

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: P270478

Luminaire Tested: **NAV-AF-03-D-UNV-T4W-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270478
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24127)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-03-D-UNV-T4W-7027-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10246.7 lumens
Efficiency: N/A
Efficacy: 106.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B2 - U0 - G2

Input Watts (W): 96
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

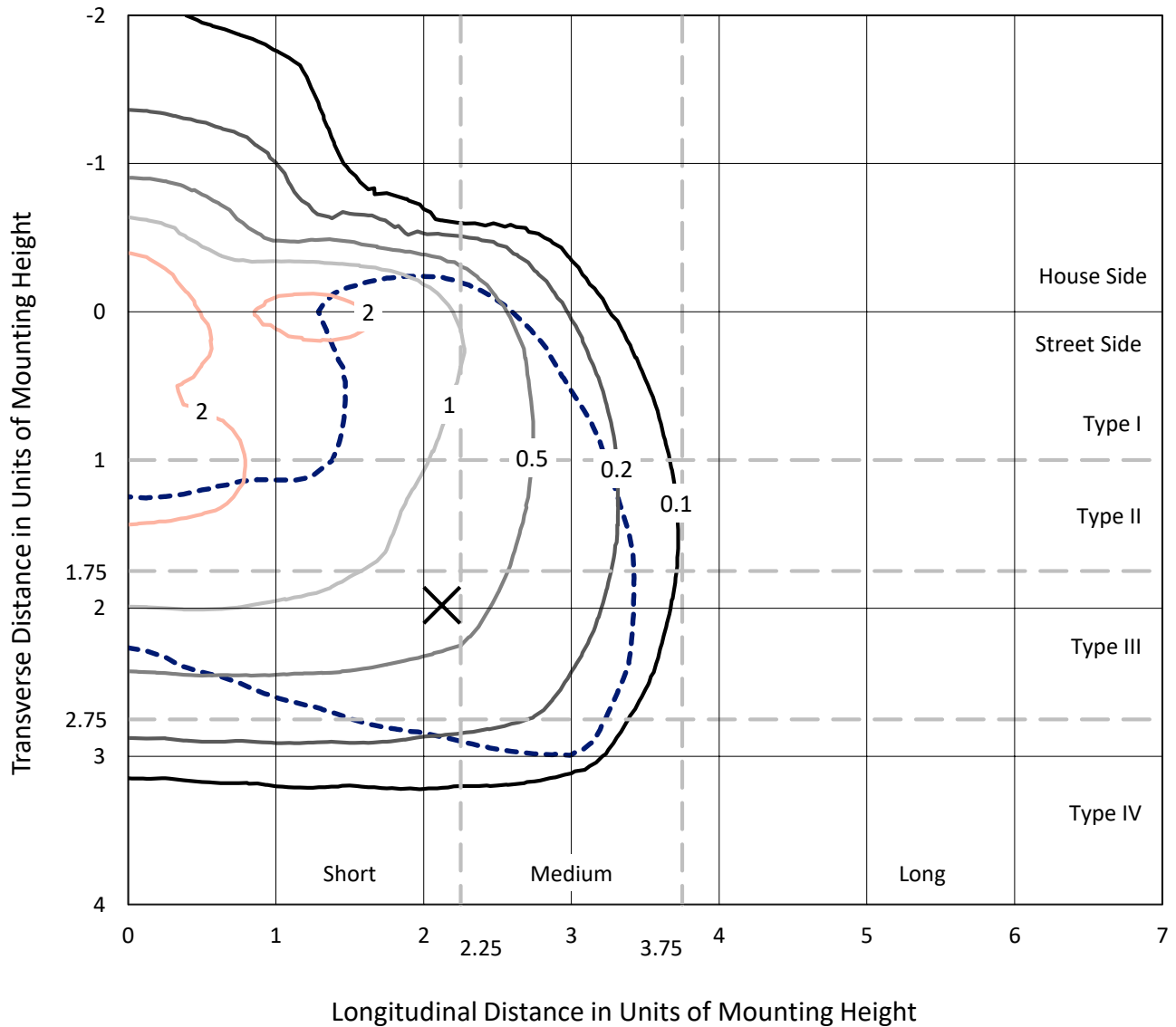


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Iso-Footcandle Lines of Horizontal Illumination

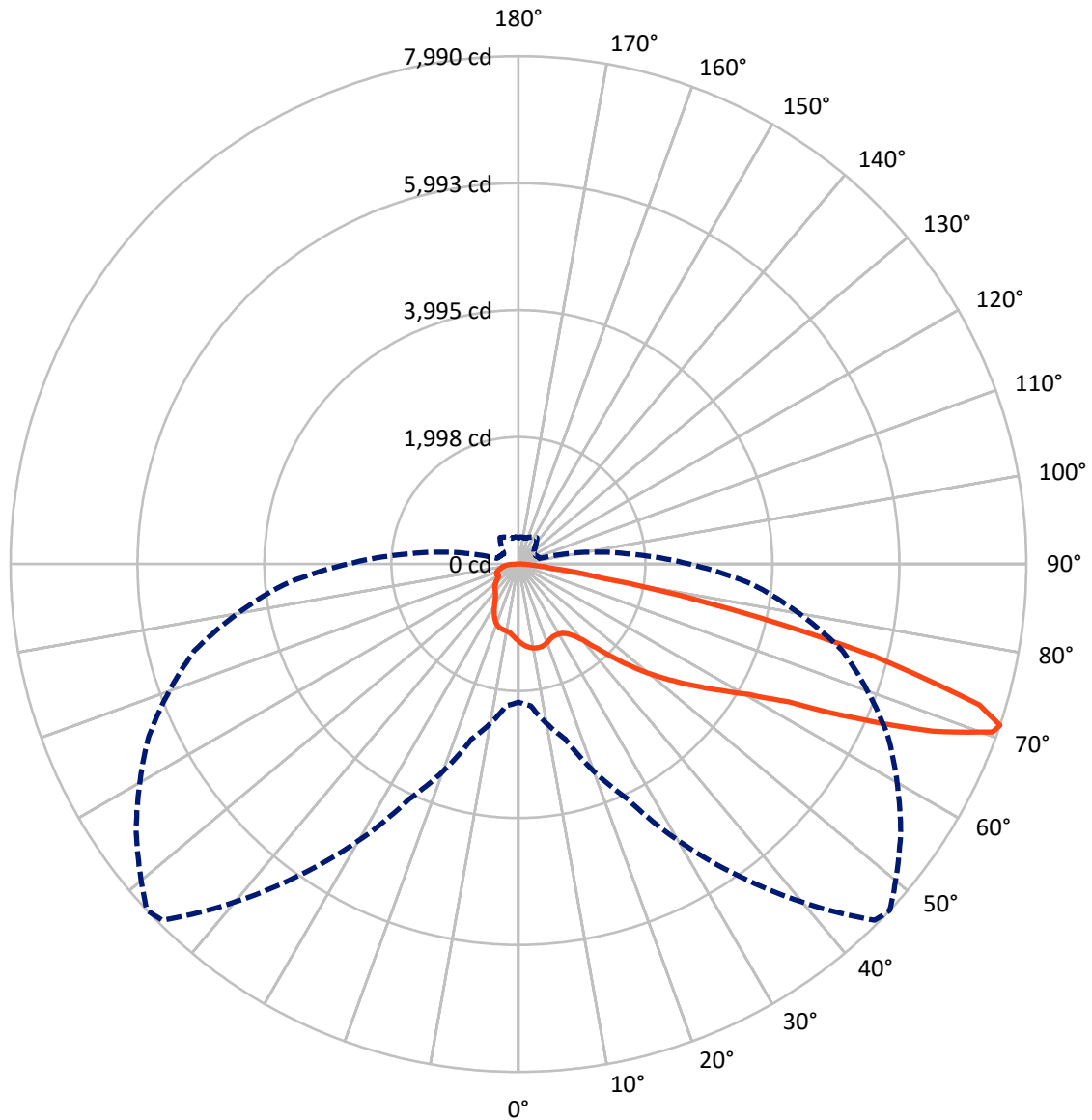
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.5 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 47-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2196.0	0.0	2196.0
	% Fixture	21.4	0.0	21.4
Street Side	Lumens	8050.7	0.0	8050.7
	% Fixture	78.6	0.0	78.6
Total	Lumens	10246.7	0.0	10246.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.3	1.1
10°-20°	340.4	3.3
20°-30°	505.8	4.9
30°-40°	726.2	7.1
40°-50°	1287.6	12.6
50°-60°	2203.3	21.5
60°-70°	3127.9	30.5
70°-80°	1713.1	16.7
80°-90°	226.1	2.2
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°	10246.7	100.0
0°-180°	10246.7	100.0



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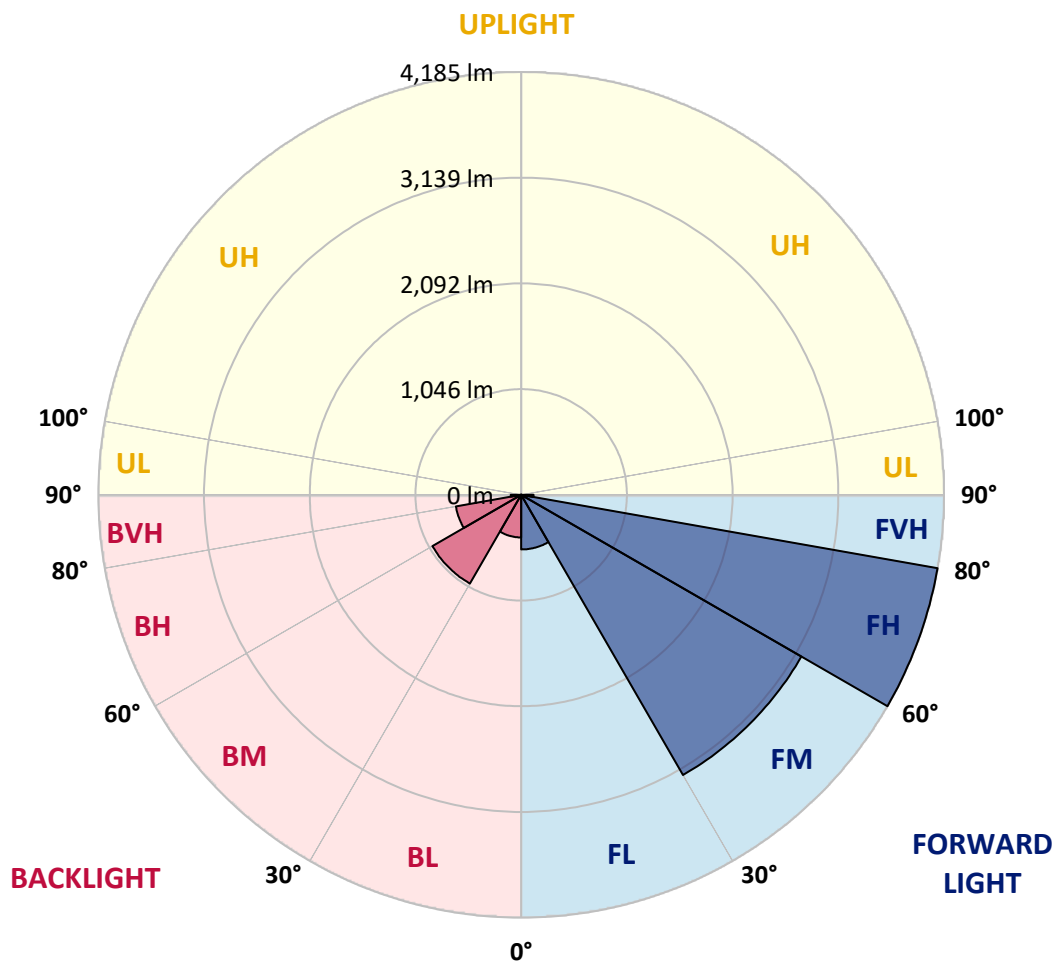
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	540.8	5.3			
FM	(30°-60°)	3202.4	31.3			
