

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: P197332

Luminaire Tested: **NAV-AF-04-D-UNV-T4W-8030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197332
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-04-D-UNV-T4W-8030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 80 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: 12962 lumens
Efficiency: N/A
Efficacy: 100.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B2 - U0 - G3

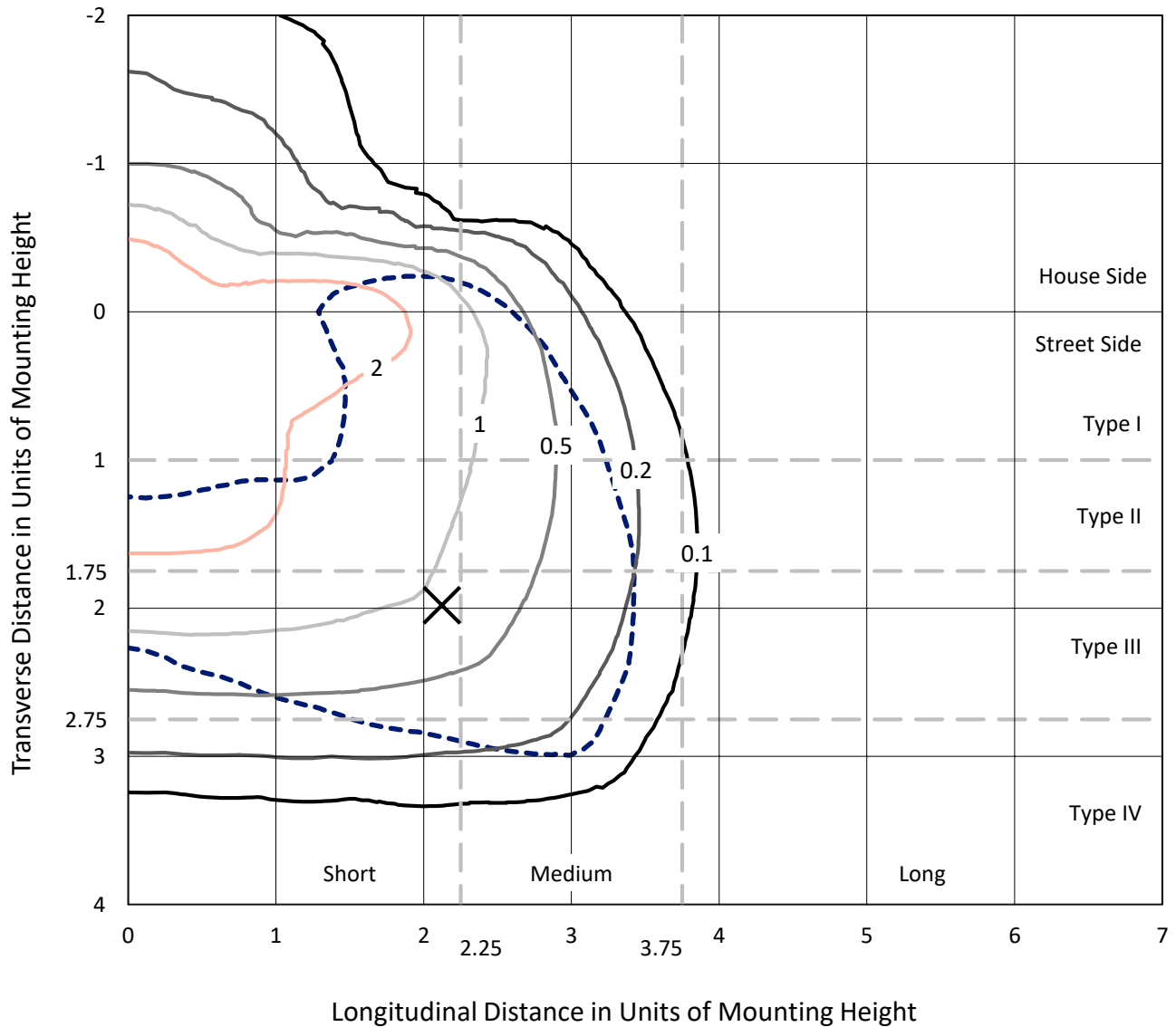
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P197332
 CATALOG NUMBER: NAV-AF-04-D-UNV-T4W-8030-600

