

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: P270479

Luminaire Tested: **NAV-AF-03-D-UNV-T4W-7027-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270479
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-7027-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12564.9 lumens
Efficiency: N/A
Efficacy: 101.3 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 - G3

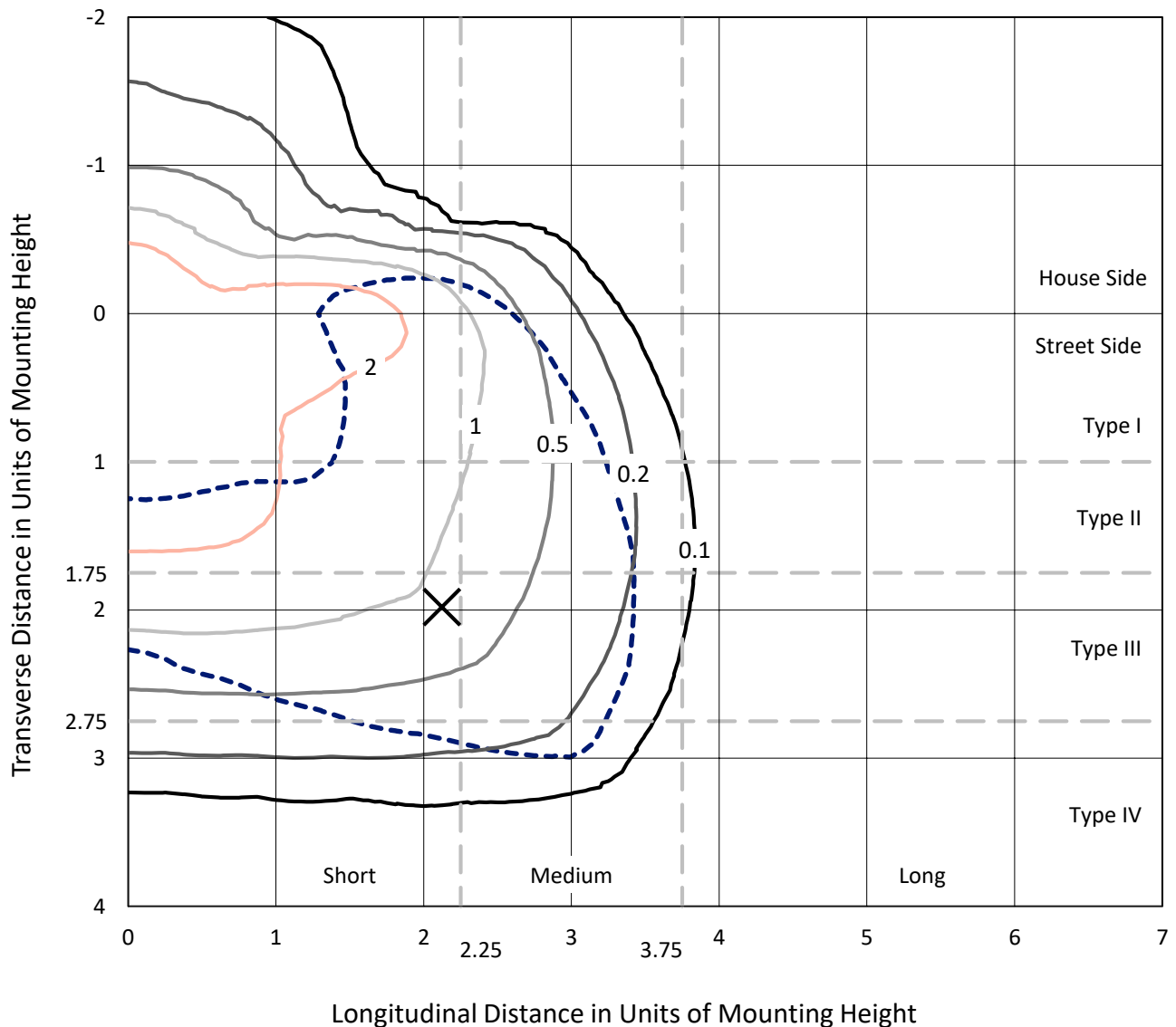
Input Watts (W): 124
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

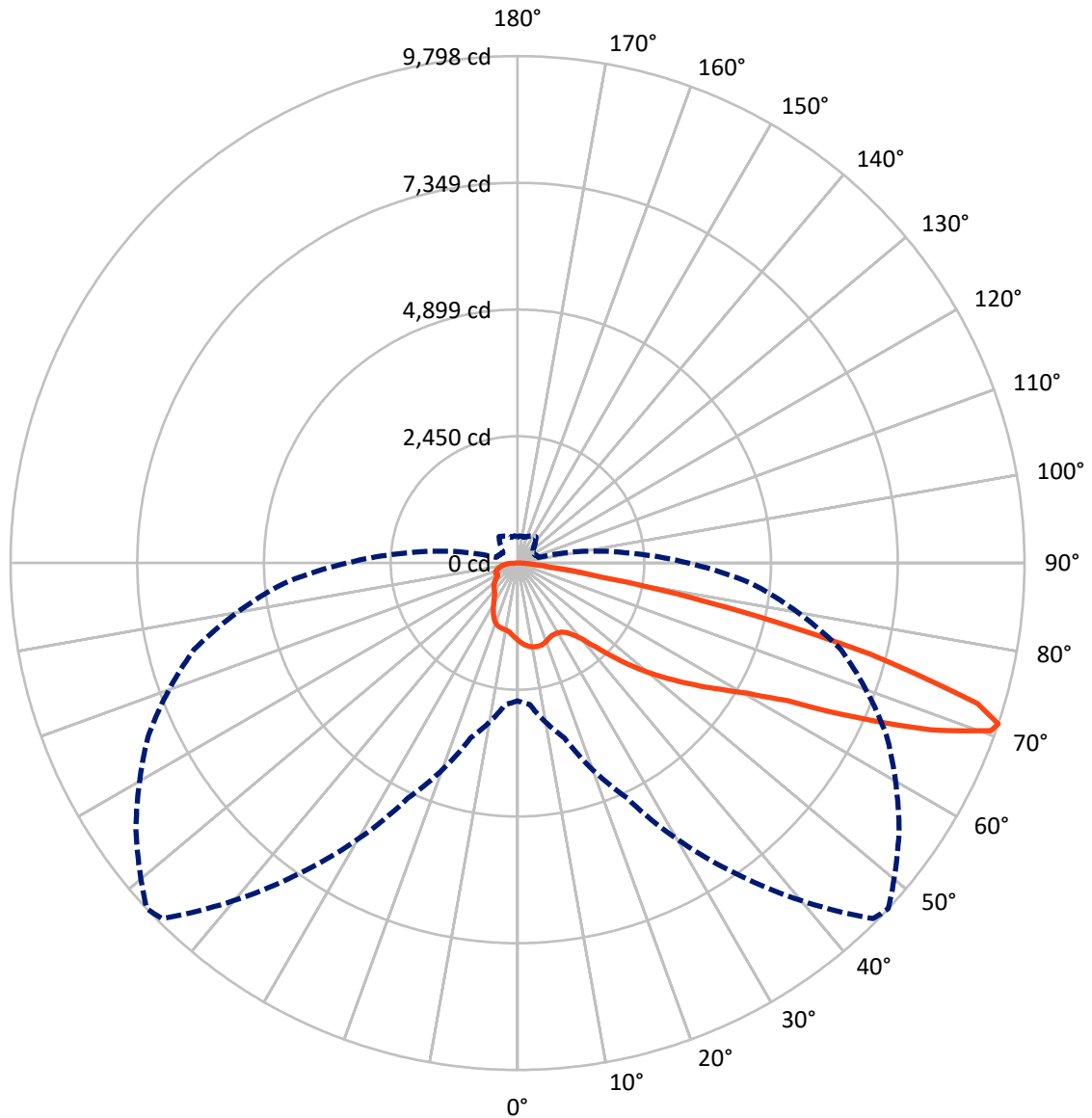


Based on 20 foot mounting height. Maximum calculated value = 4.3 fc
 Type IV - Short - Semi-Cutoff

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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	2692.8	0.0	2692.8
	% Fixture	21.4	0.0	21.4
Street Side	Lumens	9872.1	0.0	9872.1
	% Fixture	78.6	0.0	78.6
Total	Lumens	12564.9	0.0	12564.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.7	1.1
10°-20°	417.4	3.3
20°-30°	620.2	4.9
30°-40°	890.5	7.1
40°-50°	1578.9	12.6
50°-60°	2701.7	21.5
60°-70°	3835.5	30.5
70°-80°	2100.7	16.7
80°-90°	277.3	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°	12564.9	100.0
0°-180°	12564.9	100.0

Coefficient of Utilization



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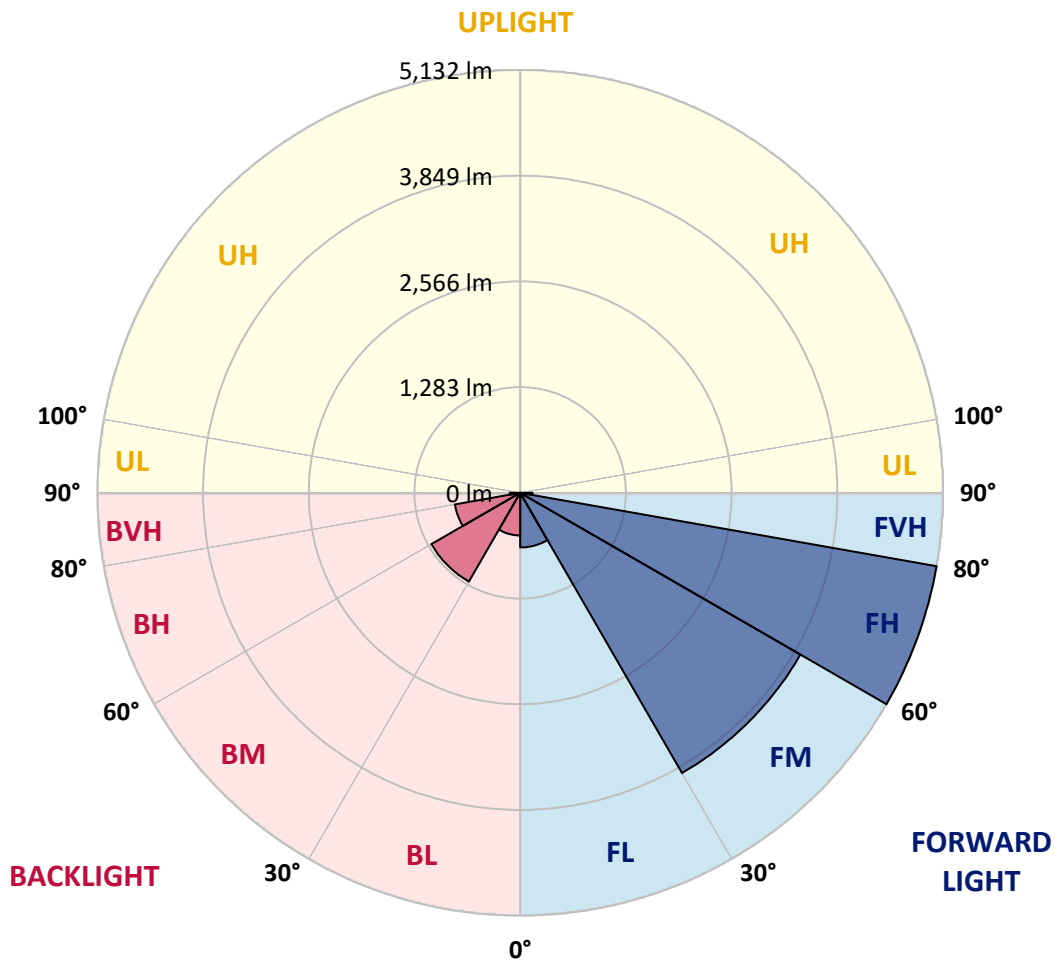
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	663.1	5.3			
FM	(30°-60°)	3926.9	31.3			
FH	(60°-80°)	5131.6	40.8			G3/7500
FVH	(80°-90°)	150.4	1.2			G2/225
BL	(0°-30°)	517.1	4.1	B2/1000		
