

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: P196250

Luminaire Tested: **NAV-AF-02-D-UNV-T2-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196250  
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-02-D-UNV-T2-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 4000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8035.3 lumens  
Efficiency: N/A  
Efficacy: 121.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Medium - Full Cutoff  
BUG Rating: B2 - U0 - G2

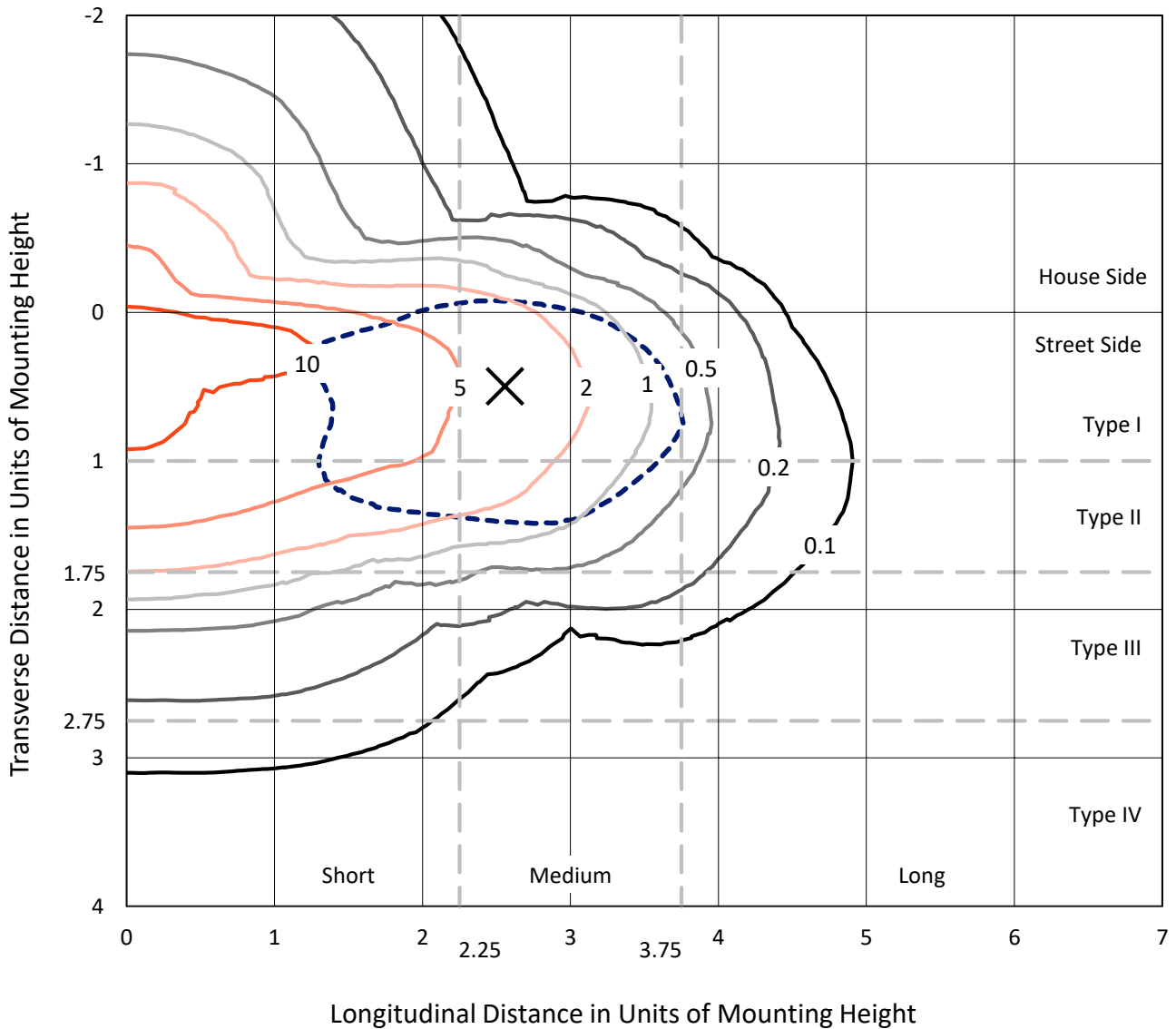
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P196250  
 CATALOG NUMBER: NAV-AF-02-D-UNV-T2-600