Iso-Footcandle Lines of Horizontal Illumination

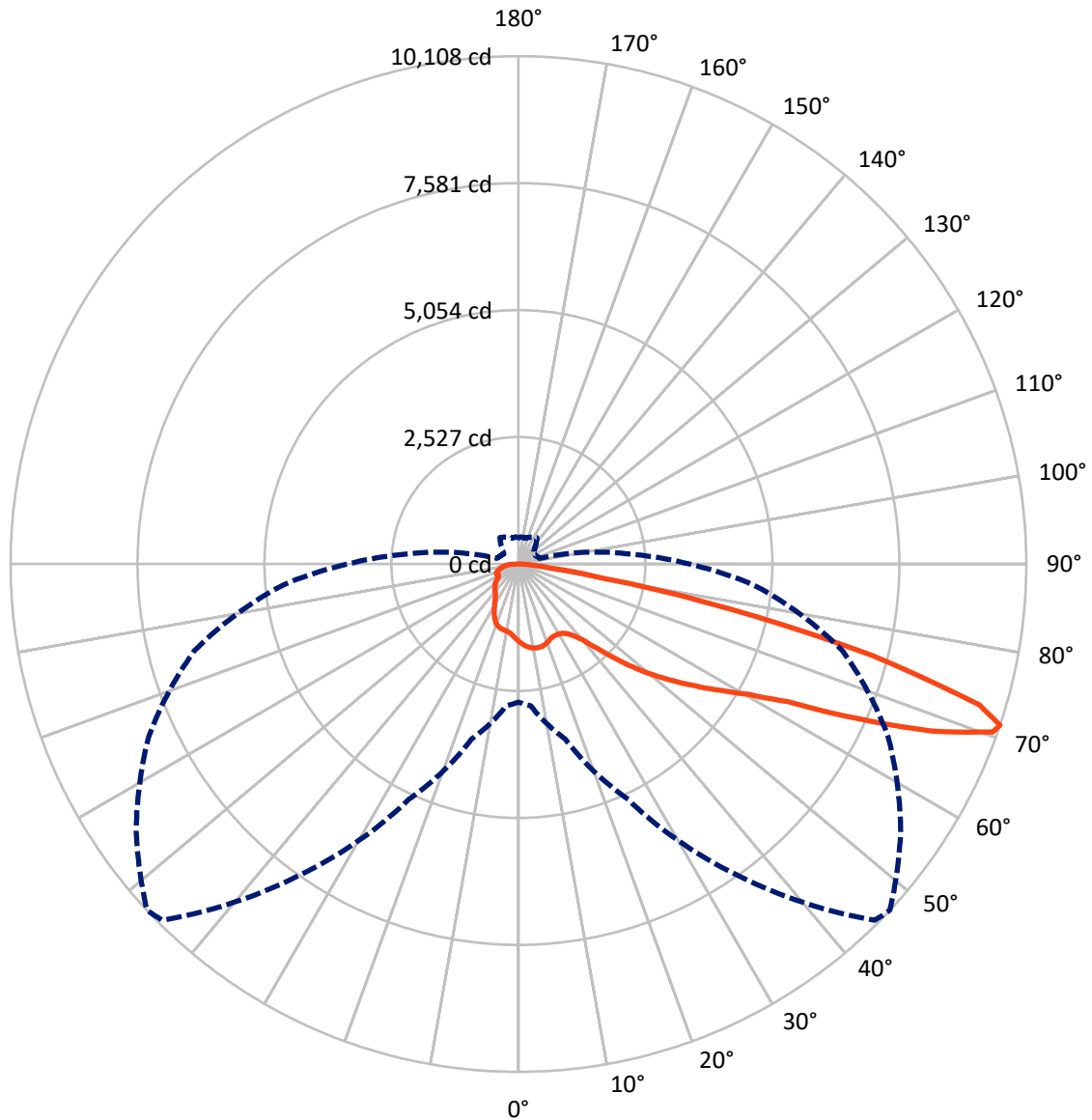
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.4 fc
 Type IV - Short - Semi-Cutoff

