

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: P196851

Luminaire Tested: **NAV-AF-03-D-UNV-T4W-7030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196851
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-7030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 3000K, 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: 11406.7 lumens
Efficiency: N/A
Efficacy: 118.8 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

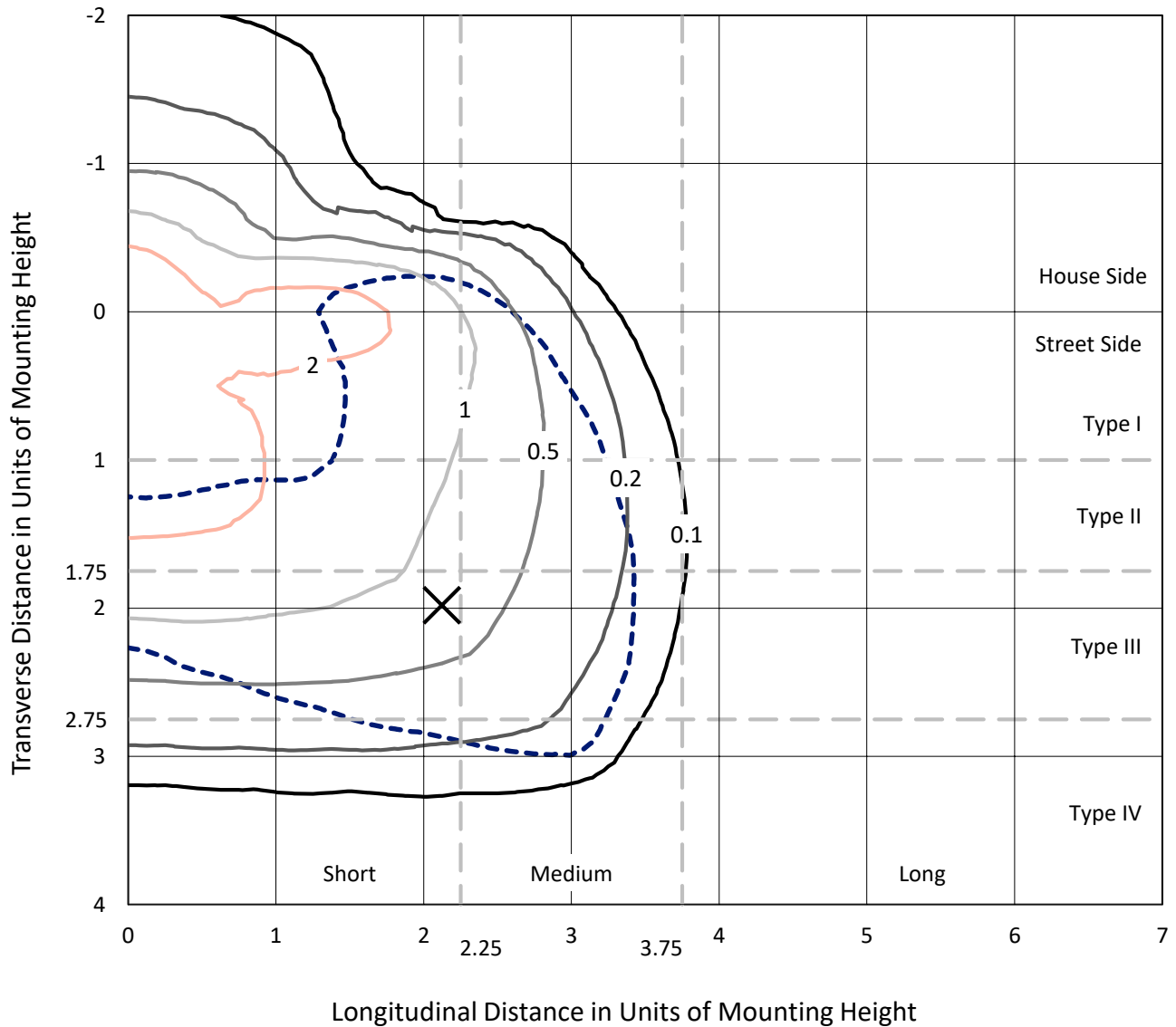
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P196851
 CATALOG NUMBER: NAV-AF-03-D-UNV-T4W-7030-600

