

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: P197047

Luminaire Tested: **NAV-AF-01-D-UNV-SL2-8030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197047
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-SL2-8030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 80 CRI, 3000K, 800mA 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: 3949 lumens
Efficiency: N/A
Efficacy: 89.8 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): 44
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

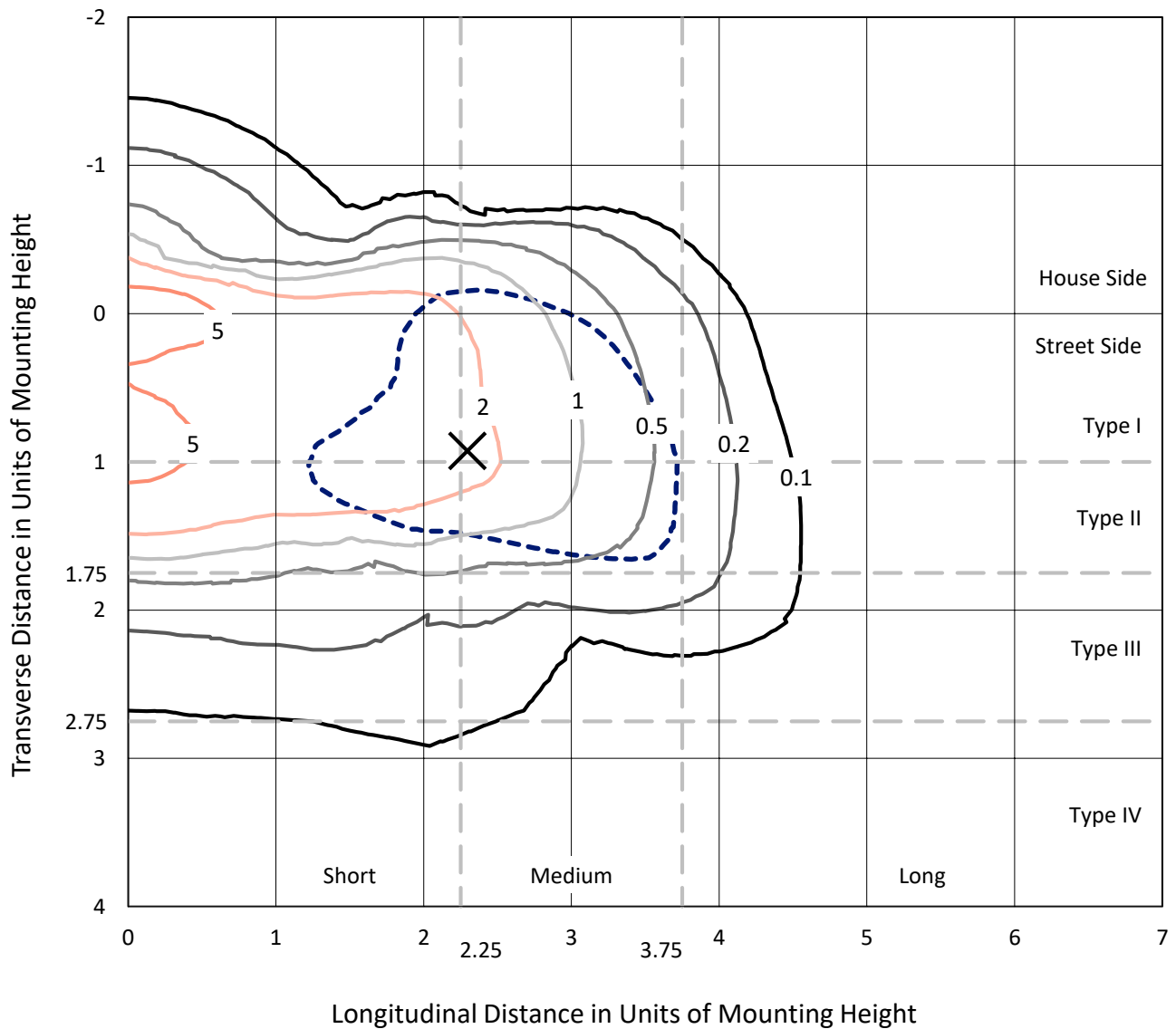


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Iso-Footcandle Lines of Horizontal Illumination

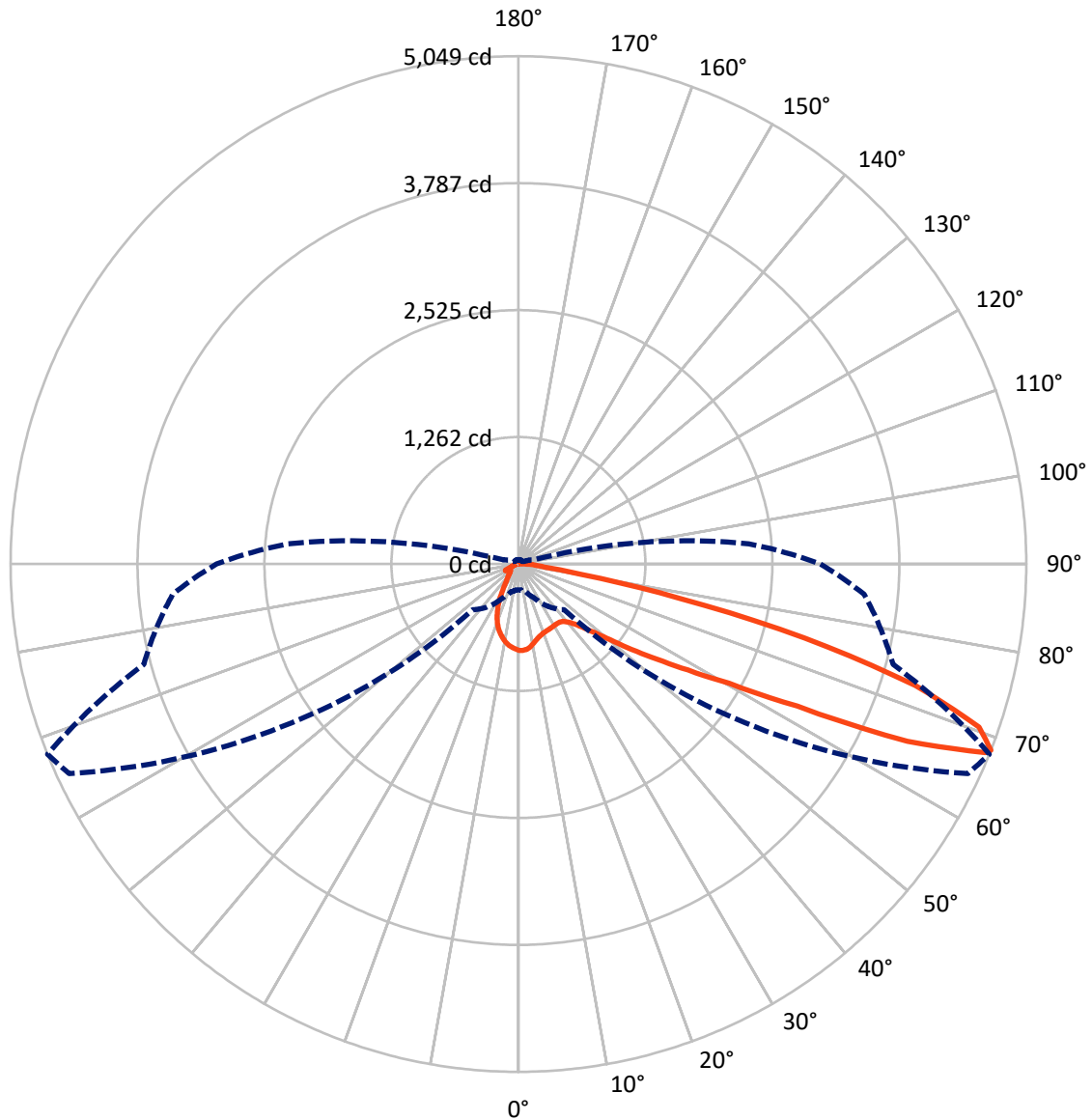
× Max cd
 - - - 1/2 Max cd



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	646.1	0.0	646.1
	% Fixture	16.4	0.0	16.4
Street Side	Lumens	3302.9	0.0	3302.9
	% Fixture	83.6	0.0	83.6
Total	Lumens	3949.0	0.0	3949.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.6	1.9
10°-20°	170.8	4.3
20°-30°	231.0	5.8
30°-40°	325.6	8.2
40°-50°	535.5	13.6
50°-60°	830.0	21.0
60°-70°	1076.2	27.3
70°-80°	617.6	15.6
80°-90°	88.9	2.3
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°	3949.0	100.0
0°-180°	3949.0	100.0

Coefficient of Utilization



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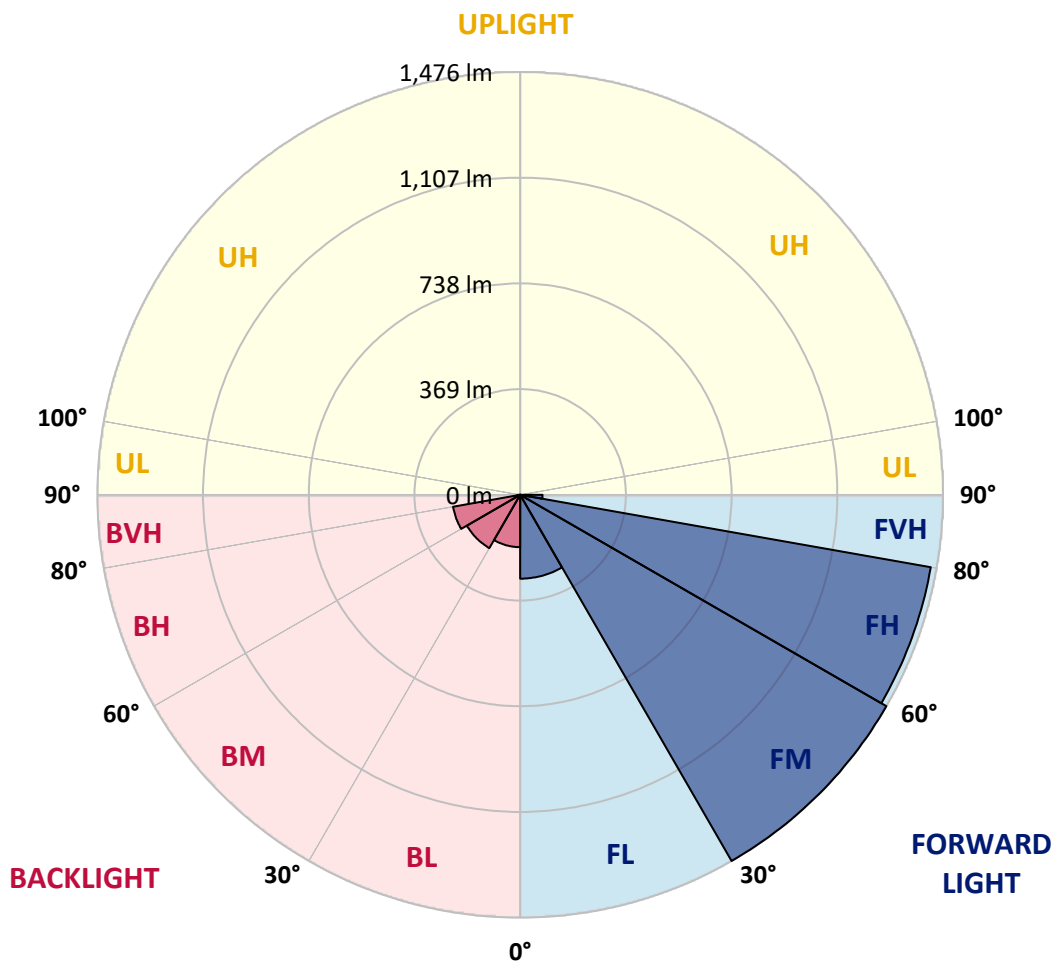
