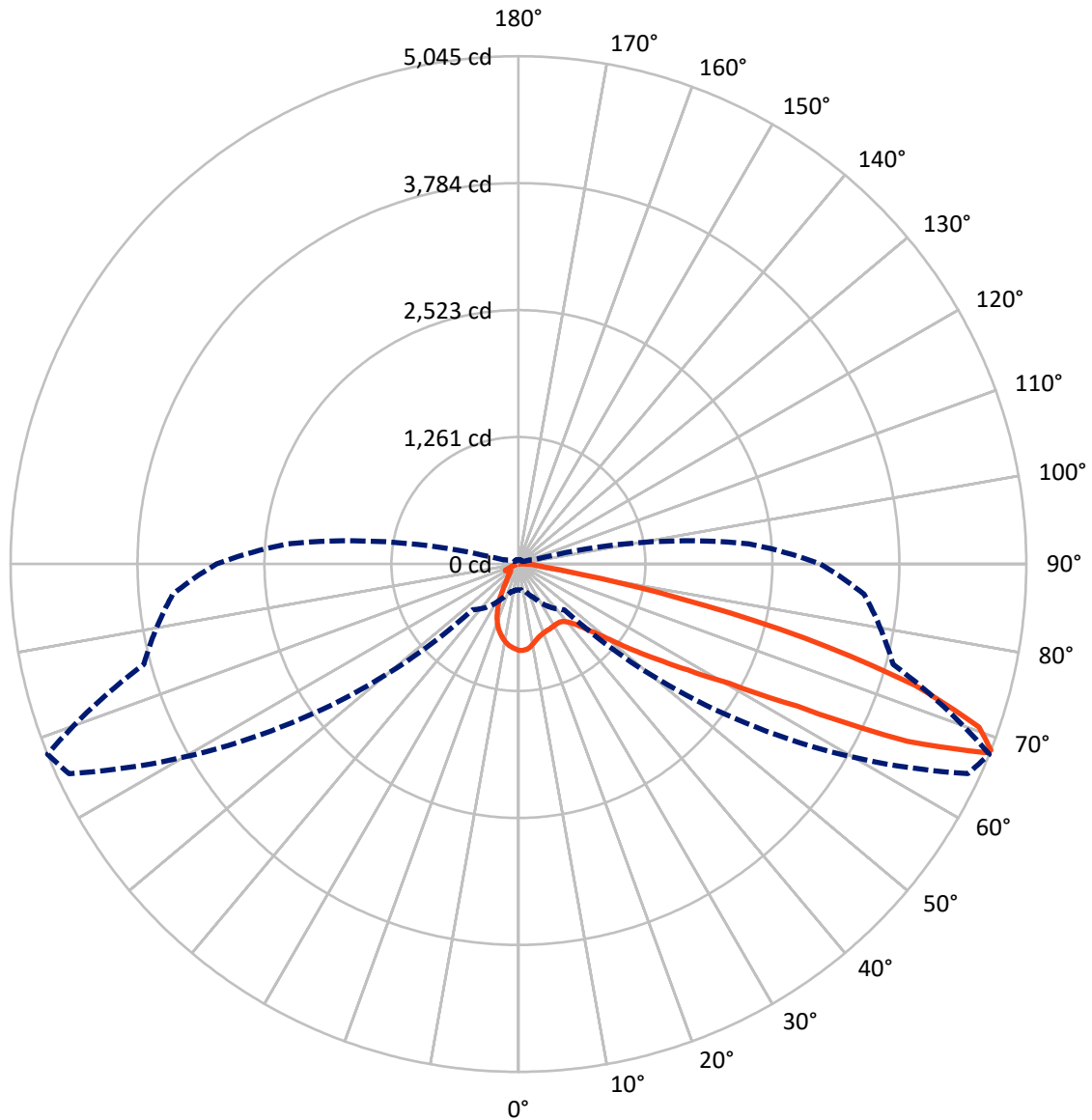
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.6 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
House Side	Lumens	645.6	0.0	645.6
	% Fixture	16.4	0.0	16.4
Street Side	Lumens	3300.4	0.0	3300.4
	% Fixture	83.6	0.0	83.6
Total	Lumens	3946.0	0.0	3946.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.6	1.9
10°-20°	170.6	4.3
20°-30°	230.8	5.8
30°-40°	325.4	8.2
40°-50°	535.1	13.6
50°-60°	829.4	21.0
60°-70°	1075.3	27.3
70°-80°	617.1	15.6
80°-90°	88.8	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°	3946.0	100.0
0°-180°	3946.0	100.0

Coefficient of Utilization



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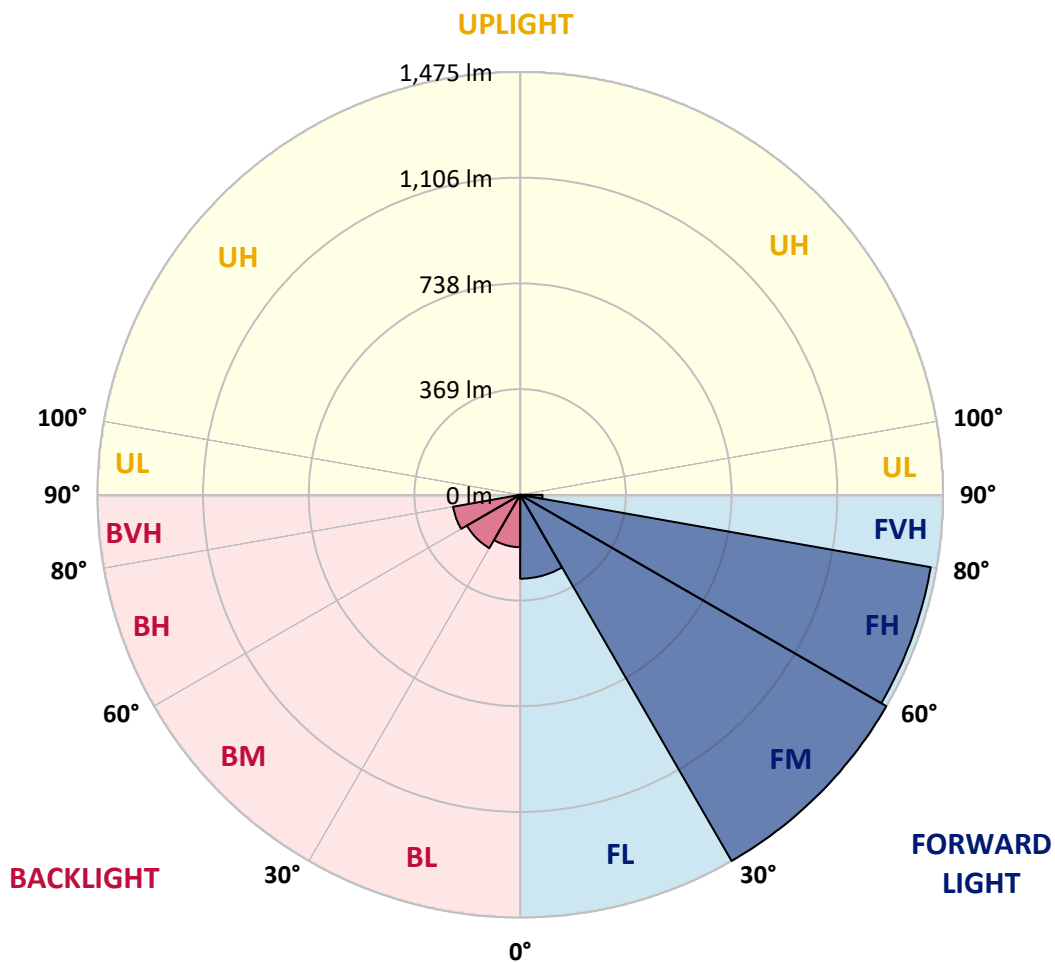
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	292.5	7.4			
FM	(30°-60°)	1475.1	37.4			
FH	(60°-80°)	1454.7	36.9			G1/1800
FVH	(80°-90°)	78.2	2.0			G1/100
BL	(0°-30°)	182.5	4.6	B1/500		
BM	(30°-60°)	214.7	5.4	B0/220		
BH	(60°-80°)	237.8	6.0	B1/500		G1/500
BVH	(80°-90°)	10.6	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°	858.6	858.6	858.6	858.6	858.6	858.6	858.6	858.6	858.6	858.6	858.6
2.5°	835.7	842.4	842.4	847.3	851.7	855.3	858.4	858.4	858.4	856.3	854.5
5°	747.8	756.8	758.1	770.5	786.7	806.5	828.7	848.3	852.2	859.4	862.2
7.5°	686.7	689.5	694.4	702.9	719.4	743.9	778.7	822.5	833.1	855.8	867.6
10°	643.4	645.7	649.8	658.3	673.3	695.4	729.7	786.7	804.2	844.4	867.9
12.5°	611.7	613.5	617.3	625.1	640.3	660.1	695.2	754.5	776.1	833.1	871.5
15°	586.9	590.0	593.1	600.6	616.1	635.1	670.7	731.0	754.5	824.1	878.2