BM	(30°-60°)	1244.3	9.9	B2/2500		
BH	(60°-80°)	804.6	6.4	B2/1000		G2/1000
BVH	(80°-90°)	126.9	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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	1494.2	1494.2	1494.2	1494.2	1494.2	1494.2	1494.2	1494.2	1494.2	1494.2	1494.2
2.5°	1585.4	1582.2	1583.7	1578.1	1564.2	1549.5	1549.5	1534.0	1517.7	1501.4	1483.6
5°	1684.0	1679.0	1675.0	1657.1	1630.2	1600.1	1595.1	1564.2	1530.8	1497.5	1464.9
7.5°	1766.2	1761.2	1749.0	1716.5	1677.3	1632.6	1626.9	1586.1	1542.2	1495.8	1450.3
10°	1824.7	1821.6	1797.9	1756.4	1710.8	1657.8	1648.1	1606.6	1554.4	1496.7	1438.8
12.5°	1857.3	1852.5	1824.0	1775.1	1721.3	1667.7	1657.8	1617.9	1558.5	1495.0	1427.3
15°	1844.3	1841.9	1814.9	1765.3	1711.6	1665.2	1657.1	1616.3	1556.0	1489.3	1416.8
17.5°	1789.0	1794.6	1773.4	1724.7	1680.6	1648.1	1639.0	1600.9	1543.8	1475.5	1400.5
20°	1712.3	1718.9	1708.3	1658.7	1633.4	1612.3	1607.3	1576.4	1523.4	1455.1	1381.1
22.5°	1631.1	1636.7	1637.5	1591.1	1583.0	1574.8	1570.7	1548.8	1505.6	1442.9	1367.9
25°	1574.8	1581.2	1583.0	1542.2	1547.2	1549.5	1548.8	1533.2	1502.3	1442.9	1369.6
27.5°	1560.1	1563.4	1561.8	1524.3	1533.2	1547.2	1547.9	1544.6	1515.4	1459.1	1392.5
30°	1610.7	1612.3	1591.8	1535.7	1544.6	1562.6	1563.4	1561.8	1543.1	1501.4	1443.7
32.5°	1828.9	1827.2	1757.2	1612.3	1581.2	1587.8	1590.3	1604.9	1606.6	1571.6	1517.7
35°	2161.1	2160.2	2078.8	1831.3	1685.5	1651.4	1654.6	1677.3	1697.7	1674.1	1643.2
37.5°	2526.7	2529.1	2479.4	2144.0	1910.2	1767.8	1764.5	1781.6	1818.3	1826.4	1830.4