REPORT NUMBER: P197332
CATALOG NUMBER: NAV-AF-04-D-UNV-T4W-8030-600

Luminous Intensity Polar Plot



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

REPORT NUMBER: P197332

CATALOG NUMBER: NAV-AF-04-D-UNV-T4W-8030-600

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2777.9	0.0	2777.9
	% Fixture	21.4	0.0	21.4
Street Side	Lumens	10184.1	0.0	10184.1
	% Fixture	78.6	0.0	78.6
Total	Lumens	12962.0	0.0	12962.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.2	1.1
10°-20°	430.6	3.3
20°-30°	639.8	4.9
30°-40°	918.7	7.1
40°-50°	1628.8	12.6
50°-60°	2787.1	21.5
60°-70°	3956.8	30.5
70°-80°	2167.1	16.7
80°-90°	286.1	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°	12962.0	100.0
0°-180°	12962.0	100.0

Coefficient of Utilization



REPORT NUMBER: P197332

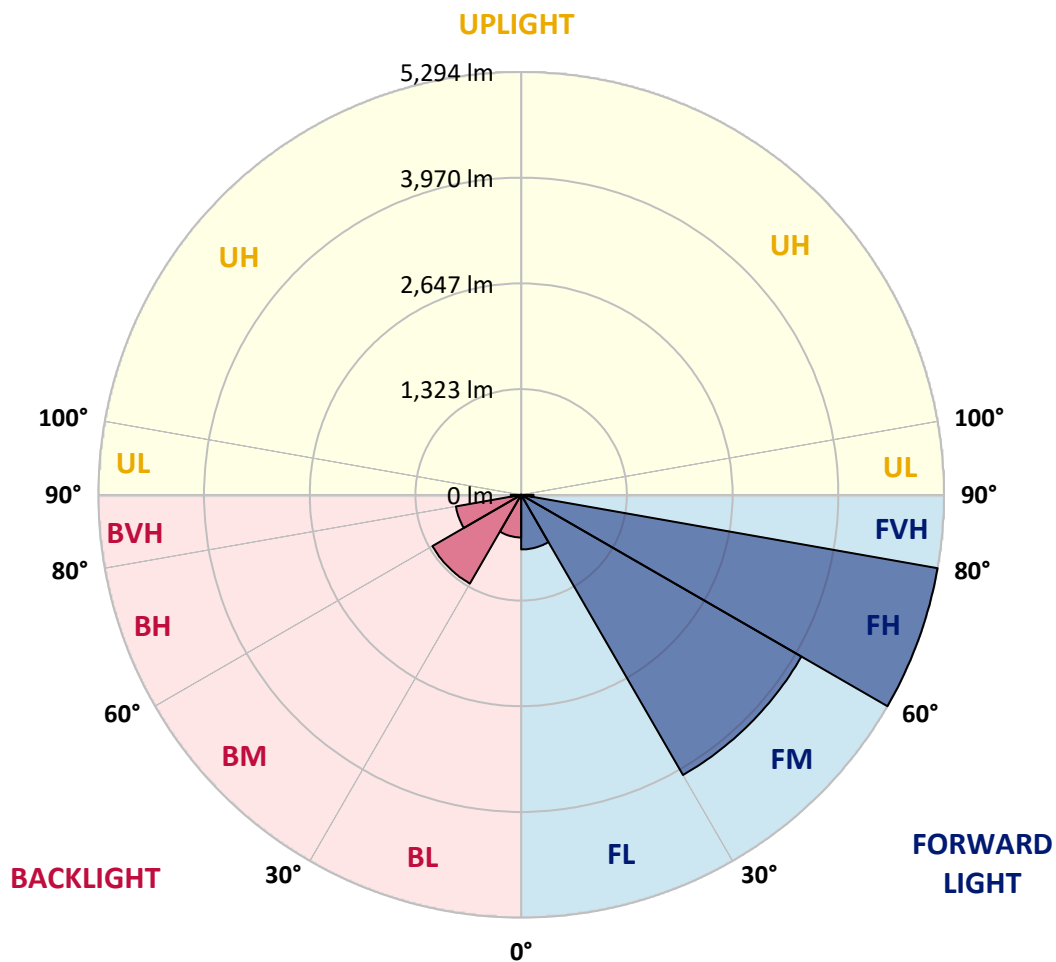
CATALOG NUMBER: NAV-AF-04-D-UNV-T4W-8030-600