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	292.7	7.4			
FM	(30°-60°)	1476.2	37.4			
FH	(60°-80°)	1455.8	36.9			G1/1800
FVH	(80°-90°)	78.3	2.0			G1/100
BL	(0°-30°)	182.6	4.6	B1/500		
BM	(30°-60°)	214.9	5.4	B0/220		
BH	(60°-80°)	237.9	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°	859.3	859.3	859.3	859.3	859.3	859.3	859.3	859.3	859.3	859.3	859.3
2.5°	836.3	843.0	843.0	847.9	852.3	855.9	859.0	859.0	859.0	856.9	855.1
5°	748.3	757.4	758.7	771.0	787.3	807.2	829.3	848.9	852.8	860.0	862.9
7.5°	687.2	690.0	694.9	703.5	720.0	744.5	779.3	823.2	833.7	856.4	868.3
10°	643.9	646.2	650.3	658.8	673.8	696.0	730.3	787.3	804.8	845.1	868.6
12.5°	612.1	613.9	617.8	625.6	640.8	660.6	695.7	755.1	776.7	833.7	872.2
15°	587.4	590.5	593.6	601.0	616.5	635.6	671.2	731.6	755.1	824.7	878.9
17.5°	577.6	579.1	579.6	583.5	597.4	616.8	652.4	715.1	739.3	817.5	884.0
20°	583.8	584.0	578.9	576.3	584.3	602.1	636.6	702.7	727.4	811.0	886.1
22.5°	610.9	610.9	597.4	586.1	580.7	591.8	626.1	694.2	721.0	806.1	886.1
25°	662.4	660.1	639.2	616.8	592.8	588.2	619.4	688.8	716.1	803.5	882.7
27.5°	730.3	728.2	701.7	668.4	625.0	595.9	617.0	684.4	711.2	799.7	875.5
30°	812.8	811.0	780.8	737.3	673.3	620.4	622.5	681.3	707.3	793.2	863.4
32.5°	895.1	894.1	870.1	825.5	739.8	661.9	636.6	680.8	705.3	785.5	848.7
35°	977.9	977.9	963.2	925.6	829.3	724.4	666.3	690.3	709.1	781.4	836.1
37.5°	1100.2	1095.3	1068.0	1029.0	942.1	805.4	714.3	710.4	724.1	788.3	831.9
