

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: P195289

Luminaire Tested: **NAV-AF-01-D-UNV-T2-7060-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195289
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24136)
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-T2-7060-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5700K, 615mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3940 lumens
Efficiency: N/A
Efficacy: 115.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B1 - U0 - G1

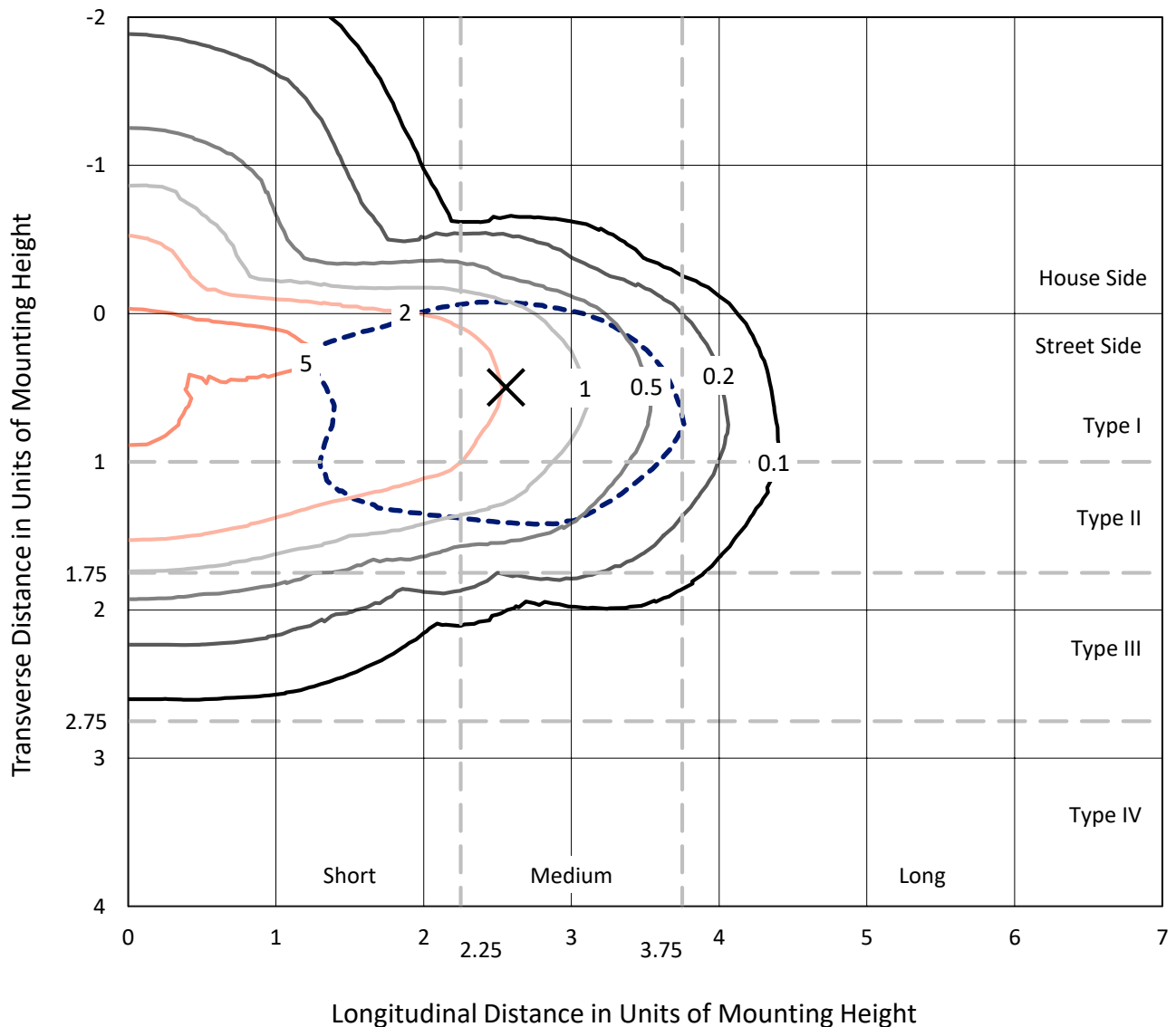
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

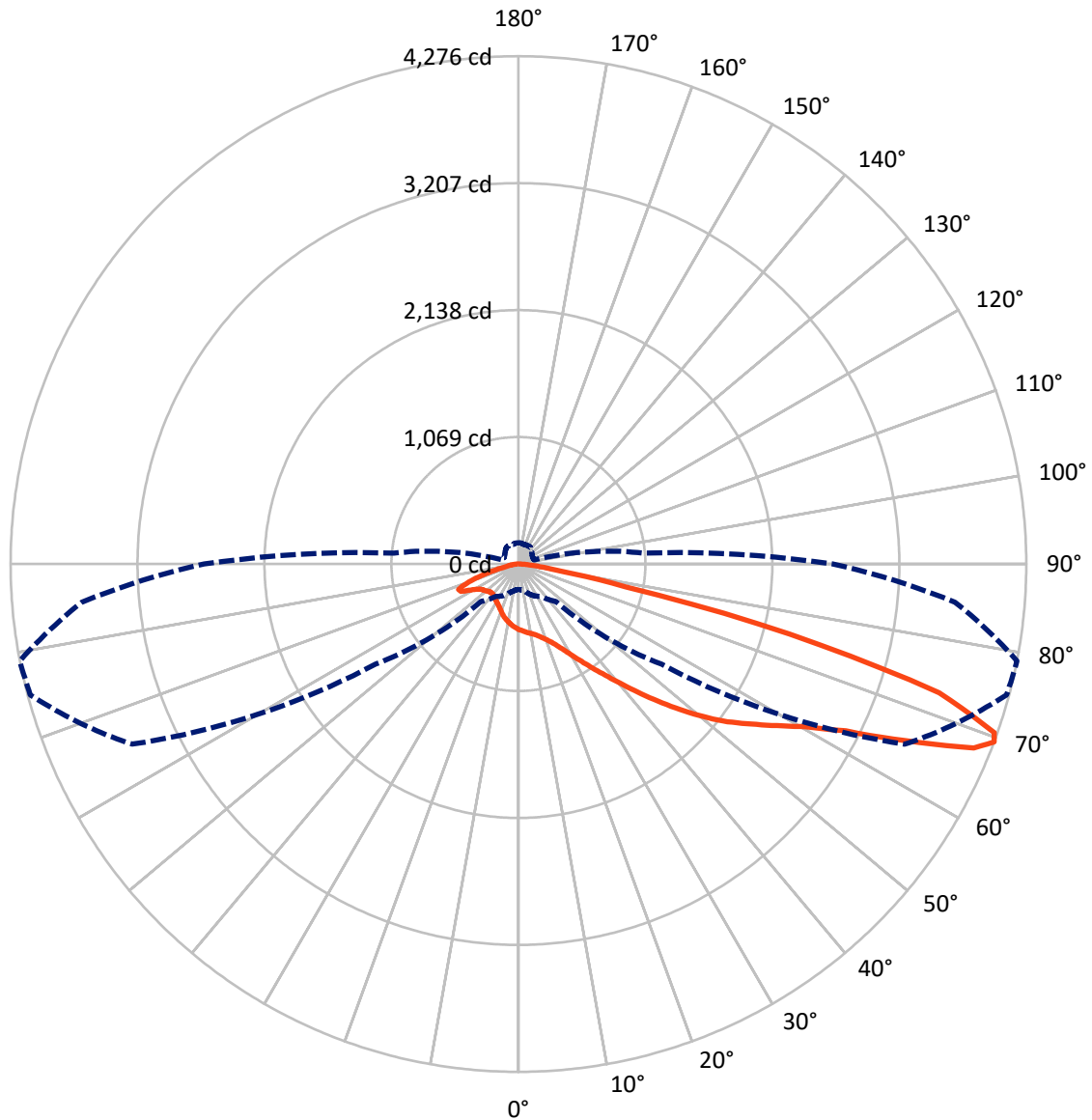
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.7 fc
 Type II - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	741.2	0.0	741.2
	% Fixture	18.8	0.0	18.8
Street Side	Lumens	3198.8	0.0	3198.8
	% Fixture	81.2	0.0	81.2
Total	Lumens	3940.0	0.0	3940.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.3	1.3
10°-20°	147.0	3.7
20°-30°	242.8	6.2
30°-40°	393.2	10.0
40°-50°	628.1	15.9
50°-60°	899.6	22.8
60°-70°	1002.2	25.4
70°-80°	501.4	12.7
80°-90°	74.4	1.9
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°	3940.0	100.0
0°-180°	3940.0	100.0



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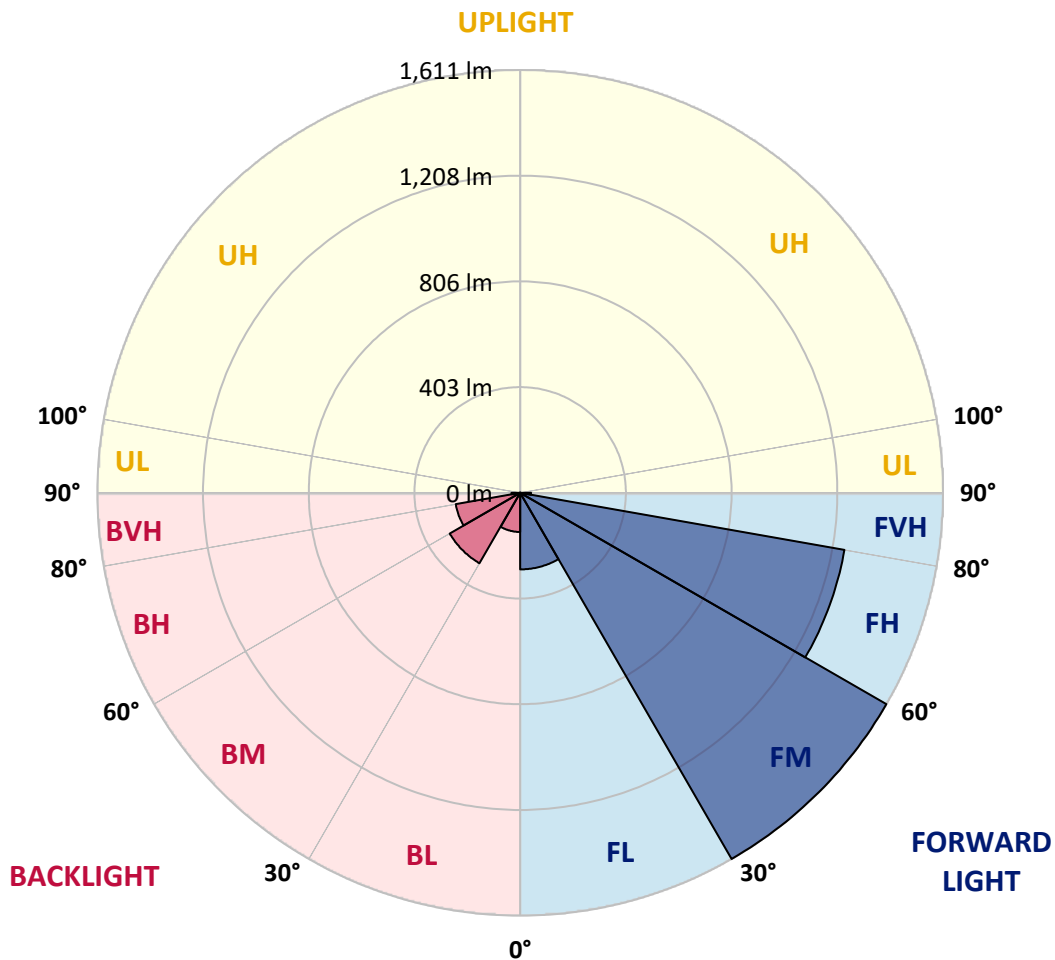
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	291.7	7.4			
FM	(30°-60°)	1611.1	40.9			
FH	(60°-80°)	1254.4	31.8			G1/1800