17.5°	577.1	578.7	579.2	583.1	597.0	616.3	651.9	714.5	738.8	816.9	883.4
20°	583.3	583.6	578.4	575.8	583.8	601.6	636.2	702.2	726.9	810.4	885.4
22.5°	610.4	610.4	597.0	585.6	580.2	591.3	625.6	693.6	720.5	805.5	885.4
25°	661.9	659.6	638.7	616.3	592.3	587.7	618.9	688.2	715.6	802.9	882.1
27.5°	729.7	727.7	701.1	667.9	624.6	595.4	616.6	683.8	710.7	799.1	874.9
30°	812.2	810.4	780.3	736.7	672.8	619.9	622.0	680.8	706.8	792.6	862.7
32.5°	894.4	893.4	869.4	824.8	739.3	661.4	636.2	680.2	704.7	784.9	848.0
35°	977.2	977.2	962.5	924.9	828.7	723.8	665.8	689.8	708.6	780.8	835.4
37.5°	1099.4	1094.5	1067.1	1028.2	941.4	804.7	713.8	709.9	723.5	787.7	831.3
40°	1288.6	1274.4	1206.1	1140.6	1064.3	908.4	783.9	748.8	757.1	811.4	841.1
42.5°	1486.5	1464.1	1373.6	1269.0	1191.4	1036.2	875.9	812.0	811.7	857.3	872.3
45°	1656.4	1644.8	1546.8	1414.1	1336.5	1180.0	992.1	905.8	896.5	928.5	932.3
47.5°	1755.1	1747.4	1688.4	1567.7	1508.7	1349.9	1139.6	1036.0	1018.4	1037.5	1031.6
50°	1727.8	1735.3	1718.3	1656.7	1693.8	1588.6	1327.5	1214.3	1181.1	1200.2	1185.7
52.5°	1584.0	1604.1	1619.3	1631.1	1800.2	1908.0	1563.6	1437.0	1409.5	1406.1	1392.2
55°	1324.9	1356.9	1404.8	1491.9	1771.6	2164.5	1976.0	1706.4	1666.2	1645.1	1650.5
57.5°	901.7	950.1	1053.5	1219.2	1622.9	2273.7	2585.9	2054.4	1986.3	1911.1	1928.6
60°	496.7	537.2	660.1	827.2	1283.4	2257.5	3126.4	2619.9	2405.7	2206.2	2242.3
62.5°	321.4	330.2	421.7	565.0	787.7	1993.0	3426.7	3565.1	3111.2	2595.4	2646.2
65°	258.3	264.5	309.3	455.7	548.8	1282.1	3440.1	4545.7	4246.4	3124.4	3125.9
67.5°	252.4	255.2	281.2	383.3	514.8	698.0	2973.6	4932.3	5001.7	3748.7	3446.8