Iso-Footcandle Lines of Horizontal Illumination

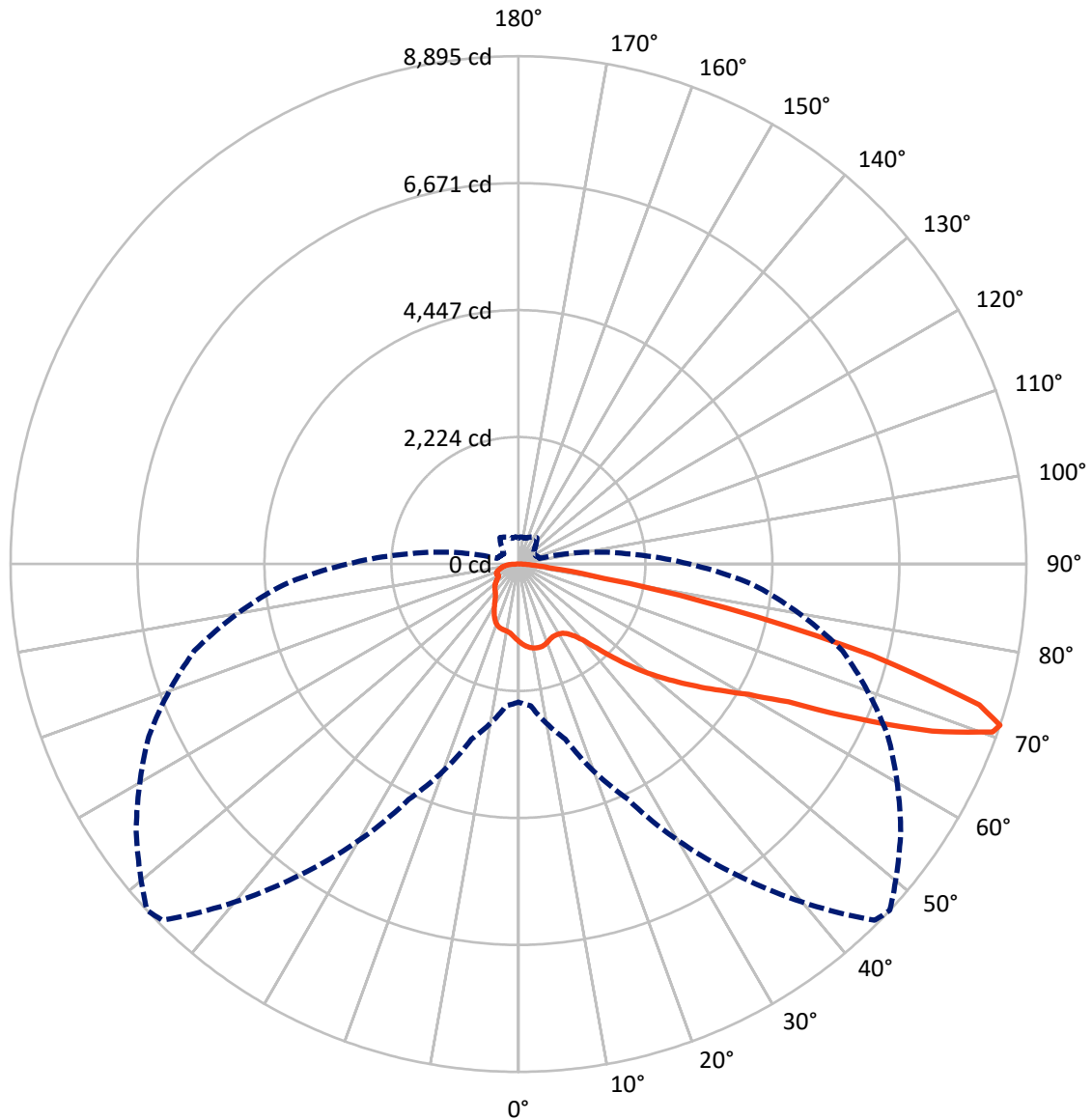
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.9 fc
 Type IV - Short - Semi-Cutoff