FVH	(80°-90°)	41.6	1.1			G1/100
BL	(0°-30°)	149.3	3.8	B1/500		
BM	(30°-60°)	309.8	7.9	B1/1000		
BH	(60°-80°)	249.2	6.3	B1/500		G1/500
BVH	(80°-90°)	32.8	0.8			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°	75°	79°	85°
0°	552.9	552.9	552.9	552.9	552.9	552.9	552.9	552.9	552.9	552.9	552.9
2.5°	607.0	605.7	605.5	601.6	599.6	595.2	584.9	574.3	564.5	559.4	553.9
5°	657.8	655.2	654.0	647.5	641.8	632.0	615.8	599.0	581.5	572.5	561.7
7.5°	688.5	688.7	688.7	683.6	677.9	666.1	645.4	622.5	596.5	584.6	567.6
10°	691.1	691.3	695.2	696.5	697.8	691.6	672.5	643.6	610.1	594.7	572.5
12.5°	665.5	667.4	673.8	683.1	696.2	702.9	694.7	666.3	627.7	608.8	581.8
15°	631.3	633.1	641.3	655.5	676.6	699.1	710.7	692.4	650.6	628.4	595.4
17.5°	614.5	616.6	622.2	633.6	654.2	684.4	719.2	720.2	677.7	652.1	611.7
20°	606.5	608.1	615.3	624.6	640.3	669.2	719.9	749.6	709.9	680.2	631.5
22.5°	624.8	625.3	628.9	634.1	644.7	666.8	719.4	780.0	750.1	715.6	657.0
25°	678.4	675.1	672.5	666.1	668.6	684.4	727.7	812.5	801.7	762.0	691.1
27.5°	741.8	741.3	734.6	719.7	710.1	720.2	751.1	848.8	864.8	821.0	735.7
30°	812.5	812.7	805.8	787.5	768.1	769.2	788.5	890.8	940.3	892.1	790.6
32.5°	886.5	891.1	878.2	859.9	836.4	829.0	842.1	941.6	1027.7	976.2	854.2
35°	974.9	975.6	961.5	934.7	911.2	899.3	911.5	1005.0	1128.5	1074.9	931.8
37.5°	1066.6	1067.1	1052.5	1018.2	988.5	980.8	994.2	1082.1	1235.2	1187.3	1023.1
