

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: P197281

Luminaire Tested: **NAV-AF-01-D-UNV-T3R-8030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197281
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24250)
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-T3R-8030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 80 CRI, 3000K, 615mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE III
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3341 lumens
Efficiency: N/A
Efficacy: 98.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - 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

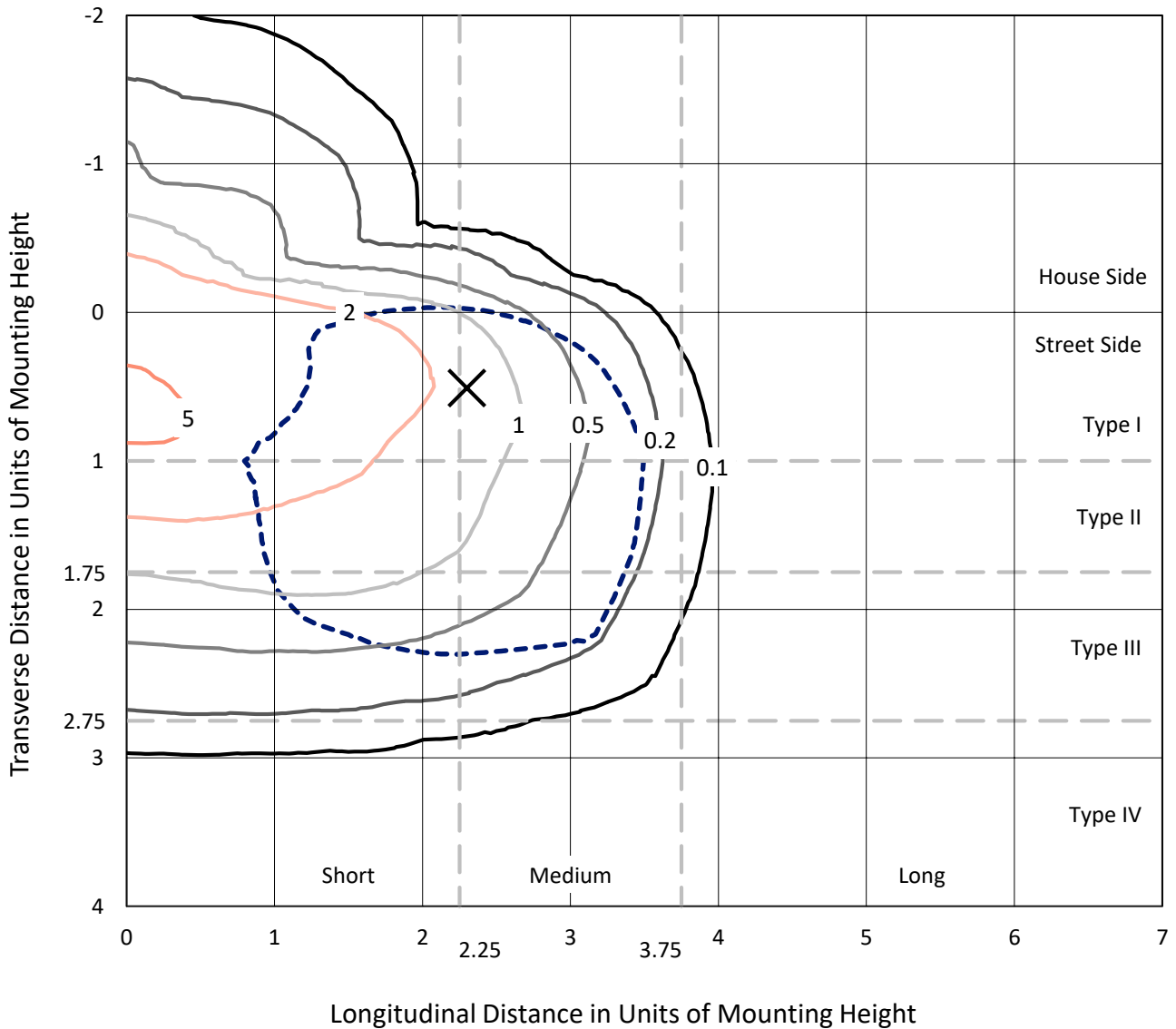


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Iso-Footcandle Lines of Horizontal Illumination

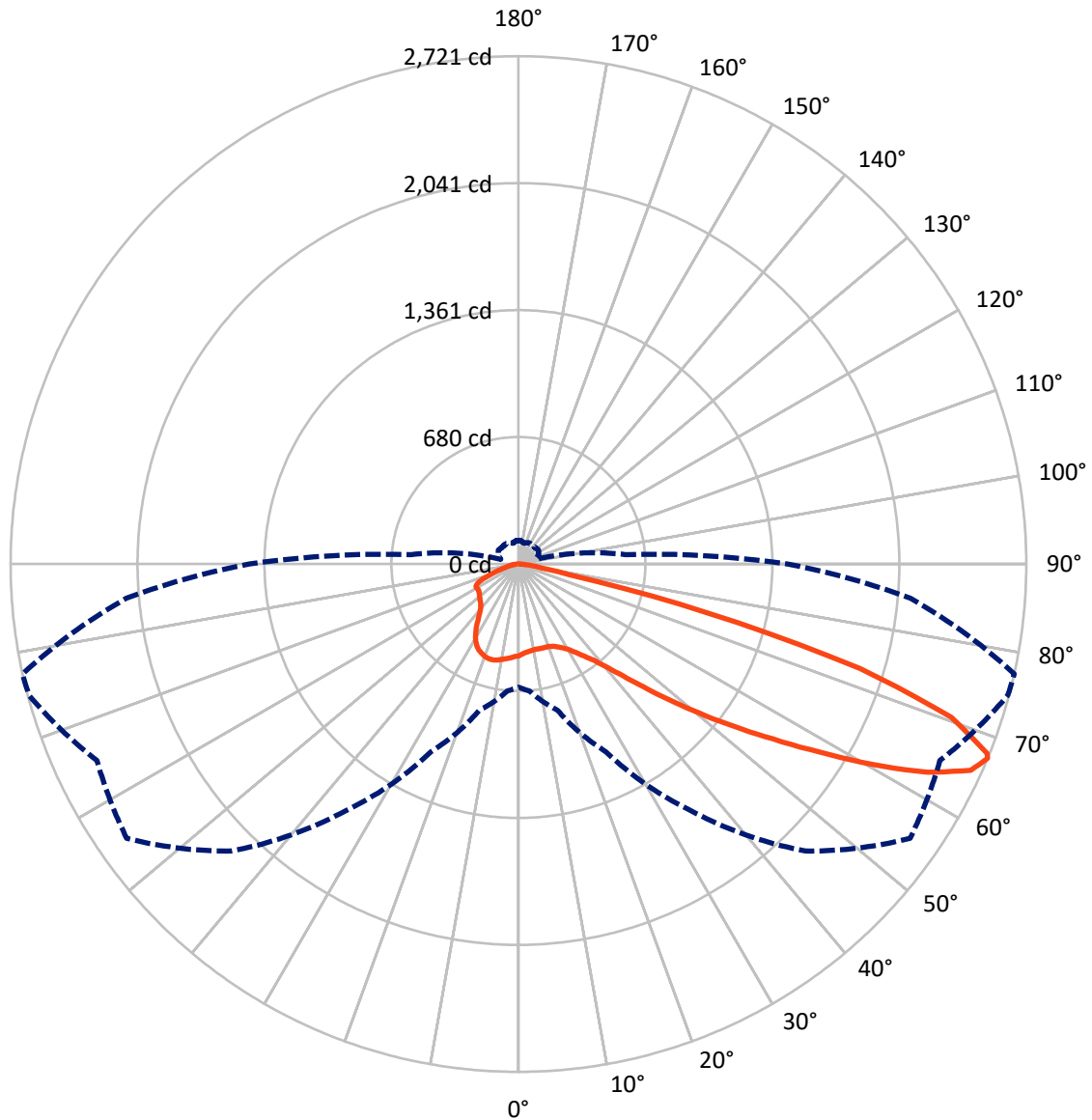
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.9 fc
 Type III - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	574.1	0.0	574.1
	% Fixture	17.2	0.0	17.2
Street Side	Lumens	2766.9	0.0	2766.9
	% Fixture	82.8	0.0	82.8
Total	Lumens	3341.0	0.0	3341.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.8	1.3
10°-20°	121.3	3.6
20°-30°	206.1	6.2
30°-40°	329.7	9.9
40°-50°	507.5	15.2
50°-60°	704.1	21.1
60°-70°	939.2	28.1
70°-80°	447.0	13.4
80°-90°	42.3	1.3
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°	3341.0	100.0
0°-180°	3341.0	100.0



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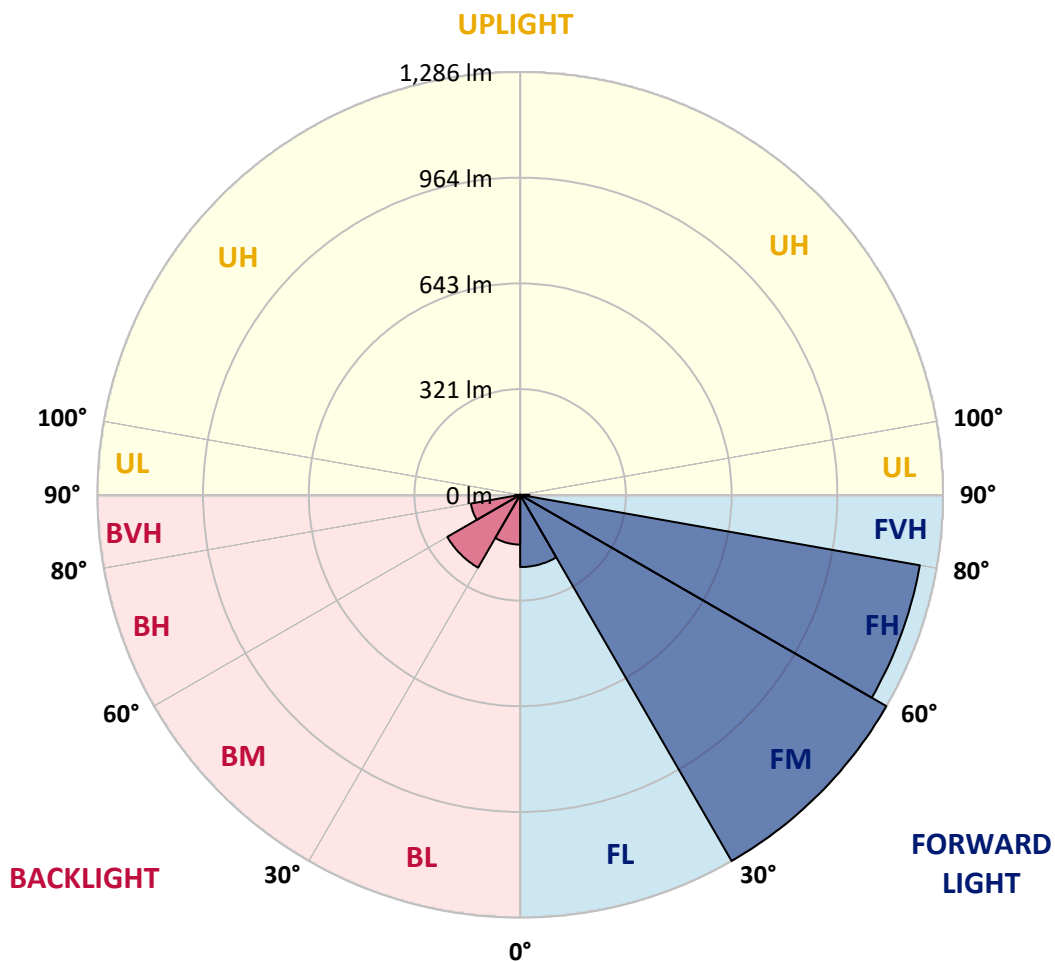