40°	1289.5	1275.4	1207.0	1141.5	1065.1	909.1	784.5	749.4	757.6	812.1	841.7
42.5°	1487.7	1465.2	1374.7	1269.9	1192.3	1037.0	876.6	812.6	812.3	858.0	872.9
45°	1657.7	1646.0	1548.0	1415.2	1337.5	1180.9	992.9	906.5	897.2	929.2	933.0
47.5°	1756.5	1748.7	1689.6	1568.9	1509.8	1350.9	1140.4	1036.7	1019.2	1038.3	1032.4
50°	1729.1	1736.6	1719.6	1657.9	1695.1	1589.8	1328.5	1215.3	1182.0	1201.1	1186.6
52.5°	1585.2	1605.3	1620.5	1632.4	1801.6	1909.4	1564.8	1438.1	1410.5	1407.2	1393.2
55°	1325.9	1357.9	1405.9	1493.1	1773.0	2166.1	1977.5	1707.7	1667.5	1646.3	1651.7
57.5°	902.3	950.8	1054.3	1220.2	1624.1	2275.5	2587.9	2055.9	1987.8	1912.5	1930.1
60°	497.1	537.6	660.6	827.8	1284.4	2259.2	3128.8	2621.9	2407.5	2207.9	2244.0
62.5°	321.7	330.4	422.0	565.4	788.3	1994.6	3429.3	3567.9	3113.6	2597.4	2648.2
65°	258.5	264.7	309.6	456.1	549.2	1283.1	3442.7	4549.1	4249.6	3126.7	3128.3
67.5°	252.5	255.4	281.4	383.6	515.1	698.6	2975.8	4936.1	5005.5	3751.5	3449.5
68°	256.2	259.5	285.8	371.7	514.9	643.9	2750.4	4930.1	5049.1	3856.0	3449.5
70°	226.0	230.1	291.5	384.6	493.0	553.6	1883.4	4668.3	4859.7	4096.2	3273.0
72.5°	118.1	114.8	144.2	303.6	554.9	576.8	995.0	3900.1	4123.5	3793.6	2827.8
75°	92.1	83.8	80.7	120.0	488.1	598.2	577.8	2772.0	2940.8	2734.6	1890.1
77.5°	86.7	76.6	70.7	70.9	214.9	622.5	467.4	1631.3	1631.3	1304.5	603.1