FH	(60°-80°)	4184.8	40.8			G2/5000
FVH	(80°-90°)	122.7	1.2			G2/225
BL	(0°-30°)	421.7	4.1	B1/500		
BM	(30°-60°)	1014.7	9.9	B2/2500		
BH	(60°-80°)	656.1	6.4	B2/1000		G2/1000
BVH	(80°-90°)	103.5	1.0			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	1218.6	1218.6	1218.6	1218.6	1218.6	1218.6	1218.6	1218.6	1218.6	1218.6	1218.6
2.5°	1292.9	1290.2	1291.6	1286.9	1275.7	1263.6	1263.6	1251.0	1237.8	1224.5	1209.8
5°	1373.1	1369.2	1366.0	1351.3	1329.4	1304.8	1300.8	1275.7	1248.4	1221.2	1194.6
7.5°	1440.3	1436.3	1426.4	1399.7	1367.8	1331.4	1326.7	1293.5	1257.6	1219.8	1182.7
10°	1488.1	1485.4	1466.2	1432.3	1395.2	1351.9	1344.0	1310.2	1267.7	1220.4	1173.4
12.5°	1514.6	1510.7	1487.5	1447.6	1403.8	1359.9	1351.9	1319.4	1270.9	1219.2	1164.1
15°	1504.0	1502.1	1480.1	1439.7	1395.7	1358.0	1351.3	1318.2	1268.9	1214.5	1155.4
17.5°	1458.8	1463.5	1446.4	1406.4	1370.5	1344.0	1336.7	1305.4	1259.1	1203.2	1142.1
20°	1396.4	1401.7	1393.1	1352.7	1332.0	1314.8	1310.7	1285.6	1242.4	1186.7	1126.1
22.5°	1330.1	1334.7	1335.4	1297.5	1290.9	1284.2	1281.0	1262.9	1227.9	1176.7	1115.5
25°	1284.2	1289.5	1290.9	1257.6	1261.7	1263.6	1262.9	1250.4	1225.2	1176.7	1117.0
27.5°	1272.3	1275.0	1273.5	1243.1	1250.4	1261.7	1262.3	1259.7	1235.8	1190.0	1135.5
30°	1313.4	1314.8	1298.2	1252.3	1259.7	1274.2	1275.0	1273.5	1258.3	1224.5	1177.3
32.5°	1491.5	1490.1	1432.9	1314.8	1289.5	1294.8	1296.9	1308.8	1310.2	1281.6	1237.8
35°	1762.4	1761.7	1695.3	1493.4	1374.5	1346.6	1349.3	1367.8	1384.5	1365.2	1340.0
37.5°	2060.5	2062.5	2021.9	1748.5	1557.8	1441.6	1438.9	1452.9	1482.8	1489.4	1492.8