### Iso-Footcandle Lines of Horizontal Illumination

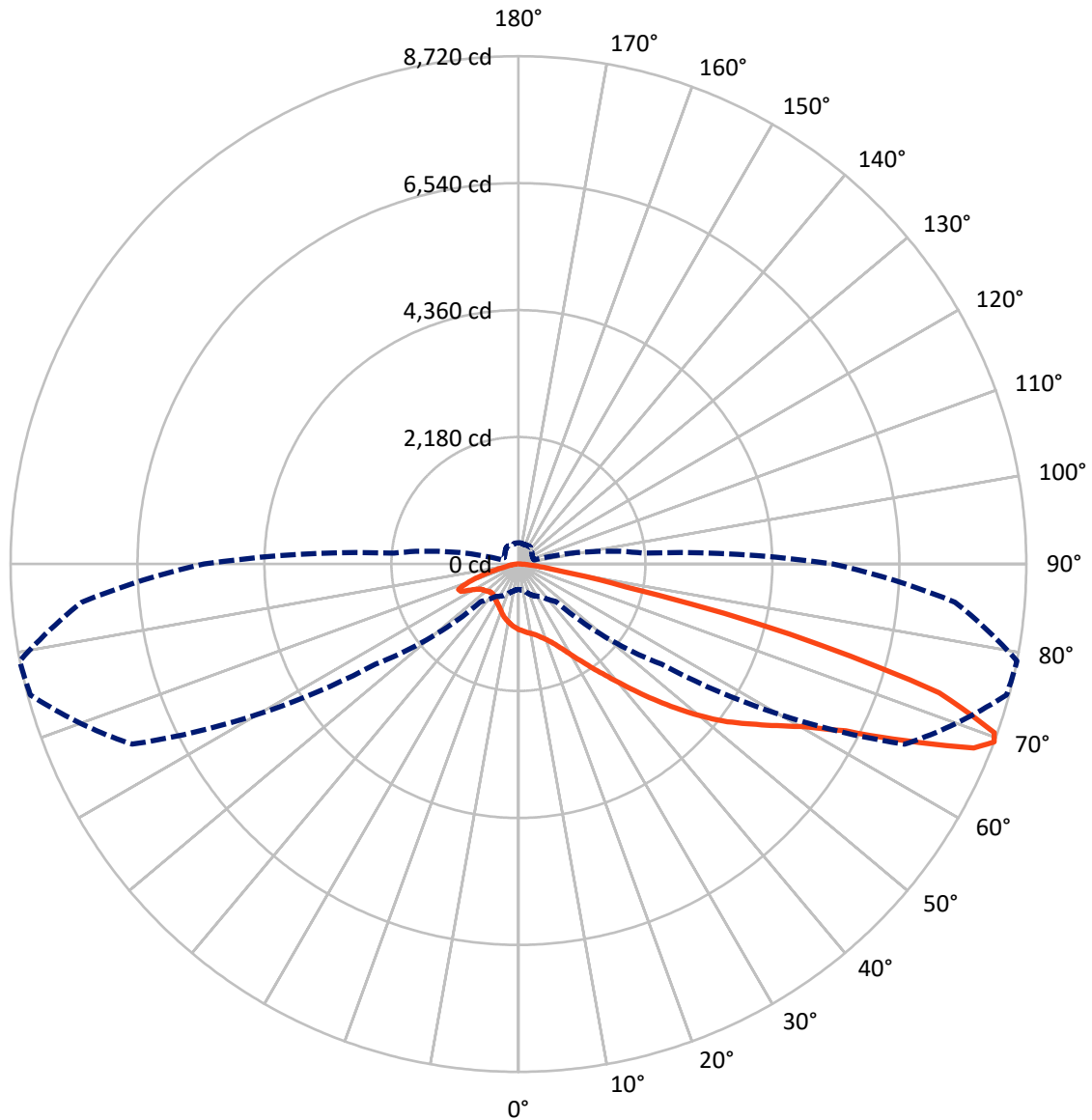
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 13.6 fc  
 Type II - Medium - Full Cutoff