68°	256.0	259.3	285.6	371.4	514.5	643.4	2748.3	4926.4	5045.2	3853.1	3446.8
70°	225.8	229.9	291.3	384.3	492.6	553.2	1881.9	4664.8	4856.0	4093.0	3270.5
72.5°	118.1	114.7	144.1	303.4	554.5	576.4	994.2	3897.1	4120.4	3790.7	2825.6
75°	92.0	83.8	80.7	119.9	487.7	597.8	577.4	2769.9	2938.5	2732.6	1888.6
77.5°	86.6	76.6	70.6	70.9	214.7	622.0	467.1	1630.1	1630.1	1303.5	602.7
80°	69.6	60.3	56.5	64.4	103.6	573.3	487.4	742.9	633.6	336.9	166.0
82.5°	45.9	41.0	41.2	52.3	78.6	382.8	564.5	366.8	275.6	149.2	97.7
85°	29.1	25.0	27.8	36.6	58.8	170.6	558.8	254.9	182.5	83.8	48.7
87.5°	14.7	11.3	13.9	19.1	35.8	49.0	460.1	227.6	135.3	34.8	26.5
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°	858.6	858.6	858.6	858.6	858.6	858.6	858.6	858.6	858.6	858.6	858.6
2.5°	854.5	848.8	846.0	841.3	835.7	830.0	826.1	824.3	823.3	823.8	823.6
5°	860.7	853.2	841.1	823.8	806.0	787.2	772.8	761.7	754.7	752.7	752.2
7.5°	865.3	854.5	831.8	800.4	769.9	736.9	708.9	686.4	671.2	664.3	664.0
10°	864.5	850.6	814.8	768.4	723.8	675.3	631.3	593.6	566.3	553.2	552.6
12.5°	865.3	846.2	793.9	731.0	667.1	597.8	532.3	473.8	433.0	413.7	412.9
15°	868.4	841.6	772.5	689.3	600.8	502.9	409.3	335.9	298.7	286.1	286.1
17.5°	868.2	833.9	747.8	640.8	522.2	391.0	279.4	234.1	230.4	242.0	243.8
20°	863.0	821.5	715.8	583.3	430.0	270.7	189.5	183.0	211.9	243.8	247.5
22.5°	855.0	805.5	679.0	516.6	322.5	176.3	146.2	155.9	195.1	234.8	240.5
25°	843.9	786.2	636.7	439.0	214.5	126.8	121.9	134.0	161.6	188.2	192.3
27.5°	827.7	761.7	590.5	354.9	136.9	104.4	106.2	114.7	126.6	137.9	140.2
30°	807.3	733.1	540.3	261.9	103.9	93.3	96.4	101.6	106.7	113.9	115.5