40°	2391.2	2401.1	2399.2	2041.3	1814.8	1603.7	1577.1	1561.2	1618.9	1655.4	1702.6
42.5°	2769.0	2766.4	2767.7	2362.6	2108.3	1858.7	1809.5	1735.2	1802.2	1865.3	1968.8
45°	3093.8	3104.4	3112.3	2704.5	2437.0	2150.2	2100.3	1964.9	2025.3	2119.6	2277.7
47.5°	3420.4	3401.8	3416.4	3085.0	2802.9	2482.8	2418.3	2235.8	2292.3	2425.1	2665.5
50°	3800.9	3792.3	3725.9	3581.8	3245.1	2820.1	2735.8	2518.7	2601.0	2778.3	3144.2
52.5°	4142.3	4095.7	4044.0	3972.2	3680.0	3161.4	3054.5	2812.9	2964.2	3184.0	3738.4
55°	4267.0	4235.9	4298.3	4391.3	4140.3	3509.4	3389.8	3156.1	3373.9	3648.1	4437.7
57.5°	4399.9	4410.5	4551.4	4739.2	4575.8	3880.6	3751.1	3562.6	3823.5	4167.4	5219.3
60°	4466.4	4508.9	4789.7	5142.3	4990.3	4287.7	4163.5	4029.3	4322.1	4741.3	5998.9
62.5°	4477.6	4534.6	4932.5	5283.7	5560.6	4911.3	4767.8	4622.3	4945.1	5375.4	6563.2
65°	4270.5	4358.0	4919.7	5457.7	6080.5	5953.1	5862.1	5608.4	5779.1	5933.8	6659.6
67.5°	3661.5	3757.2	4433.0	5386.0	6497.6	7034.1	7016.8	6642.2	6423.2	6149.5	5945.7
70°	2687.3	2764.4	3413.7	4604.4	6315.7	7882.7	7913.3	7312.4	6603.1	5691.4	4421.1
71°	2173.4	2239.7	2851.9	4087.7	5961.1	7926.6	7990.3	7342.1	6415.9	5277.7	3701.3
72.5°	1352.7	1389.8	1893.8	3085.0	5132.9	7475.1	7582.7	6959.7	5826.2	4461.0	2616.4
75°	510.6	525.2	702.6	1360.7	3063.8	5615.8	5745.9	5259.8	4093.0	2546.5	1095.0
77.5°	274.3	281.6	348.6	565.8	1227.9	3219.3	3386.6	3000.1	1963.5	891.1	447.5
80°	184.0	188.6	241.0	335.3	564.5	1225.7	1365.2	1204.5	735.2	508.6	318.7
82.5°	118.8	121.5	164.0	220.4	364.5	430.9	492.0	514.0	458.9	364.5	192.5