REPORT NUMBER: P196250  
CATALOG NUMBER: NAV-AF-02-D-UNV-T2-600

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P196250

CATALOG NUMBER: NAV-AF-02-D-UNV-T2-600

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1511.6	0.0	1511.6
	% Fixture	18.8	0.0	18.8
<b>Street Side</b>	Lumens	6523.7	0.0	6523.7
	% Fixture	81.2	0.0	81.2
<b>Total</b>	Lumens	8035.3	0.0	8035.3
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	104.5	1.3
10°-20°	299.7	3.7
20°-30°	495.2	6.2
30°-40°	801.9	10.0
40°-50°	1281.0	15.9
50°-60°	1834.6	22.8
60°-70°	2044.0	25.4
70°-80°	1022.6	12.7
80°-90°	151.8	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°	8035.3	100.0
0°-180°	8035.3	100.0

**Coefficient of Utilization**



REPORT NUMBER: P196250

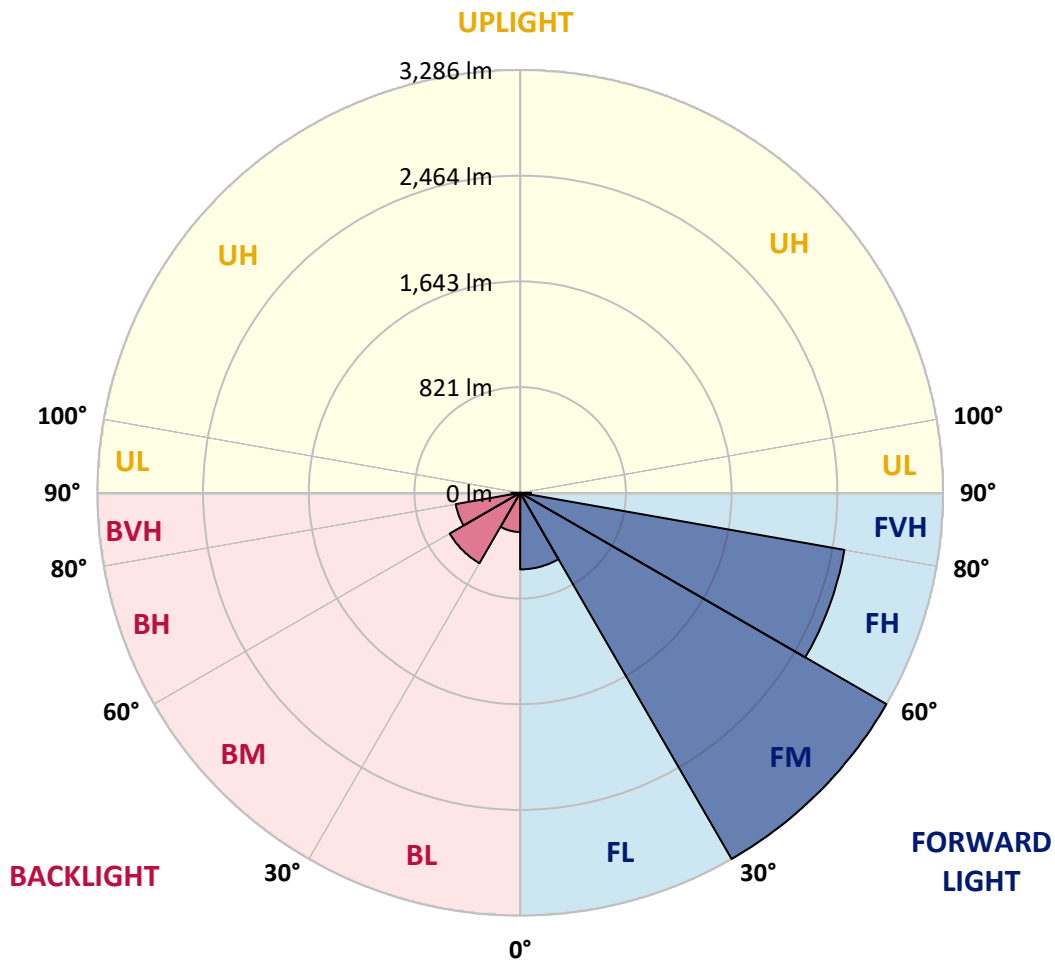
CATALOG NUMBER: NAV-AF-02-D-UNV-T2-600

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	594.9	7.4			
FM (30°-60°)	3285.6	40.9			
FH (60°-80°)	2558.3	31.8			G2/5000
FVH (80°-90°)	84.8	1.1			G1/100
BL (0°-30°)	304.5	3.8	B1/500		
BM (30°-60°)	631.9	7.9	B1/1000		
BH (60°-80°)	508.2	6.3	B2/1000		G2/1000
BVH (80°-90°)	67.0	0.8			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type II Medium





