

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: P197305

Luminaire Tested: **NAV-AF-01-D-UNV-T4FT-8030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197305
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24256)
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-T4FT-8030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 80 CRI, 3000K, 615mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3311 lumens
Efficiency: N/A
Efficacy: 97.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G1

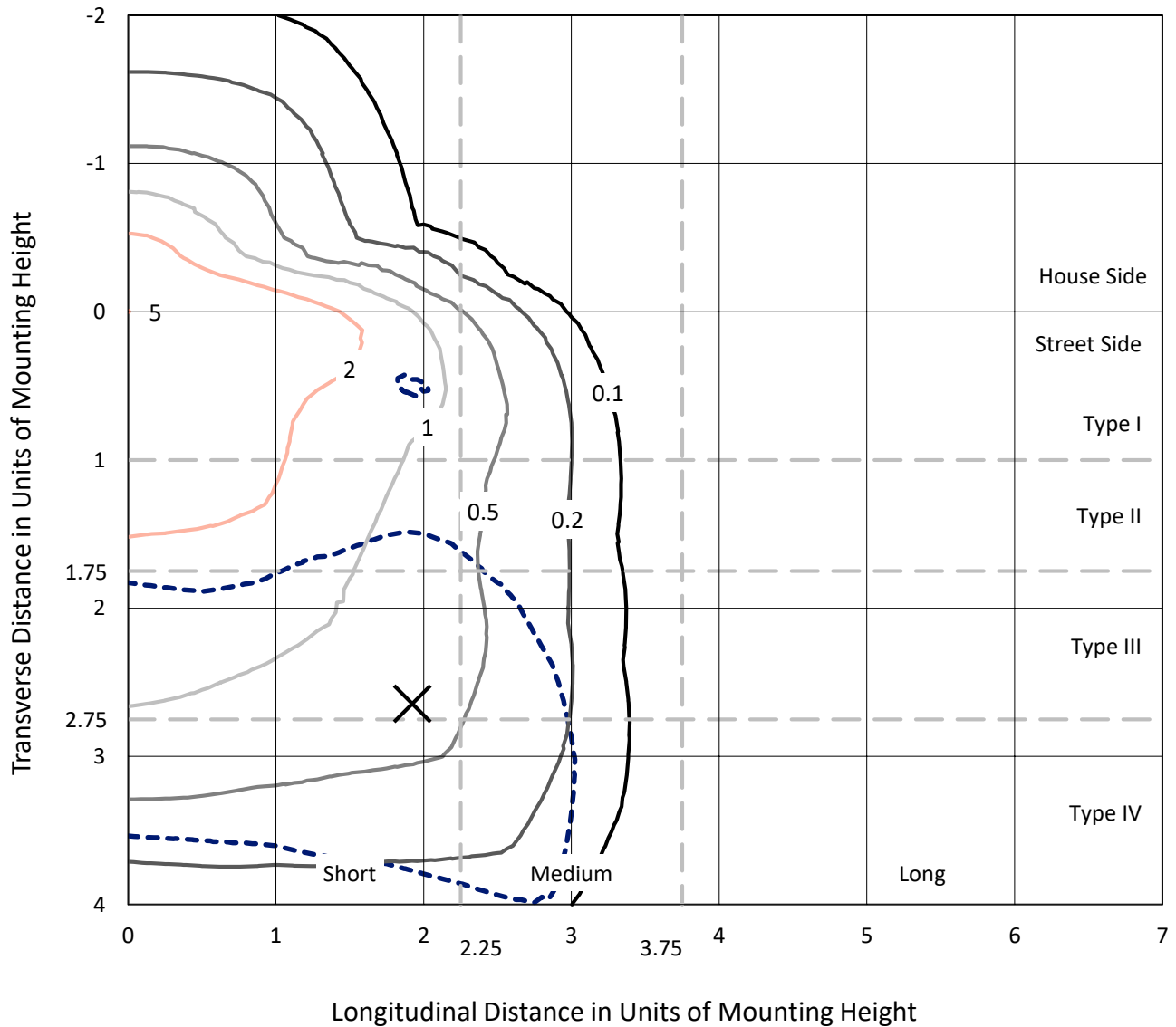
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

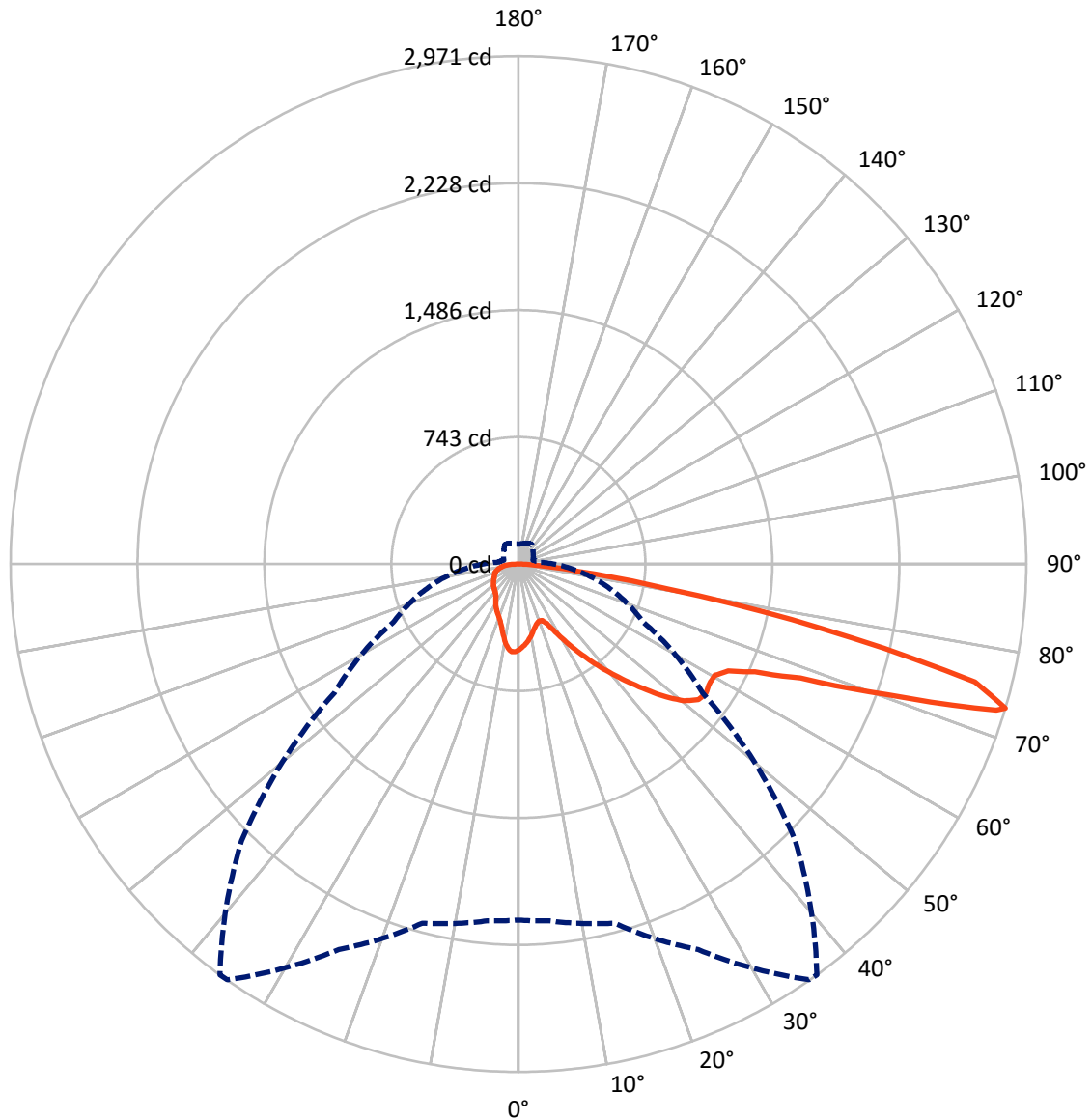
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 36-Deg Lateral - - - Horizontal Cone Through 73-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	638.5	0.0	638.5
	% Fixture	19.3	0.0	19.3
Street Side	Lumens	2672.5	0.0	2672.5
	% Fixture	80.7	0.0	80.7
Total	Lumens	3311.0	0.0	3311.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.6	1.4
10°-20°	114.4	3.5
20°-30°	183.4	5.5
30°-40°	303.4	9.2
40°-50°	469.5	14.2
50°-60°	628.5	19.0
60°-70°	821.0	24.8
70°-80°	670.6	20.3
80°-90°	74.6	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°	3311.0	100.0
0°-180°	3311.0	100.0



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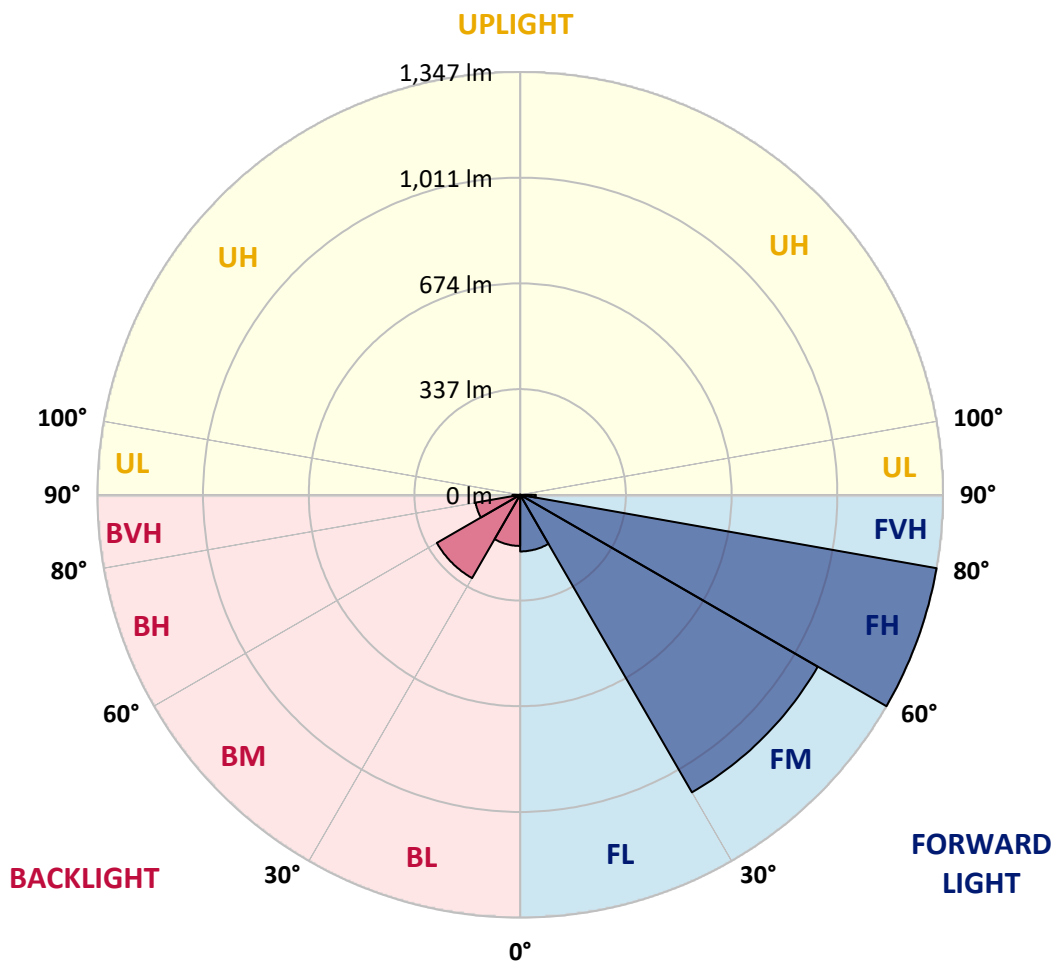
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	180.4	5.4			
FM (30°-60°)	1094.7	33.1			