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	219.7	6.6			
FM	(30°-60°)	1285.7	38.5			
FH	(60°-80°)	1234.0	36.9			G1/1800
FVH	(80°-90°)	27.5	0.8			G1/100
BL	(0°-30°)	151.4	4.5	B1/500		
BM	(30°-60°)	255.6	7.7	B1/1000		
BH	(60°-80°)	152.2	4.6	B1/500		G1/500
BVH	(80°-90°)	14.8	0.4			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 III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	491.7	491.7	491.7	491.7	491.7	491.7	491.7	491.7	491.7	491.7	491.7
2.5°	440.9	443.0	443.2	449.2	451.9	458.7	466.1	472.7	478.5	480.6	484.3
5°	396.7	396.7	397.3	401.3	408.9	419.8	435.3	452.3	470.0	474.4	485.3
7.5°	373.6	374.0	374.4	378.3	384.3	394.0	409.5	432.6	462.2	469.4	488.6
10°	375.6	375.0	373.0	372.1	374.6	380.8	394.2	418.0	455.6	466.7	494.6
12.5°	408.1	406.8	400.0	390.1	381.0	378.7	388.0	410.5	452.5	466.7	504.7
15°	463.6	464.4	451.0	430.4	406.6	390.5	389.3	407.9	451.4	468.0	516.5
17.5°	535.9	536.3	517.7	487.8	448.3	415.1	397.7	407.9	451.4	469.2	527.8
20°	612.7	609.8	588.8	551.2	500.0	449.2	413.2	410.3	452.7	471.1	538.6
22.5°	678.6	675.9	653.8	614.4	555.7	489.4	434.1	418.6	459.5	478.7	553.7
25°	736.2	737.9	716.4	672.0	611.3	534.9	465.3	437.6	473.7	492.5	572.2
27.5°	806.2	803.1	778.3	736.0	668.5	582.0	504.3	461.6	490.7	509.3	595.0
30°	887.2	885.7	852.3	808.7	731.5	634.6	542.9	487.4	512.8	532.2	623.5
32.5°	985.5	985.3	949.3	895.9	802.3	694.1	588.6	522.7	545.0	564.6	661.3
35°	1096.8	1096.6	1059.4	988.8	883.9	760.0	642.3	565.6	584.8	605.5	706.3