REPORT NUMBER: P196250

CATALOG NUMBER: NAV-AF-02-D-UNV-T2-600

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	1127.6	1127.6	1127.6	1127.6	1127.6	1127.6	1127.6	1127.6	1127.6	1127.6	1127.6
2.5°	1238.0	1235.4	1234.8	1226.9	1222.7	1213.8	1192.8	1171.3	1151.2	1140.8	1129.7
5°	1341.6	1336.3	1333.7	1320.5	1309.0	1289.0	1255.9	1221.7	1185.9	1167.6	1145.5
7.5°	1404.1	1404.6	1404.6	1394.1	1382.5	1358.4	1316.3	1269.6	1216.5	1192.2	1157.6
10°	1409.4	1409.9	1417.8	1420.4	1423.0	1410.4	1371.6	1312.7	1244.3	1212.8	1167.6
12.5°	1357.4	1361.0	1374.1	1393.1	1419.9	1433.6	1416.7	1358.9	1280.0	1241.7	1186.5
15°	1287.4	1291.1	1307.9	1336.8	1380.0	1425.7	1449.3	1412.0	1326.9	1281.7	1214.3
17.5°	1253.2	1257.4	1269.0	1292.2	1334.2	1395.7	1466.7	1468.8	1382.0	1330.0	1247.5
20°	1237.0	1240.1	1254.9	1273.8	1305.8	1364.7	1468.2	1528.7	1447.8	1387.3	1287.9
22.5°	1274.3	1275.3	1282.7	1293.2	1314.8	1359.9	1467.2	1590.7	1529.7	1459.3	1340.0
25°	1383.6	1376.8	1371.6	1358.4	1363.6	1395.7	1484.0	1657.0	1634.9	1554.0	1409.4
27.5°	1512.9	1511.9	1498.2	1467.7	1448.3	1468.8	1531.9	1731.1	1763.7	1674.4	1500.4
30°	1657.0	1657.5	1643.3	1605.9	1566.5	1568.7	1608.1	1816.8	1917.7	1819.4	1612.3
32.5°	1807.9	1817.3	1791.0	1753.7	1705.9	1690.6	1717.4	1920.4	2095.9	1990.8	1742.1
35°	1988.2	1989.7	1960.8	1906.2	1858.3	1834.2	1858.8	2049.7	2301.4	2192.1	1900.3
37.5°	2175.3	2176.3	2146.4	2076.5	2016.0	2000.3	2027.6	2206.8	2519.1	2421.3	2086.4
40°	2328.2	2339.3	2315.7	2250.0	2189.0	2179.5	2219.0	2395.0	2797.2	2692.6	2307.8
42.5°	2501.7	2514.4	2486.0	2417.6	2369.3	2366.1	2427.7	2609.5	3073.7	3006.5	2558.5