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	684.1	5.3			
FM	(30°-60°)	4051.0	31.3			
FH	(60°-80°)	5293.8	40.8			G3/7500
FVH	(80°-90°)	155.2	1.2			G2/225
BL	(0°-30°)	533.5	4.1	B2/1000		
BM	(30°-60°)	1283.6	9.9	B2/2500		
BH	(60°-80°)	830.0	6.4	B2/1000		G2/1000
BVH	(80°-90°)	130.9	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-G3

Type IV Short





REPORT NUMBER: P197332

CATALOG NUMBER: NAV-AF-04-D-UNV-T4W-8030-600

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	1541.4	1541.4	1541.4	1541.4	1541.4	1541.4	1541.4	1541.4	1541.4	1541.4	1541.4
2.5°	1635.5	1632.1	1633.8	1627.9	1613.6	1598.5	1598.5	1582.6	1565.8	1549.0	1530.5
5°	1737.1	1732.1	1727.9	1709.4	1681.7	1650.6	1645.6	1613.6	1579.2	1544.8	1511.2
7.5°	1822.0	1816.9	1804.3	1770.7	1730.4	1684.2	1678.3	1636.3	1591.0	1543.1	1496.0
10°	1882.4	1879.1	1854.7	1811.9	1764.8	1710.2	1700.2	1657.3	1603.6	1543.9	1484.3
12.5°	1916.0	1911.0	1881.6	1831.2	1775.8	1720.3	1710.2	1669.1	1607.8	1542.2	1472.5
15°	1902.6	1900.1	1872.4	1821.1	1765.7	1717.8	1709.4	1667.4	1605.2	1536.4	1461.6
17.5°	1845.5	1851.4	1829.5	1779.1	1733.8	1700.2	1690.9	1651.4	1592.6	1522.1	1444.8
20°	1766.5	1773.2	1762.3	1711.1	1685.0	1663.2	1658.2	1626.2	1571.6	1501.1	1424.6
22.5°	1682.5	1688.4	1689.2	1641.4	1633.0	1624.6	1620.4	1597.7	1553.2	1488.5	1411.2
25°	1624.6	1631.3	1633.0	1591.0	1596.0	1598.5	1597.7	1581.7	1549.8	1488.5	1412.9
27.5°	1609.4	1612.8	1611.1	1572.5	1581.7	1596.0	1596.8	1593.5	1563.2	1505.3	1436.4
30°	1661.5	1663.2	1642.2	1584.2	1593.5	1612.0	1612.8	1611.1	1591.8	1549.0	1489.3
32.5°	1886.6	1885.0	1812.7	1663.2	1631.3	1638.0	1640.5	1655.6	1657.3	1621.2	1565.8
35°	2229.4	2228.5	2144.5	1889.2	1738.8	1703.5	1706.9	1730.4	1751.4	1727.0	1695.1
37.5°	2606.5	2609.0	2557.8	2211.7	1970.6	1823.6	1820.3	1837.9	1875.7	1884.1	1888.3