FH (60°-80°)	1347.3	40.7			G1/1800
FVH (80°-90°)	50.1	1.5			G1/100
BL (0°-30°)	163.0	4.9	B1/500		
BM (30°-60°)	306.6	9.3	B1/1000		
BH (60°-80°)	144.3	4.4	B1/500		G1/500
BVH (80°-90°)	24.6	0.7			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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	501.5	501.5	501.5	501.5	501.5	501.5	501.5	501.5	501.5	501.5	501.5
2.5°	482.4	483.6	483.8	485.3	485.3	485.1	485.7	488.3	489.5	492.5	495.0
5°	458.6	460.1	460.7	463.2	466.4	466.6	468.9	473.8	478.4	484.9	490.4
7.5°	431.9	433.6	435.3	440.5	445.1	445.6	450.0	457.8	463.9	471.9	481.7
10°	406.0	406.4	408.1	414.8	420.9	421.6	427.9	436.7	444.9	456.1	467.2
12.5°	384.8	386.0	385.6	390.7	395.9	396.3	404.8	415.9	427.9	440.5	453.8
15°	377.4	377.2	372.8	372.6	374.9	375.3	383.5	396.5	410.0	425.6	442.6
17.5°	382.5	380.8	369.2	362.0	360.6	361.0	367.1	381.4	395.7	413.6	434.0
20°	410.2	403.7	376.6	359.3	354.5	354.5	358.0	369.6	385.4	406.2	431.9
22.5°	476.1	466.0	408.1	377.4	360.4	358.7	355.9	364.8	382.2	407.3	440.5
25°	559.0	554.1	466.0	425.6	390.4	385.0	366.9	370.0	388.8	418.6	464.1
27.5°	635.7	627.3	541.9	495.6	446.0	437.6	399.3	386.4	404.3	439.7	498.2
30°	680.5	674.9	620.0	575.8	516.7	505.9	451.0	418.8	432.1	474.4	546.5
32.5°	729.4	726.0	698.2	658.0	593.2	580.8	517.9	471.6	474.6	520.5	604.8
35°	776.7	781.1	765.3	735.9	675.7	664.1	607.8	540.6	527.0	572.2	667.1
37.5°	833.5	834.5	824.6	805.5	762.4	752.9	706.4	614.3	584.0	627.3	727.2