40°	2932.2	2944.4	2941.9	2503.0	2225.5	1966.5	1934.0	1914.4	1985.2	2030.0	2087.8
42.5°	3395.6	3392.2	3393.8	2897.2	2585.3	2279.1	2218.9	2127.6	2209.9	2287.3	2414.4
45°	3793.6	3806.7	3816.4	3316.5	2988.3	2636.5	2575.5	2409.4	2483.5	2599.2	2792.9
47.5°	4194.2	4171.5	4189.3	3783.1	3437.1	3044.5	2965.6	2741.6	2810.8	2973.7	3268.5
50°	4660.9	4650.3	4568.9	4392.2	3979.3	3458.1	3354.8	3088.6	3189.5	3406.9	3855.5
52.5°	5079.3	5022.5	4959.0	4871.0	4512.6	3876.7	3745.7	3449.2	3634.9	3904.5	4584.3
55°	5232.4	5194.2	5270.7	5384.7	5077.0	4303.4	4156.8	3870.2	4137.4	4473.6	5441.8
57.5°	5395.3	5408.3	5581.0	5811.4	5611.2	4758.6	4599.9	4368.5	4688.6	5110.4	6400.2
60°	5476.7	5528.9	5873.3	6305.7	6119.3	5257.7	5105.4	4940.9	5300.1	5813.9	7356.1
62.5°	5490.6	5560.6	6048.4	6479.1	6818.7	6022.2	5846.3	5668.1	6063.9	6591.6	8048.3
65°	5236.6	5344.0	6032.8	6692.5	7456.2	7299.8	7188.3	6877.3	7086.5	7276.4	8166.3
67.5°	4489.9	4607.1	5436.1	6604.5	7967.5	8625.5	8604.3	8145.1	7876.3	7540.9	7291.0
70°	3295.3	3389.8	4186.1	5646.1	7744.5	9666.1	9703.6	8966.7	8097.1	6979.1	5421.5
71°	2665.1	2746.5	3497.3	5012.6	7309.7	9719.9	9798.1	9003.4	7867.4	6471.7	4538.7
72.5°	1658.7	1704.3	2322.3	3783.1	6294.2	9166.2	9298.1	8534.3	7144.4	5470.3	3208.1
75°	626.2	644.1	861.5	1668.4	3757.0	6886.2	7045.9	6449.8	5019.1	3122.7	1342.7
77.5°	336.2	345.3	427.6	693.8	1505.6	3947.5	4152.8	3678.9	2407.7	1092.8	548.9
80°	225.6	231.3	295.6	411.2	692.1	1503.1	1674.1	1477.1	901.4	623.8	390.9
82.5°	145.7	148.9	201.1	270.3	447.0	528.5	603.4	630.3	562.7	447.0	236.2