45°	2697.3	2715.2	2675.7	2599.0	2558.0	2627.3	2631.0	2847.2	3392.3	3357.5	2840.8
47.5°	2910.7	2925.4	2893.4	2810.9	2766.2	2866.6	2830.3	3104.1	3736.6	3734.0	3146.3
50°	3075.3	3091.6	3094.7	3058.4	3011.7	3024.3	3049.0	3374.4	4079.8	4120.9	3462.2
52.5°	3045.3	3061.1	3132.1	3227.2	3302.4	3269.8	3299.7	3661.4	4411.6	4498.3	3762.3
55°	2803.5	2811.9	2944.9	3170.9	3491.1	3646.7	3648.8	3973.7	4727.0	4848.5	4047.3
57.5°	2367.7	2368.7	2541.7	2875.0	3381.3	3891.2	4199.7	4365.9	5056.0	5235.4	4400.5
60°	1675.4	1679.6	1880.9	2316.7	2987.5	3861.7	4792.2	5067.6	5437.2	5670.1	4855.7
62.5°	994.6	1004.0	1156.0	1505.6	2219.0	3483.2	5142.3	6316.1	5998.7	6307.7	5584.4
65°	647.1	655.0	745.9	921.6	1311.1	2534.4	5027.2	7525.2	7061.0	7310.7	6631.6
67.5°	498.4	504.6	576.1	682.3	804.3	1369.9	4019.4	7778.6	8354.2	8432.1	7515.2
69°	437.9	443.1	495.7	597.7	677.1	906.8	2995.4	7318.6	8677.6	8720.1	7526.3
70°	405.8	410.0	459.4	547.8	621.9	723.8	2292.5	6784.5	8559.2	8668.1	7309.2
72.5°	334.3	338.0	373.3	441.1	508.3	515.7	1015.6	4954.0	7207.2	7555.2	6185.3
75°	279.2	281.2	304.3	353.8	411.6	410.6	518.8	2806.2	4397.9	4812.7	3819.1
77.5°	232.9	234.5	249.7	280.2	324.9	323.3	365.4	1211.2	1941.9	1873.5	1314.8
80°	205.5	206.6	214.5	222.4	250.7	249.2	270.8	556.2	790.1	730.2	497.3
82.5°	156.1	158.3	198.1	201.8	194.5	187.7	188.7	323.9	404.8	368.5	267.1
85°	88.3	88.8	127.3	148.7	169.3	127.3	122.4	167.2	199.8	175.0	116.7
87.5°	39.4	41.0	61.0	70.5	91.5	74.7	69.9	71.0	86.2	71.5	46.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P196250