40°	1141.6	1147.1	1135.5	1103.2	1073.3	1068.7	1088.0	1174.4	1371.6	1320.3	1131.6
42.5°	1226.7	1232.9	1219.0	1185.5	1161.7	1160.2	1190.4	1279.5	1507.2	1474.2	1254.5
45°	1322.6	1331.4	1312.0	1274.4	1254.3	1288.3	1290.1	1396.1	1663.4	1646.3	1393.0
47.5°	1427.2	1434.5	1418.7	1378.3	1356.4	1405.6	1387.8	1522.1	1832.2	1830.9	1542.7
50°	1507.9	1515.9	1517.5	1499.7	1476.7	1482.9	1495.0	1654.6	2000.5	2020.6	1697.6
52.5°	1493.2	1501.0	1535.8	1582.4	1619.3	1603.3	1618.0	1795.3	2163.2	2205.7	1844.8
55°	1374.7	1378.8	1444.0	1554.8	1711.8	1788.1	1789.1	1948.4	2317.8	2377.4	1984.5
57.5°	1161.0	1161.5	1246.3	1409.7	1657.9	1908.0	2059.3	2140.7	2479.2	2567.1	2157.8
60°	821.5	823.6	922.3	1136.0	1464.9	1893.5	2349.8	2484.9	2666.1	2780.3	2381.0
62.5°	487.7	492.3	566.8	738.2	1088.0	1708.0	2521.5	3097.0	2941.4	3092.9	2738.2
65°	317.3	321.2	365.8	451.9	642.9	1242.7	2465.0	3689.9	3462.3	3584.7	3251.7
67.5°	244.4	247.5	282.5	334.6	394.4	671.7	1970.9	3814.2	4096.4	4134.6	3685.0
69°	214.7	217.3	243.1	293.1	332.0	444.6	1468.7	3588.6	4254.9	4275.8	3690.4
70°	199.0	201.1	225.3	268.6	304.9	354.9	1124.1	3326.7	4196.9	4250.3	3584.0
72.5°	163.9	165.7	183.0	216.3	249.3	252.9	498.0	2429.2	3534.0	3704.6	3032.9
75°	136.9	137.9	149.2	173.5	201.8	201.3	254.4	1376.0	2156.5	2359.8	1872.7
77.5°	114.2	115.0	122.4	137.4	159.3	158.5	179.1	593.9	952.2	918.7	644.7
80°	100.8	101.3	105.2	109.0	123.0	122.2	132.7	272.7	387.4	358.0	243.8
82.5°	76.6	77.6	97.2	99.0	95.4	92.0	92.5	158.8	198.5	180.7	130.9