85°	96.1	98.5	132.7	172.7	276.9	260.6	267.1	349.4	383.5	294.7	120.6
87.5°	55.3	57.0	79.8	88.8	124.5	97.7	105.9	166.0	228.0	192.1	69.2
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°	1494.2	1494.2	1494.2	1494.2	1494.2	1494.2	1494.2	1494.2	1494.2	1494.2	1494.2
2.5°	1475.5	1469.0	1454.3	1445.4	1441.2	1439.7	1437.9	1441.2	1441.2	1439.7	1436.4
5°	1448.5	1436.4	1412.0	1394.9	1385.8	1383.4	1386.8	1390.8	1393.2	1393.2	1390.8
7.5°	1429.1	1411.1	1378.5	1355.0	1341.1	1337.0	1346.0	1360.7	1370.5	1375.2	1376.2
10°	1412.8	1388.3	1352.5	1328.1	1316.6	1315.1	1326.4	1345.1	1365.6	1374.4	1376.2
12.5°	1398.1	1370.5	1331.3	1308.6	1300.3	1304.5	1319.9	1337.0	1360.7	1373.7	1374.4
15°	1384.3	1355.7	1314.2	1290.7	1289.0	1295.4	1310.2	1324.0	1341.9	1358.1	1358.1
17.5°	1367.9	1337.0	1293.9	1271.9	1271.9	1277.6	1287.4	1294.6	1306.0	1321.5	1320.8
20°	1348.4	1316.6	1272.7	1249.9	1245.1	1241.7	1241.7	1243.3	1253.1	1267.0	1269.5
22.5°	1333.8	1301.1	1254.8	1227.2	1205.2	1184.0	1175.1	1171.7	1180.7	1193.7	1197.0
25°	1333.8	1301.1	1249.2	1202.7	1148.9	1108.1	1091.1	1086.2	1095.3	1107.4	1112.3
27.5°	1355.7	1323.2	1262.1	1180.7	1082.2	1017.1	996.7	992.5	1000.7	1010.6	1015.4
30°	1407.0	1375.2	1299.6	1155.4	1008.1	922.6	899.7	895.7	899.7	903.9	909.5
32.5°	1492.5	1465.7	1360.7	1132.7	933.2	837.1	809.5	802.8	804.5	805.3	810.2
35°	1631.9	1619.6	1442.0	1105.8	862.4	767.1	738.5	725.6	724.8	728.7	734.5
37.5°	1845.1	1852.5	1547.2	1066.6	803.7	717.3	688.9	675.9	669.3	677.5	684.0
40°	2146.4	2163.5	1668.4	1013.7	755.7	688.0	657.9	645.7	636.8	634.4	637.5