REPORT NUMBER: P196851
CATALOG NUMBER: NAV-AF-03-D-UNV-T4W-7030-600

Luminous Intensity Polar Plot



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

REPORT NUMBER: P196851

CATALOG NUMBER: NAV-AF-03-D-UNV-T4W-7030-600

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2444.6	0.0	2444.6
	% Fixture	21.4	0.0	21.4
Street Side	Lumens	8962.1	0.0	8962.1
	% Fixture	78.6	0.0	78.6
Total	Lumens	11406.7	0.0	11406.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.5	1.1
10°-20°	378.9	3.3
20°-30°	563.0	4.9
30°-40°	808.4	7.1
40°-50°	1433.4	12.6
50°-60°	2452.7	21.5
60°-70°	3482.0	30.5
70°-80°	1907.0	16.7
80°-90°	251.7	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°	11406.7	100.0
0°-180°	11406.7	100.0



REPORT NUMBER: P196851

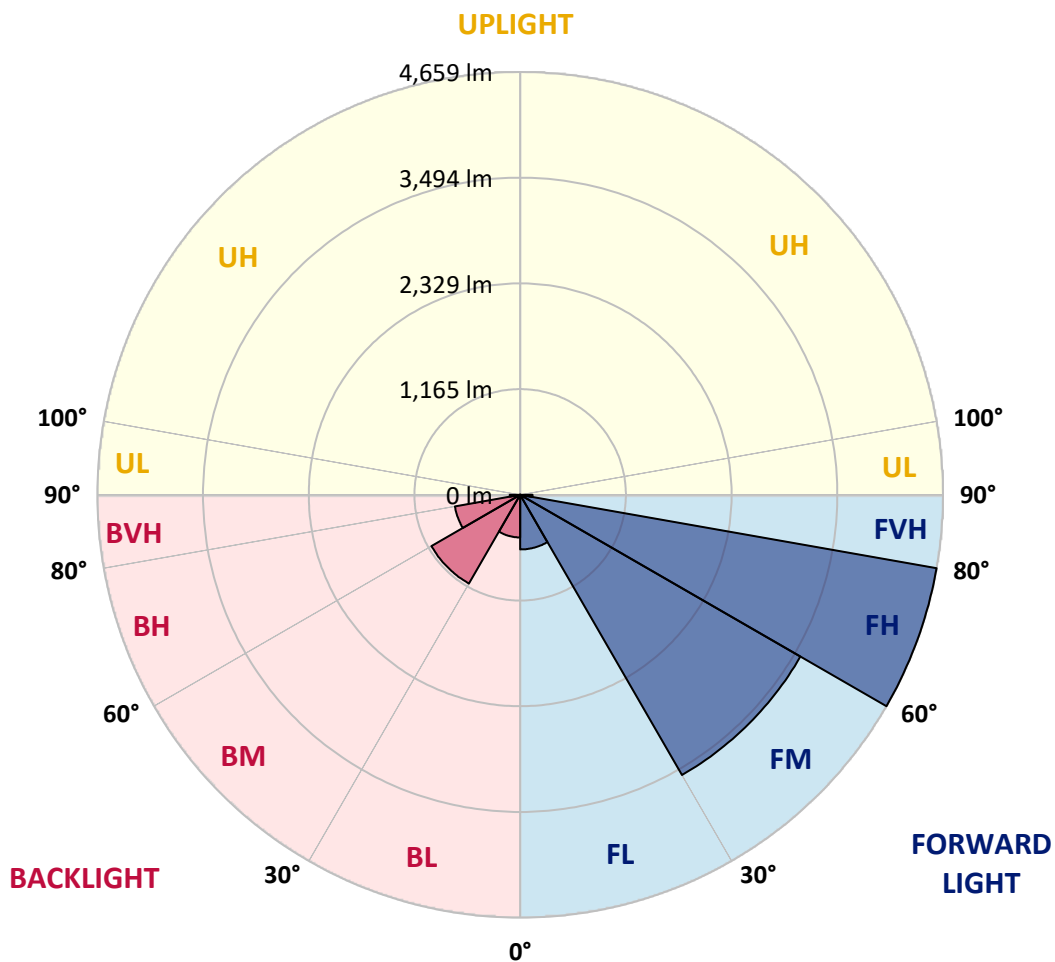
CATALOG NUMBER: NAV-AF-03-D-UNV-T4W-7030-600