40°	946.9	930.3	891.5	876.4	850.7	844.8	791.8	681.8	637.0	683.9	784.0
42.5°	1069.5	1043.6	983.1	958.2	947.9	942.5	862.9	726.8	686.6	740.5	839.8
45°	1168.4	1147.4	1088.0	1057.3	1058.6	1049.7	925.0	767.0	740.5	797.3	902.1
47.5°	1265.8	1230.7	1164.2	1159.8	1174.5	1161.4	984.3	807.2	796.7	859.1	964.3
50°	1272.1	1240.1	1213.2	1248.5	1273.8	1257.6	1038.2	859.8	854.9	934.0	1044.7
52.5°	1195.3	1190.7	1231.7	1291.2	1333.1	1318.6	1082.1	913.8	914.5	1027.7	1142.5
55°	1167.3	1161.4	1210.7	1283.9	1340.5	1331.8	1115.0	974.9	980.5	1141.3	1247.5
57.5°	1214.5	1199.7	1209.4	1270.0	1323.2	1318.2	1149.0	1042.6	1052.9	1272.1	1344.5
60°	1360.7	1330.6	1279.3	1290.6	1323.9	1320.9	1197.8	1118.1	1135.4	1408.4	1405.9
62.5°	1579.7	1545.6	1441.0	1390.5	1383.2	1377.5	1278.4	1210.9	1219.5	1506.9	1370.1
65°	1819.9	1783.3	1659.0	1576.3	1533.0	1520.8	1408.4	1322.8	1268.7	1506.7	1230.9
67.5°	2089.6	2050.9	1927.0	1848.1	1801.2	1780.4	1619.4	1413.3	1252.7	1379.2	984.9
70°	2365.8	2329.0	2272.2	2299.8	2320.4	2288.6	1951.8	1443.3	1137.9	1081.3	661.4
72.5°	2219.2	2216.2	2259.4	2520.6	2918.0	2924.3	2283.8	1358.4	879.1	642.7	352.6
73°	2083.1	2095.5	2175.4	2488.0	2969.2	2971.3	2290.3	1314.4	807.2	553.7	309.7
75°	1079.2	1163.3	1460.0	2017.4	2749.3	2759.2	2018.9	995.0	481.1	307.6	208.7
77.5°	289.0	285.3	470.4	982.8	1832.9	1819.9	1275.7	481.7	230.6	192.9	146.4
80°	99.1	100.3	160.1	359.5	855.6	886.1	553.7	210.2	151.7	134.4	103.7