85°	78.3	80.4	108.2	140.8	225.7	212.4	217.7	284.9	312.8	240.3	98.3
87.5°	45.2	46.5	65.0	72.4	101.6	79.7	86.3	135.5	185.9	156.8	56.5
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°	1218.6	1218.6	1218.6	1218.6	1218.6	1218.6	1218.6	1218.6	1218.6	1218.6	1218.6
2.5°	1203.2	1197.9	1185.9	1178.7	1175.3	1174.1	1172.6	1175.3	1175.3	1174.1	1171.4
5°	1181.4	1171.4	1151.4	1137.6	1130.2	1128.2	1130.8	1134.2	1136.1	1136.1	1134.2
7.5°	1165.5	1150.8	1124.1	1104.9	1093.6	1090.4	1097.6	1109.5	1117.6	1121.5	1122.3
10°	1152.0	1132.1	1102.9	1083.0	1073.7	1072.3	1081.6	1097.0	1113.5	1120.8	1122.3
12.5°	1140.2	1117.6	1085.7	1067.0	1060.4	1063.9	1076.3	1090.4	1109.5	1120.2	1120.8
15°	1128.9	1105.6	1071.8	1052.5	1051.1	1056.4	1068.4	1079.8	1094.3	1107.6	1107.6
17.5°	1115.5	1090.4	1055.1	1037.3	1037.3	1041.9	1049.8	1055.8	1065.1	1077.7	1077.1
20°	1099.6	1073.7	1037.9	1019.2	1015.4	1012.7	1012.7	1013.9	1021.9	1033.2	1035.2
22.5°	1087.7	1061.1	1023.3	1000.7	982.7	965.5	958.2	955.5	962.9	973.5	976.1
25°	1087.7	1061.1	1018.6	980.8	936.9	903.8	889.9	885.8	893.2	903.1	907.1
27.5°	1105.6	1079.0	1029.3	962.9	882.6	829.3	812.7	809.5	816.1	824.0	828.1
30°	1147.5	1121.5	1059.8	942.2	822.0	752.3	733.7	730.4	733.7	737.1	741.7
32.5°	1217.2	1195.3	1109.5	923.6	761.0	682.6	660.1	654.8	656.0	656.8	660.8
35°	1330.7	1320.8	1176.1	901.8	703.3	625.5	602.3	591.7	590.9	594.3	599.0
37.5°	1504.8	1510.7	1261.7	869.9	655.5	585.1	561.8	551.1	545.8	552.5	557.8
40°	1750.3	1764.4	1360.7	826.7	616.1	561.1	536.6	526.5	519.3	517.2	519.8