42.5°	2538.2	2533.2	1792.2	946.2	703.6	668.5	636.8	623.8	609.1	590.4	586.2
45°	3002.1	2932.2	1895.7	863.1	644.1	649.7	617.2	599.3	576.5	548.9	545.6
47.5°	3550.2	3357.2	1959.2	774.3	588.7	625.4	595.2	567.5	534.1	516.3	513.8
50°	4210.5	3854.7	2003.8	684.0	539.1	594.4	564.2	527.7	495.1	490.1	489.3
52.5°	4992.3	4441.8	2059.3	602.6	499.9	554.6	533.4	495.9	469.9	472.2	472.2
55°	5823.6	5049.3	2060.9	538.3	465.7	508.1	510.5	480.5	460.0	468.1	470.6
57.5°	6581.7	5580.2	1898.8	492.6	433.3	471.5	503.2	486.2	470.6	499.2	501.7
60°	7242.9	5988.9	1550.4	455.3	406.4	457.6	519.5	521.1	517.9	595.2	601.0
62.5°	7484.8	5993.0	1101.0	423.5	391.8	465.7	553.6	556.1	556.1	627.7	638.3
65°	7145.9	5493.9	732.8	404.6	381.9	483.6	581.5	570.9	545.6	595.2	583.8
67.5°	5952.3	4276.6	535.7	392.5	368.0	484.5	605.7	579.0	535.7	578.1	558.6
70°	4090.9	2721.2	448.7	381.2	351.7	463.3	618.8	576.5	521.1	539.1	513.0
71°	3292.8	2171.7	425.8	377.0	345.3	451.0	620.5	573.3	513.8	525.1	501.7
72.5°	2169.1	1337.8	398.2	368.0	335.4	429.8	616.3	565.9	503.9	504.8	489.3
75°	855.7	554.6	358.2	347.7	307.8	395.8	598.5	550.4	485.4	469.0	462.4
77.5°	432.4	362.3	315.1	319.2	275.2	360.7	573.3	525.1	459.3	437.2	432.4
80°	315.9	275.2	269.5	276.9	238.6	326.5	541.5	491.1	425.8	448.7	438.9
82.5°	192.1	167.8	210.9	228.8	199.6	291.5	503.9	451.0	383.5	353.5	342.0
85°	91.2	98.5	152.3	168.5	147.4	232.9	460.9	407.1	334.7	289.1	293.9
87.5°	44.7	54.5	87.1	101.0	96.8	170.9	347.7	315.9	263.8	217.4	212.4
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)