82.5°	50.5	52.2	83.7	152.9	357.8	350.3	178.2	123.7	101.6	81.6	58.1
85°	26.9	27.8	46.1	79.3	131.3	132.7	62.7	66.1	64.6	46.3	28.6
87.5°	13.3	13.7	22.1	34.9	48.6	46.9	21.9	28.6	31.8	26.1	15.8
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°	501.5	501.5	501.5	501.5	501.5	501.5	501.5	501.5	501.5	501.5	501.5
2.5°	498.2	498.2	500.9	505.5	508.9	512.0	514.1	517.5	519.4	519.2	519.0
5°	494.8	496.9	502.4	508.0	511.8	514.4	514.4	515.8	515.8	515.2	514.4
7.5°	487.0	490.6	498.6	503.6	504.7	501.9	496.5	492.3	487.0	484.3	483.2
10°	474.6	479.2	489.3	491.6	486.2	476.5	463.2	451.9	441.8	437.1	435.7
12.5°	462.4	468.5	478.0	474.4	461.3	442.4	422.0	406.4	395.1	390.7	389.2
15°	452.3	459.7	467.0	455.9	433.2	406.9	384.3	369.8	361.2	357.8	357.0
17.5°	445.6	454.2	456.7	435.9	404.3	374.9	354.9	345.4	341.6	340.2	339.7
20°	446.0	455.7	449.6	416.5	376.6	346.9	333.6	330.9	330.9	330.9	330.7
22.5°	457.6	466.0	446.6	398.4	349.8	323.3	317.7	320.0	321.7	321.7	321.4
25°	481.5	486.2	448.7	381.0	324.8	302.9	303.1	307.6	309.0	309.0	308.6
27.5°	518.1	514.4	452.5	361.6	300.2	284.4	287.4	291.4	292.4	291.8	291.6
30°	564.0	548.9	455.7	338.9	277.1	267.2	269.7	272.0	271.2	269.7	269.5
32.5°	615.3	584.0	453.8	313.5	256.7	249.3	250.8	252.0	250.8	247.2	247.2
35°	666.2	615.8	443.5	285.7	240.5	232.0	231.8	235.8	235.6	231.4	231.6
37.5°	710.8	640.8	423.5	260.2	226.6	219.4	220.3	222.8	224.0	218.4	217.7
40°	749.8	658.0	395.3	238.6	215.4	215.8	213.5	209.5	208.1	205.5	205.1