40°	3024.8	3037.4	3034.9	2582.2	2295.7	2028.6	1995.0	1974.8	2047.9	2094.1	2153.8
42.5°	3502.8	3499.4	3501.1	2988.7	2667.0	2351.2	2289.0	2194.9	2279.8	2359.6	2490.6
45°	3913.6	3927.0	3937.1	3421.3	3082.8	2719.9	2656.9	2485.6	2562.0	2681.3	2881.2
47.5°	4326.8	4303.3	4321.8	3902.6	3545.6	3140.8	3059.3	2828.3	2899.7	3067.7	3371.8
50°	4808.2	4797.2	4713.2	4531.0	4105.1	3567.5	3460.8	3186.1	3290.3	3514.6	3977.4
52.5°	5239.9	5181.1	5115.6	5024.9	4655.3	3999.2	3864.0	3558.2	3749.8	4027.8	4729.2
55°	5397.8	5358.4	5437.3	5554.9	5237.4	4439.4	4288.2	3992.5	4268.0	4615.0	5613.7
57.5°	5565.8	5579.3	5757.4	5995.1	5788.4	4909.0	4745.2	4506.6	4836.7	5271.8	6602.4
60°	5649.8	5703.6	6058.9	6505.0	6312.6	5423.9	5266.8	5097.1	5467.6	5997.6	7588.6
62.5°	5664.1	5736.4	6239.5	6683.9	7034.2	6212.6	6031.2	5847.2	6255.5	6799.8	8302.6
65°	5402.0	5512.9	6223.6	6904.0	7691.9	7530.6	7415.5	7094.6	7310.5	7506.2	8424.4
67.5°	4631.8	4752.7	5607.8	6813.2	8219.4	8898.1	8876.3	8402.5	8125.3	7779.2	7521.4
70°	3399.5	3496.9	4318.4	5824.6	7989.2	9971.6	10010.3	9250.1	8353.0	7199.6	5592.7
71°	2749.3	2833.3	3607.8	5171.0	7540.7	10027.1	10107.7	9287.9	8116.1	6676.3	4682.2
72.5°	1711.1	1758.1	2395.7	3902.6	6493.2	9455.9	9592.0	8804.0	7370.2	5643.1	3309.6
75°	646.0	664.4	888.7	1721.2	3875.8	7103.9	7268.5	6653.6	5177.8	3221.4	1385.2
77.5°	346.9	356.2	441.0	715.7	1553.2	4072.3	4284.0	3795.1	2483.9	1127.3	566.2
80°	232.7	238.6	304.9	424.2	714.0	1550.6	1727.0	1523.8	929.9	643.4	403.2
82.5°	150.4	153.7	207.5	278.9	461.2	545.2	622.4	650.2	580.4	461.2	243.6
85°	99.1	101.6	136.9	178.1	285.6	268.8	275.5	360.4	395.6	304.1	124.3
87.5°	57.1	58.8	82.3	91.6	128.5	100.8	109.2	171.4	235.2	198.2	71.4
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: P197332