37.5°	1174.0	1172.8	1153.4	1084.8	974.1	836.6	709.4	623.5	630.1	653.2	760.6
40°	1188.9	1196.3	1213.1	1172.6	1072.6	921.7	776.7	685.6	691.8	721.6	828.9
42.5°	1172.8	1182.5	1238.0	1249.4	1171.1	1024.7	861.0	771.7	779.6	816.6	909.3
45°	1158.7	1167.2	1236.8	1291.9	1268.4	1137.1	966.1	876.9	891.7	937.6	1001.0
47.5°	1134.8	1142.6	1212.4	1299.6	1324.0	1245.3	1092.7	1003.2	1028.8	1084.4	1105.5
50°	1133.5	1137.1	1179.2	1274.0	1343.2	1327.5	1232.9	1151.1	1190.3	1254.4	1221.1
52.5°	1102.2	1126.7	1164.9	1233.1	1343.6	1375.4	1371.0	1313.2	1373.7	1444.6	1347.9
55°	910.1	938.4	1117.4	1213.1	1341.1	1416.5	1497.2	1485.7	1580.2	1654.8	1490.0
57.5°	849.8	861.8	980.3	1219.0	1361.7	1484.4	1623.4	1670.9	1816.5	1897.9	1660.4
60°	833.3	845.9	952.9	1221.9	1417.7	1608.1	1794.6	1880.1	2094.2	2180.6	1853.9
62.5°	814.9	831.2	954.9	1224.6	1516.0	1791.1	2021.8	2107.1	2379.4	2456.5	2035.2
65°	761.2	782.9	916.7	1207.7	1623.6	2020.7	2322.0	2343.7	2615.1	2664.0	2144.6
67°	659.4	683.1	811.8	1109.8	1613.7	2175.4	2562.2	2491.8	2715.2	2721.2	2109.1
67.5°	627.2	651.8	776.3	1069.1	1585.4	2195.6	2604.7	2512.2	2714.4	2707.8	2076.1
70°	422.3	450.0	549.7	785.0	1271.7	2043.4	2594.4	2449.2	2536.4	2460.6	1783.7
72.5°	209.6	210.4	274.2	430.0	770.5	1465.6	2164.3	2095.3	2056.0	1912.9	1308.9
75°	101.0	102.8	129.5	190.0	324.8	756.7	1475.9	1413.8	1203.8	1042.3	655.1
77.5°	77.0	78.9	100.6	123.7	135.5	246.8	731.1	590.8	348.8	278.6	184.6