42.5°	2069.8	2065.8	1461.5	771.6	573.7	545.2	519.3	508.6	496.8	481.4	478.1
45°	2448.3	2391.2	1545.9	703.9	525.2	529.9	503.3	488.7	470.2	447.5	444.9
47.5°	2895.1	2737.9	1597.6	631.5	480.1	510.0	485.4	462.8	435.6	420.9	419.0
50°	3433.7	3143.4	1634.1	557.8	439.6	484.7	460.2	430.3	403.7	399.7	399.0
52.5°	4071.2	3622.2	1679.3	491.5	407.7	452.1	434.9	404.3	383.1	385.2	385.2
55°	4749.2	4117.7	1680.6	438.9	379.9	414.4	416.4	391.8	375.2	381.8	383.8
57.5°	5367.4	4550.6	1548.5	401.7	353.3	384.5	410.3	396.4	383.8	407.0	409.1
60°	5906.5	4883.9	1264.4	371.2	331.4	373.2	423.6	425.0	422.4	485.4	490.0
62.5°	6103.9	4887.3	897.8	345.3	319.3	379.9	451.6	453.6	453.6	511.9	520.6
65°	5827.6	4480.2	597.6	330.0	311.4	394.4	474.1	465.5	444.9	485.4	476.1
67.5°	4854.1	3487.5	436.9	320.1	300.2	395.2	494.1	472.1	436.9	471.5	455.5
70°	3336.0	2219.3	365.9	310.8	286.9	377.8	504.7	470.2	425.0	439.6	418.3
71°	2685.4	1771.0	347.3	307.4	281.6	367.9	505.9	467.5	419.0	428.3	409.1
72.5°	1769.0	1091.0	324.6	300.2	273.5	350.6	502.7	461.5	411.1	411.8	399.0
75°	698.0	452.1	292.2	283.5	250.9	322.8	488.0	449.0	395.8	382.5	377.2
77.5°	352.7	295.5	256.9	260.2	224.4	294.1	467.5	428.3	374.6	356.5	352.7
80°	257.6	224.4	219.7	225.7	194.6	266.3	441.5	400.5	347.3	365.9	358.0
82.5°	156.8	136.8	171.9	186.6	162.8	237.7	411.1	367.9	312.8	288.1	279.0
85°	74.4	80.4	124.1	137.4	120.3	189.9	375.9	332.1	272.9	235.7	239.7
87.5°	36.6	44.5	71.1	82.4	79.1	139.4	283.5	257.6	215.1	177.2	173.4
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)