CATALOG NUMBER: NAV-AF-04-D-UNV-T4W-8030-600

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1541.4	1541.4	1541.4	1541.4	1541.4	1541.4	1541.4	1541.4	1541.4	1541.4	1541.4
2.5°	1522.1	1515.4	1500.2	1491.0	1486.8	1485.1	1483.4	1486.8	1486.8	1485.1	1481.8
5°	1494.4	1481.8	1456.6	1438.9	1429.7	1427.2	1430.5	1434.7	1437.2	1437.2	1434.7
7.5°	1474.2	1455.7	1422.1	1397.8	1383.5	1379.3	1388.5	1403.6	1413.7	1418.8	1419.6
10°	1457.4	1432.2	1395.2	1370.0	1358.3	1356.6	1368.4	1387.7	1408.7	1417.9	1419.6
12.5°	1442.3	1413.7	1373.4	1349.9	1341.5	1345.7	1361.6	1379.3	1403.6	1417.1	1417.9
15°	1428.0	1398.6	1355.8	1331.4	1329.7	1336.4	1351.6	1365.8	1384.3	1401.1	1401.1
17.5°	1411.2	1379.3	1334.8	1312.1	1312.1	1318.0	1328.0	1335.6	1347.4	1363.3	1362.5
20°	1391.0	1358.3	1312.9	1289.4	1284.4	1281.0	1281.0	1282.7	1292.8	1307.0	1309.6
22.5°	1375.9	1342.3	1294.4	1265.9	1243.2	1221.4	1212.1	1208.8	1218.0	1231.4	1234.8
25°	1375.9	1342.3	1288.6	1240.7	1185.2	1143.2	1125.6	1120.6	1129.8	1142.4	1147.4
27.5°	1398.6	1365.0	1302.0	1218.0	1116.4	1049.2	1028.2	1024.0	1032.4	1042.4	1047.5
30°	1451.5	1418.8	1340.6	1192.0	1039.9	951.7	928.2	924.0	928.2	932.4	938.3
32.5°	1539.7	1512.0	1403.6	1168.4	962.6	863.5	835.0	828.2	829.9	830.8	835.8
35°	1683.4	1670.8	1487.6	1140.7	889.6	791.3	761.9	748.4	747.6	751.8	757.7
37.5°	1903.4	1911.0	1596.0	1100.4	829.1	740.0	710.6	697.2	690.5	698.9	705.6
40°	2214.2	2231.9	1721.2	1045.8	779.5	709.8	678.7	666.1	656.9	654.4	657.7
42.5°	2618.3	2613.2	1848.8	976.1	725.8	689.6	656.9	643.4	628.3	609.0	604.8
45°	3097.1	3024.8	1955.5	890.4	664.4	670.3	636.7	618.2	594.7	566.2	562.8
47.5°	3662.4	3463.3	2021.0	798.8	607.3	645.1	614.0	585.5	551.0	532.6	530.0
50°	4343.6	3976.6	2067.2	705.6	556.1	613.2	582.1	544.3	510.7	505.7	504.8
52.5°	5150.0	4582.2	2124.4	621.6	515.8	572.0	550.2	511.6	484.7	487.2	487.2
55°	6007.7	5208.8	2126.0	555.2	480.5	524.2	526.7	495.6	474.6	483.0	485.5
57.5°	6789.7	5756.5	1958.9	508.2	446.9	486.4	519.1	501.5	485.5	514.9	517.4
60°	7471.8	6178.2	1599.4	469.6	419.2	472.1	535.9	537.6	534.2	614.0	619.9
62.5°	7721.3	6182.4	1135.7	436.8	404.0	480.5	571.2	573.7	573.7	647.6	658.6
65°	7371.8	5667.5	756.0	417.5	394.0	499.0	599.8	588.8	562.8	614.0	602.3
67.5°	6140.4	4411.7	552.7	404.9	379.7	499.8	625.0	597.2	552.7	596.4	576.2
70°	4220.2	2807.3	462.8	393.1	362.9	478.0	638.4	594.7	537.6	556.1	529.2
71°	3397.0	2240.3	439.3	388.9	356.2	465.4	640.1	591.4	530.0	541.8	517.4
72.5°	2237.8	1380.1	410.8	379.7	346.1	443.5	635.9	583.8	520.0	520.8	504.8
75°	882.8	572.0	369.6	358.7	317.5	408.2	617.4	567.8	500.6	483.8	477.1
77.5°	446.0	373.8	325.1	329.3	283.9	372.1	591.4	541.8	473.8	451.1	446.0
80°	325.9	283.9	278.0	285.6	246.1	336.8	558.6	506.5	439.3	462.8	452.8
82.5°	198.2	173.0	217.6	236.0	205.8	300.7	520.0	465.4	395.6	364.6	352.8
85°	94.1	101.6	157.1	173.9	152.0	240.2	475.4	420.0	345.2	298.2	303.2
87.5°	46.2	56.3	89.9	104.2	100.0	176.4	358.7	325.9	272.2	224.3	219.2
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)