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	602.0	5.3			
FM	(30°-60°)	3564.9	31.3			
FH	(60°-80°)	4658.6	40.8			G2/5000
FVH	(80°-90°)	136.5	1.2			G2/225
BL	(0°-30°)	469.4	4.1	B1/500		
BM	(30°-60°)	1129.5	9.9	B2/2500		
BH	(60°-80°)	730.4	6.4	B2/1000		G2/1000
BVH	(80°-90°)	115.2	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





REPORT NUMBER: P196851

CATALOG NUMBER: NAV-AF-03-D-UNV-T4W-7030-600

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	1356.5	1356.5	1356.5	1356.5	1356.5	1356.5	1356.5	1356.5	1356.5	1356.5	1356.5
2.5°	1439.3	1436.3	1437.8	1432.6	1420.1	1406.7	1406.7	1392.6	1377.9	1363.1	1346.8
5°	1528.6	1524.2	1520.6	1504.3	1479.9	1452.5	1448.1	1420.1	1389.7	1359.4	1329.8
7.5°	1603.4	1598.9	1587.9	1558.2	1522.7	1482.1	1476.9	1439.9	1400.0	1357.9	1316.6
10°	1656.6	1653.6	1632.2	1594.4	1553.1	1505.0	1496.2	1458.5	1411.2	1358.6	1306.2
12.5°	1686.1	1681.7	1655.9	1611.5	1562.7	1513.9	1505.0	1468.8	1414.8	1357.2	1295.9
15°	1674.3	1672.1	1647.7	1602.7	1553.7	1511.7	1504.3	1467.4	1412.6	1352.0	1286.2
17.5°	1624.0	1629.2	1610.1	1565.6	1525.7	1496.2	1488.0	1453.2	1401.6	1339.4	1271.4
20°	1554.5	1560.4	1550.8	1505.8	1482.8	1463.6	1459.1	1431.1	1383.0	1321.0	1253.6
22.5°	1480.7	1485.8	1486.6	1444.4	1437.0	1429.6	1426.0	1405.9	1366.9	1309.9	1241.8
25°	1429.6	1435.5	1437.0	1400.0	1404.5	1406.7	1405.9	1392.0	1363.9	1309.9	1243.4
27.5°	1416.3	1419.3	1417.7	1383.8	1392.0	1404.5	1405.2	1402.3	1375.7	1324.7	1264.0
30°	1462.1	1463.6	1445.2	1394.1	1402.3	1418.5	1419.3	1417.7	1400.8	1363.1	1310.6
32.5°	1660.3	1658.8	1595.1	1463.6	1435.5	1441.4	1443.7	1457.0	1458.5	1426.7	1377.9
35°	1961.9	1961.1	1887.2	1662.5	1530.1	1499.1	1502.1	1522.7	1541.2	1519.8	1491.7
37.5°	2293.8	2296.0	2250.8	1946.4	1734.2	1604.8	1601.8	1617.4	1650.7	1658.0	1661.8