42.5°	786.4	670.0	365.4	220.5	209.7	214.6	206.8	197.3	193.3	195.6	197.1
45°	822.3	683.5	336.6	205.5	202.6	210.8	200.1	189.5	184.9	186.0	187.4
47.5°	866.3	702.2	301.9	189.5	191.6	203.8	195.9	184.5	177.6	173.3	172.1
50°	924.2	729.4	256.9	172.3	180.1	196.3	192.3	177.1	169.6	161.1	159.0
52.5°	996.5	755.0	211.4	158.4	170.6	189.8	186.4	170.8	161.6	151.5	149.8
55°	1068.7	758.6	172.3	146.4	159.9	180.9	179.2	165.8	152.7	144.5	142.8
57.5°	1119.2	724.7	146.0	136.3	149.6	170.0	172.7	159.7	145.4	139.1	138.0
60°	1120.0	643.7	130.0	129.6	141.8	160.5	166.0	152.5	140.7	136.5	135.7
62.5°	1031.0	518.8	119.7	124.5	136.1	152.7	160.9	148.5	139.7	138.0	137.2
65°	864.2	383.3	111.5	119.9	130.8	146.2	156.7	147.3	139.3	138.6	138.0
67.5°	638.0	262.8	104.6	114.0	125.0	139.5	152.7	145.4	136.7	139.3	138.4
70°	401.4	175.4	98.0	107.3	117.2	131.7	147.5	142.0	133.6	132.1	129.4
72.5°	226.6	126.9	90.2	98.7	107.1	121.4	140.3	136.3	126.4	120.5	117.8
73°	204.7	120.1	88.4	96.6	104.8	119.3	138.6	134.6	124.3	117.8	115.3
75°	149.8	98.2	79.7	87.9	95.1	109.6	130.6	126.2	115.1	107.3	105.6
77.5°	108.6	75.7	68.6	75.9	82.3	96.1	118.6	113.6	102.7	98.5	96.8
80°	78.3	57.4	56.8	64.0	69.4	83.5	105.8	100.6	90.0	102.4	99.7
82.5°	46.7	36.8	41.7	49.6	55.3	70.1	91.9	85.8	75.7	76.6	65.2
85°	22.3	20.8	25.9	32.6	36.6	48.0	76.6	71.7	60.6	49.6	48.6
87.5°	9.9	9.5	12.4	14.5	19.6	28.8	52.4	46.5	44.0	26.3	20.6
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)