85°	43.3	43.6	62.4	72.9	83.0	62.4	60.1	82.0	98.0	85.8	57.2
87.5°	19.3	20.1	29.9	34.5	44.9	36.6	34.3	34.8	42.3	35.1	22.7
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°	552.9	552.9	552.9	552.9	552.9	552.9	552.9	552.9	552.9	552.9	552.9
2.5°	548.8	544.4	534.1	523.5	513.0	506.3	499.3	492.8	490.3	490.0	485.1
5°	551.1	540.8	517.3	491.6	467.1	448.0	432.0	421.7	411.7	409.8	405.5
7.5°	551.9	535.1	497.0	455.7	418.4	392.1	376.1	369.1	364.2	362.9	361.4
10°	551.6	527.9	474.3	417.8	375.3	355.5	349.5	351.1	353.1	354.2	354.2
12.5°	555.7	524.6	451.6	382.3	347.5	337.9	342.6	350.6	356.7	359.3	359.8
15°	563.2	522.5	426.6	351.3	327.9	330.2	341.5	353.1	361.9	365.8	366.8
17.5°	572.5	519.7	397.7	325.8	316.5	324.5	339.2	353.9	364.5	369.4	370.2
20°	582.8	515.5	367.8	306.7	306.5	316.5	331.2	347.7	359.1	364.5	364.2
22.5°	596.7	511.7	340.0	292.8	295.4	304.7	316.8	331.7	342.3	347.2	346.2
25°	615.3	508.1	315.0	280.4	282.8	289.0	297.5	308.8	316.3	318.9	317.1
27.5°	640.3	505.2	295.4	269.1	268.8	271.7	276.8	283.0	286.6	285.9	283.0
30°	671.0	502.4	281.0	259.1	255.4	255.2	257.5	261.1	263.4	258.8	256.5
32.5°	705.2	497.5	268.1	250.3	243.8	241.5	242.6	247.5	257.0	252.4	250.5
35°	745.7	491.8	255.2	240.8	235.9	231.5	232.2	242.8	271.7	268.3	266.5
37.5°	794.4	486.7	243.3	230.4	230.2	224.8	224.3	236.9	275.6	268.3	266.8
40°	852.9	485.6	232.8	219.1	223.2	221.2	219.4	227.1	254.2	239.5	236.6