40°	2661.9	2672.9	2670.8	2272.4	2020.2	1785.2	1755.6	1737.9	1802.2	1842.8	1895.3
42.5°	3082.5	3079.6	3081.0	2630.1	2347.0	2069.1	2014.3	1931.6	2006.2	2076.5	2191.7
45°	3444.0	3455.8	3464.6	3010.7	2712.9	2393.6	2338.1	2187.3	2254.6	2359.6	2535.5
47.5°	3807.6	3786.9	3803.2	3434.3	3120.2	2763.9	2692.1	2488.9	2551.8	2699.6	2967.2
50°	4231.2	4221.6	4147.7	3987.3	3612.5	3139.4	3045.5	2803.8	2895.5	3092.8	3500.1
52.5°	4611.2	4559.4	4501.8	4421.9	4096.6	3519.3	3400.3	3131.3	3299.8	3544.5	4161.6
55°	4750.1	4715.4	4784.9	4888.4	4609.0	3906.7	3773.6	3513.4	3755.9	4061.1	4940.1
57.5°	4898.0	4909.8	5066.6	5275.7	5093.8	4319.9	4175.8	3965.9	4256.3	4639.2	5810.2
60°	4972.0	5019.3	5331.9	5724.4	5555.2	4773.1	4634.8	4485.5	4811.4	5278.0	6678.0
62.5°	4984.5	5048.0	5490.9	5881.9	6190.1	5467.3	5307.5	5145.6	5504.9	5983.9	7306.2
65°	4753.9	4851.4	5476.7	6075.6	6768.9	6627.0	6525.7	6243.3	6433.3	6605.6	7413.5
67.5°	4076.0	4182.5	4934.9	5995.7	7233.2	7830.4	7811.2	7394.2	7150.4	6845.7	6618.8
70°	2991.5	3077.3	3800.2	5125.7	7030.7	8775.1	8809.1	8140.2	7350.6	6335.7	4921.6
71°	2419.4	2493.3	3174.8	4550.5	6635.9	8823.9	8894.9	8173.3	7142.2	5875.2	4120.3
72.5°	1505.8	1547.1	2108.2	3434.3	5714.0	8321.3	8441.1	7747.6	6485.8	4966.0	2912.6
75°	568.4	584.7	782.1	1514.7	3410.7	6251.5	6396.4	5855.2	4556.4	2834.8	1219.0
77.5°	305.3	313.5	388.1	629.8	1366.9	3583.7	3770.0	3339.7	2185.8	992.0	498.2
80°	204.8	209.9	268.3	373.3	628.4	1364.5	1519.8	1340.9	818.4	566.2	354.8
82.5°	132.3	135.3	182.6	245.4	405.8	479.7	547.7	572.2	510.8	405.8	214.3
85°	87.2	89.5	120.5	156.7	251.3	236.5	242.4	317.1	348.2	267.5	109.4
87.5°	50.3	51.8	72.4	80.6	113.1	88.7	96.1	150.8	206.9	174.5	62.9
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: P196851