CATALOG NUMBER: NAV-AF-02-D-UNV-T2-600

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1127.6	1127.6	1127.6	1127.6	1127.6	1127.6	1127.6	1127.6	1127.6	1127.6	1127.6
2.5°	1119.2	1110.2	1089.2	1067.7	1046.2	1032.5	1018.2	1005.2	999.8	999.3	989.4
5°	1123.9	1102.9	1055.1	1002.5	952.6	913.6	881.1	860.0	839.5	835.9	827.0
7.5°	1125.5	1091.3	1013.5	929.5	853.2	799.5	767.0	752.8	742.8	740.2	737.0
10°	1124.9	1076.7	967.3	852.1	765.4	725.0	712.8	716.0	720.2	722.3	722.3
12.5°	1133.4	1069.8	921.0	779.6	708.6	689.2	698.7	714.9	727.5	732.8	733.9
15°	1148.7	1065.6	870.0	716.5	668.7	673.4	696.5	720.2	738.1	745.9	748.1
17.5°	1167.6	1059.8	811.1	664.5	645.6	661.8	691.8	721.8	743.3	753.3	754.9
20°	1188.6	1051.4	750.1	625.5	625.0	645.6	675.6	709.1	732.3	743.3	742.8
22.5°	1217.0	1043.5	693.4	597.2	602.4	621.3	646.1	676.6	698.2	708.1	706.0
25°	1254.9	1036.1	642.4	571.9	576.6	589.3	606.6	629.7	645.0	650.3	646.6
27.5°	1305.8	1030.3	602.4	548.8	548.3	554.0	564.6	577.3	584.6	583.0	577.3
30°	1368.4	1024.6	573.0	528.4	521.0	520.5	525.2	532.5	537.3	527.8	523.0
32.5°	1438.3	1014.6	546.8	510.5	497.3	492.6	494.7	504.6	524.2	514.6	511.0
35°	1520.8	1003.0	520.5	491.0	481.0	472.1	473.6	495.2	554.0	547.3	543.6
37.5°	1620.1	992.5	496.2	469.9	469.4	458.4	457.4	483.1	562.0	547.3	544.1
40°	1739.5	990.4	474.6	446.8	455.2	451.0	447.3	463.1	518.3	488.4	482.6
42.5°	1883.6	999.8	458.9	424.7	438.9	449.0	442.1	445.8	468.4	441.6	436.8
45°	2051.7	1025.6	447.3	405.3	421.6	447.3	439.5	436.3	440.0	425.2	422.2
47.5°	2247.8	1071.3	439.5	389.0	405.3	443.1	438.4	432.1	430.6	422.2	420.0
50°	2457.6	1132.8	434.2	374.3	390.6	435.8	437.9	428.9	426.4	422.7	421.6
52.5°	2665.8	1199.6	427.9	361.7	378.5	426.9	438.4	425.9	422.2	420.0	419.0
55°	2872.9	1269.0	416.3	350.7	369.6	416.3	437.9	421.6	417.4	417.4	417.4
57.5°	3141.5	1374.6	401.1	341.7	358.0	402.6	431.1	416.9	411.1	411.6	412.1
60°	3529.5	1551.8	384.3	331.7	342.8	386.9	420.5	408.5	401.6	403.8	404.3
62.5°	4177.6	1861.5	361.1	317.5	326.9	370.1	406.9	396.9	390.6	394.2	394.8
65°	5041.9	2236.3	330.6	299.6	310.7	351.2	389.5	383.2	376.3	385.3	384.8
67.5°	5569.1	2346.1	298.6	280.7	294.9	331.2	368.0	365.4	360.6	376.3	375.3
69°	5396.2	2147.5	280.2	268.6	283.9	317.5	354.4	353.2	349.5	364.8	363.8
70°	5127.5	1961.9	268.6	260.8	278.1	309.1	345.3	345.3	341.7	354.9	352.2
72.5°	4118.8	1455.1	241.8	240.8	258.1	286.0	321.2	323.9	321.7	326.4	323.9
75°	2418.2	876.9	215.5	218.7	233.9	261.3	294.4	296.5	294.4	293.9	294.4
77.5°	838.5	393.2	190.3	195.1	208.2	236.0	264.9	269.1	266.0	262.3	263.4
80°	328.1	228.6	163.0	169.8	180.9	207.7	235.5	238.1	233.4	232.9	228.6
82.5°	197.1	139.3	126.6	137.7	151.4	180.3	203.5	202.3	198.8	220.2	192.9
85°	85.7	77.2	92.5	103.5	110.4	135.1	171.9	167.2	158.3	139.3	136.2
87.5°	34.7	40.0	50.9	61.5	66.3	87.3	117.7	113.5	115.1	94.6	94.1
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)