42.5°	923.6	490.3	225.0	208.3	215.2	220.1	216.8	218.6	229.7	216.5	214.2
45°	1006.1	502.9	219.4	198.7	206.7	219.4	215.5	213.9	215.7	208.5	207.0
47.5°	1102.2	525.3	215.5	190.7	198.7	217.3	215.0	211.9	211.1	207.0	206.0
50°	1205.1	555.5	212.9	183.5	191.5	213.7	214.7	210.3	209.0	207.2	206.7
52.5°	1307.1	588.2	209.8	177.3	185.6	209.3	215.0	208.8	207.0	206.0	205.4
55°	1408.7	622.2	204.2	171.9	181.2	204.2	214.7	206.7	204.7	204.7	204.7
57.5°	1540.4	674.1	196.7	167.5	175.5	197.4	211.4	204.4	201.6	201.8	202.1
60°	1730.6	760.9	188.4	162.6	168.1	189.7	206.2	200.3	196.9	198.0	198.2
62.5°	2048.5	912.7	177.1	155.7	160.3	181.5	199.5	194.6	191.5	193.3	193.6
65°	2472.2	1096.5	162.1	146.9	152.3	172.2	191.0	187.9	184.6	188.9	188.7
67.5°	2730.8	1150.4	146.4	137.6	144.6	162.4	180.4	179.1	176.8	184.6	184.0
69°	2646.0	1053.0	137.4	131.7	139.2	155.7	173.7	173.2	171.4	178.9	178.4
70°	2514.2	962.0	131.7	127.9	136.4	151.6	169.4	169.4	167.5	174.0	172.7
72.5°	2019.6	713.5	118.6	118.1	126.6	140.2	157.5	158.8	157.8	160.1	158.8
75°	1185.7	430.0	105.7	107.2	114.7	128.1	144.3	145.4	144.3	144.1	144.3
77.5°	411.1	192.8	93.3	95.6	102.1	115.7	129.9	132.0	130.4	128.6	129.1
80°	160.8	112.1	79.9	83.3	88.7	101.8	115.5	116.8	114.4	114.2	112.1
82.5°	96.7	68.3	62.1	67.5	74.2	88.4	99.8	99.2	97.4	108.0	94.6
85°	42.0	37.9	45.4	50.8	54.1	66.2	84.3	82.0	77.6	68.3	66.8
87.5°	17.0	19.6	25.0	30.2	32.5	42.8	57.7	55.7	56.5	46.4	46.1
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)