CATALOG NUMBER: NAV-AF-03-D-UNV-T4W-7030-600

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1356.5	1356.5	1356.5	1356.5	1356.5	1356.5	1356.5	1356.5	1356.5	1356.5	1356.5
2.5°	1339.4	1333.5	1320.2	1312.1	1308.4	1307.0	1305.4	1308.4	1308.4	1307.0	1304.0
5°	1315.1	1304.0	1281.8	1266.4	1258.1	1255.9	1258.8	1262.6	1264.7	1264.7	1262.6
7.5°	1297.4	1281.1	1251.4	1230.0	1217.4	1213.8	1221.9	1235.1	1244.1	1248.5	1249.3
10°	1282.4	1260.3	1227.8	1205.6	1195.3	1193.7	1204.1	1221.2	1239.6	1247.7	1249.3
12.5°	1269.3	1244.1	1208.6	1187.8	1180.5	1184.3	1198.2	1213.8	1235.1	1247.0	1247.7
15°	1256.7	1230.8	1193.1	1171.7	1170.1	1176.0	1189.4	1202.0	1218.2	1233.0	1233.0
17.5°	1241.8	1213.8	1174.6	1154.7	1154.7	1159.8	1168.6	1175.3	1185.7	1199.7	1199.0
20°	1224.1	1195.3	1155.4	1134.6	1130.3	1127.3	1127.3	1128.7	1137.6	1150.2	1152.4
22.5°	1210.8	1181.2	1139.1	1114.0	1094.0	1074.8	1066.7	1063.7	1071.9	1083.7	1086.6
25°	1210.8	1181.2	1133.9	1091.8	1043.0	1006.1	990.6	986.1	994.3	1005.3	1009.8
27.5°	1230.8	1201.2	1145.8	1071.9	982.5	923.2	904.7	901.1	908.5	917.3	921.8
30°	1277.4	1248.5	1179.8	1048.9	915.1	837.5	816.8	813.1	816.8	820.5	825.7
32.5°	1355.0	1330.6	1235.1	1028.2	847.1	759.9	734.8	728.9	730.3	731.1	735.6
35°	1481.3	1470.3	1309.2	1003.9	782.9	696.3	670.5	658.7	657.8	661.6	666.8
37.5°	1675.1	1681.7	1404.5	968.4	729.7	651.3	625.4	613.5	607.6	615.0	620.9
40°	1948.5	1964.1	1514.7	920.3	685.9	624.6	597.3	586.1	578.1	575.8	578.7
42.5°	2304.1	2299.7	1627.0	859.0	638.6	606.9	578.1	566.2	553.0	535.9	532.2
45°	2725.5	2661.9	1720.9	783.6	584.7	589.9	560.3	544.0	523.4	498.2	495.3
47.5°	3222.9	3047.8	1778.5	703.0	534.5	567.7	540.4	515.2	484.9	468.6	466.4
50°	3822.4	3499.3	1819.1	620.9	489.4	539.6	512.3	479.0	449.4	445.0	444.2
52.5°	4532.1	4032.3	1869.4	547.1	453.9	503.3	484.1	450.1	426.5	428.8	428.8
55°	5286.8	4583.9	1870.9	488.6	422.9	461.3	463.5	436.2	417.7	425.0	427.3
57.5°	5975.0	5065.8	1723.8	447.2	393.3	428.0	456.8	441.3	427.3	453.1	455.4
60°	6575.2	5436.8	1407.5	413.2	368.9	415.4	471.6	473.1	470.2	540.4	545.5
62.5°	6794.9	5440.6	999.4	384.4	355.5	422.9	502.7	504.9	504.9	569.9	579.5
65°	6487.3	4987.4	665.3	367.4	346.7	439.1	527.8	518.2	495.3	540.4	530.0
67.5°	5403.6	3882.3	486.4	356.3	334.2	439.9	550.0	525.5	486.4	524.9	507.1
70°	3713.7	2470.5	407.3	346.0	319.4	420.6	561.8	523.4	473.1	489.4	465.7
71°	2989.4	1971.5	386.6	342.2	313.5	409.5	563.2	520.4	466.4	476.8	455.4
72.5°	1969.3	1214.5	361.4	334.2	304.5	390.3	559.6	513.7	457.6	458.4	444.2
75°	777.0	503.3	325.3	315.6	279.3	359.3	543.3	499.8	440.6	425.8	419.9
77.5°	392.6	329.0	286.0	289.7	249.8	327.4	520.4	476.8	417.0	396.9	392.6
80°	286.8	249.8	244.6	251.3	216.6	296.4	491.5	445.8	386.6	407.3	398.5
82.5°	174.5	152.3	191.4	207.7	181.2	264.6	457.6	409.5	348.2	320.7	310.6
85°	82.8	89.5	138.2	153.0	133.9	211.4	418.4	369.7	303.8	262.4	266.8
87.5°	40.7	49.5	79.1	91.7	88.0	155.2	315.6	286.8	239.5	197.3	193.0
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)