32.5°	786.7	704.0	487.9	179.9	90.7	87.4	90.5	93.3	97.7	102.6	103.6
35°	768.1	676.9	434.1	125.5	85.1	83.5	85.1	86.9	91.2	96.1	96.7
37.5°	754.7	654.7	377.9	99.2	81.7	80.2	80.9	81.7	86.9	94.1	94.9
40°	752.9	640.0	320.9	89.2	79.1	77.1	76.6	77.1	83.8	92.0	92.8
42.5°	770.5	640.8	265.2	85.1	77.1	74.8	72.7	73.7	79.6	86.1	86.6
45°	812.0	658.8	217.0	83.3	75.3	73.5	70.4	70.9	73.7	77.1	77.6
47.5°	885.2	698.3	180.2	82.2	73.7	72.2	68.3	66.8	67.0	68.8	68.8
50°	1002.2	764.3	157.8	81.2	72.4	69.6	65.2	62.1	61.3	62.4	62.6
52.5°	1176.7	877.4	146.9	79.1	70.1	66.2	61.3	58.3	57.0	58.0	58.0
55°	1412.6	1058.1	141.8	76.3	67.3	62.1	57.7	55.2	54.1	54.9	54.9
57.5°	1681.4	1292.9	150.5	72.4	63.7	57.7	54.6	52.8	52.1	52.8	53.1
60°	2000.8	1600.2	210.9	67.5	59.8	53.9	52.1	51.0	50.5	51.3	51.3
62.5°	2425.3	2009.0	326.3	63.7	55.7	50.3	49.7	49.2	48.7	49.5	49.5
65°	2883.6	2381.0	335.9	61.3	52.1	47.2	47.4	47.4	46.9	47.7	47.7
67.5°	3029.5	2348.8	187.7	58.5	47.7	44.1	45.1	45.1	44.9	45.6	45.4
68°	2998.6	2297.7	163.4	57.7	46.9	43.3	44.3	44.6	44.3	45.1	44.9
70°	2768.1	2017.3	107.5	53.4	43.6	40.7	42.3	42.5	42.3	43.3	43.0
72.5°	2285.1	1513.1	79.4	46.7	39.4	37.4	38.9	39.2	39.4	40.5	40.2
75°	1451.2	835.7	62.6	39.7	35.3	33.5	35.1	35.8	36.3	37.9	37.1
77.5°	397.5	253.6	50.8	33.8	30.4	29.6	30.7	31.7	32.2	34.0	32.7
80°	139.2	112.1	42.3	28.6	25.3	25.0	26.0	27.1	27.6	29.1	27.6
82.5°	84.5	73.2	33.8	22.4	19.8	19.6	20.9	21.9	22.4	22.4	21.4
85°	44.1	38.7	24.7	15.7	13.7	12.9	15.2	16.5	16.8	16.5	15.7
87.5°	24.7	21.9	13.1	7.5	6.2	6.4	8.0	9.8	10.6	10.3	9.8
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)