80°	59.5	63.0	84.9	95.0	89.6	98.9	229.8	180.9	135.7	124.5	91.5
82.5°	46.5	48.5	72.1	72.1	62.0	66.3	107.0	104.5	84.3	76.0	49.2
85°	32.8	37.0	58.0	53.7	40.7	41.1	64.0	61.3	43.4	34.9	19.2
87.5°	14.7	18.8	41.3	35.1	21.7	16.7	26.2	22.5	17.1	13.2	8.9
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°	491.7	491.7	491.7	491.7	491.7	491.7	491.7	491.7	491.7	491.7	491.7
2.5°	488.4	491.7	496.9	500.0	504.1	505.8	507.4	510.3	512.6	511.9	510.9
5°	492.9	498.5	504.9	507.0	507.0	504.9	503.7	503.9	503.3	502.9	501.6
7.5°	499.6	507.2	511.7	509.7	503.3	495.2	487.6	483.0	478.7	476.0	476.8
10°	508.8	517.3	517.5	508.4	493.2	475.6	460.5	450.8	441.5	437.4	438.6
12.5°	522.3	530.7	523.5	503.9	477.0	449.6	421.9	401.9	383.9	379.6	378.3
15°	536.7	543.3	527.2	494.2	453.9	408.7	362.2	332.3	312.2	308.7	307.5
17.5°	549.3	553.0	525.4	476.8	417.4	346.1	292.0	271.8	267.6	269.7	269.7
20°	560.5	559.2	517.3	450.0	359.7	276.7	245.3	245.1	250.7	255.9	256.3
22.5°	574.5	564.8	504.5	410.1	291.0	230.9	225.5	230.9	237.1	242.9	243.5
25°	591.2	571.0	487.4	353.3	234.0	209.6	211.9	216.4	220.3	224.9	225.1
27.5°	608.0	575.8	463.2	286.6	203.0	196.0	198.5	200.3	201.4	204.2	204.2
30°	627.4	579.5	428.3	229.6	188.8	184.0	182.6	181.7	182.6	186.5	186.7
32.5°	651.8	586.1	380.6	197.0	182.1	175.5	168.1	164.0	166.9	173.9	175.1
35°	679.4	593.9	323.4	184.0	179.9	171.4	157.8	151.4	152.4	158.8	159.8
37.5°	714.1	604.1	267.0	180.9	182.1	171.0	153.0	143.9	139.4	139.6	139.4