80°	69.6	60.4	56.5	64.5	103.7	573.7	487.8	743.4	634.1	337.2	166.1
82.5°	45.9	41.0	41.3	52.4	78.7	383.1	564.9	367.1	275.8	149.4	97.8
85°	29.1	25.0	27.9	36.6	58.8	170.8	559.3	255.1	182.6	83.8	48.8
87.5°	14.7	11.4	13.9	19.1	35.9	49.0	460.5	227.8	135.4	34.8	26.6
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°	859.3	859.3	859.3	859.3	859.3	859.3	859.3	859.3	859.3	859.3	859.3
2.5°	855.1	849.5	846.6	842.0	836.3	830.6	826.8	825.0	823.9	824.4	824.2
5°	861.3	853.8	841.7	824.4	806.6	787.8	773.4	762.3	755.3	753.2	752.7
7.5°	866.0	855.1	832.4	801.0	770.5	737.5	709.4	686.9	671.7	664.8	664.5
10°	865.2	851.3	815.4	769.0	724.4	675.9	631.7	594.1	566.7	553.6	553.1
12.5°	866.0	846.9	794.5	731.6	667.6	598.2	532.7	474.1	433.4	414.0	413.3
15°	869.1	842.2	773.1	689.8	601.3	503.3	409.6	336.1	299.0	286.3	286.3
17.5°	868.8	834.5	748.3	641.3	522.6	391.3	279.6	234.2	230.6	242.2	244.0
20°	863.7	822.1	716.4	583.8	430.3	270.9	189.6	183.2	212.0	244.0	247.6
22.5°	855.7	806.1	679.5	517.0	322.7	176.4	146.3	156.1	195.3	235.0	240.7
25°	844.6	786.8	637.2	439.3	214.6	126.9	122.0	134.1	161.7	188.3	192.4
27.5°	828.3	762.3	591.0	355.2	137.0	104.5	106.3	114.8	126.7	138.0	140.3
30°	807.9	733.6	540.7	262.1	104.0	93.4	96.5	101.6	106.8	114.0	115.6
32.5°	787.3	704.5	488.3	180.1	90.8	87.4	90.5	93.4	97.8	102.7	103.7
35°	768.7	677.4	434.4	125.6	85.1	83.6	85.1	86.9	91.3	96.2	96.7
37.5°	755.3	655.2	378.2	99.3	81.8	80.2	81.0	81.8	86.9	94.2	94.9
40°	753.5	640.5	321.2	89.3	79.2	77.1	76.6	77.1	83.8	92.1	92.9
42.5°	771.0	641.3	265.4	85.1	77.1	74.8	72.7	73.8	79.7	86.2	86.7
45°	812.6	659.3	217.2	83.3	75.3	73.5	70.4	70.9	73.8	77.1	77.6
47.5°	885.8	698.8	180.3	82.3	73.8	72.2	68.4	66.8	67.1	68.9	68.9
50°	1003.0	764.9	157.9	81.3	72.5	69.6	65.3	62.2	61.4	62.4	62.7
52.5°	1177.6	878.1	147.0	79.2	70.2	66.3	61.4	58.3	57.0	58.0	58.0
55°	1413.6	1058.9	141.9	76.4	67.3	62.2	57.8	55.2	54.2	54.9	54.9
57.5°	1682.7	1293.9	150.6	72.5	63.7	57.8	54.7	52.9	52.1	52.9	53.1
60°	2002.3	1601.4	211.0	67.6	59.8	53.9	52.1	51.1	50.6	51.3	51.3
62.5°	2427.2	2010.5	326.6	63.7	55.7	50.3	49.8	49.3	48.8	49.5	49.5
65°	2885.8	2382.8	336.1	61.4	52.1	47.2	47.5	47.5	46.9	47.7	47.7
67.5°	3031.8	2350.5	187.8	58.6	47.7	44.1	45.1	45.1	44.9	45.7	45.4
68°	3000.9	2299.5	163.5	57.8	46.9	43.3	44.4	44.6	44.4	45.1	44.9
70°	2770.2	2018.8	107.6	53.4	43.6	40.8	42.3	42.6	42.3	43.3	43.1
72.5°	2286.8	1514.2	79.5	46.7	39.5	37.4	39.0	39.2	39.5	40.5	40.2
75°	1452.3	836.3	62.7	39.7	35.3	33.5	35.1	35.9	36.4	37.9	37.1
77.5°	397.8	253.8	50.8	33.8	30.4	29.7	30.7	31.7	32.2	34.1	32.8
80°	139.3	112.2	42.3	28.6	25.3	25.0	26.1	27.1	27.6	29.1	27.6
82.5°	84.6	73.3	33.8	22.4	19.9	19.6	20.9	21.9	22.4	22.4	21.4
85°	44.1	38.7	24.8	15.7	13.7	12.9	15.2	16.5	16.8	16.5	15.7
87.5°	24.8	21.9	13.2	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)