40°	758.5	614.2	222.4	181.7	187.1	172.0	150.8	136.5	127.0	127.4	128.2
42.5°	805.0	620.8	194.1	184.2	193.1	173.5	149.9	129.3	121.0	128.0	134.4
45°	859.3	618.9	179.5	186.5	197.6	174.1	146.8	128.5	121.6	142.7	154.7
47.5°	921.7	610.9	171.2	187.5	198.9	173.9	144.6	131.1	126.8	163.4	177.0
50°	989.4	598.3	164.6	185.9	198.3	173.1	147.0	134.4	128.9	167.9	178.4
52.5°	1063.5	586.7	157.8	182.1	195.2	170.6	150.1	133.0	123.1	154.7	162.7
55°	1151.3	584.0	150.1	175.7	190.0	167.9	148.5	128.5	116.7	137.1	142.1
57.5°	1251.7	600.7	140.2	167.9	183.0	162.5	144.6	126.0	114.4	124.7	127.4
60°	1379.1	637.7	129.7	159.6	174.3	154.5	141.0	126.6	115.0	122.9	123.5
62.5°	1478.6	671.0	120.2	149.5	162.7	144.8	137.3	127.2	116.9	125.4	124.3
65°	1514.8	654.6	108.4	134.4	146.4	134.0	132.2	127.6	116.9	126.8	124.5
67°	1440.6	576.8	97.3	119.4	130.9	124.5	127.2	126.0	114.8	126.6	122.7
67.5°	1405.3	549.3	94.4	116.9	126.8	121.6	126.0	125.1	114.2	126.2	121.6
70°	1159.0	394.0	79.7	98.1	106.1	107.2	118.3	119.8	109.2	118.5	110.3
72.5°	824.6	246.6	68.8	76.0	85.7	91.7	108.0	112.5	102.6	103.0	96.2
75°	408.1	132.4	61.3	58.6	66.7	76.4	94.2	102.6	92.9	85.9	83.6
77.5°	137.7	75.0	51.8	47.3	51.8	61.3	78.1	89.6	82.0	72.7	71.2
80°	71.2	54.5	40.5	38.0	40.9	47.5	61.1	74.6	70.0	70.4	58.0
82.5°	44.4	33.2	29.1	28.9	31.0	36.3	45.0	60.5	60.1	51.4	37.4
85°	20.7	19.2	18.6	19.2	19.8	20.7	29.3	43.2	45.6	27.7	24.6
87.5°	8.7	8.5	7.4	8.1	8.9	8.7	11.8	18.4	25.6	17.3	15.9
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)