

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: P197313

Luminaire Tested: **NAV-AF-03-D-UNV-T4FT-8030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197313
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24256)
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-T4FT-8030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 80 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12037 lumens
Efficiency: N/A
Efficacy: 97.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B2 - U0 - G2

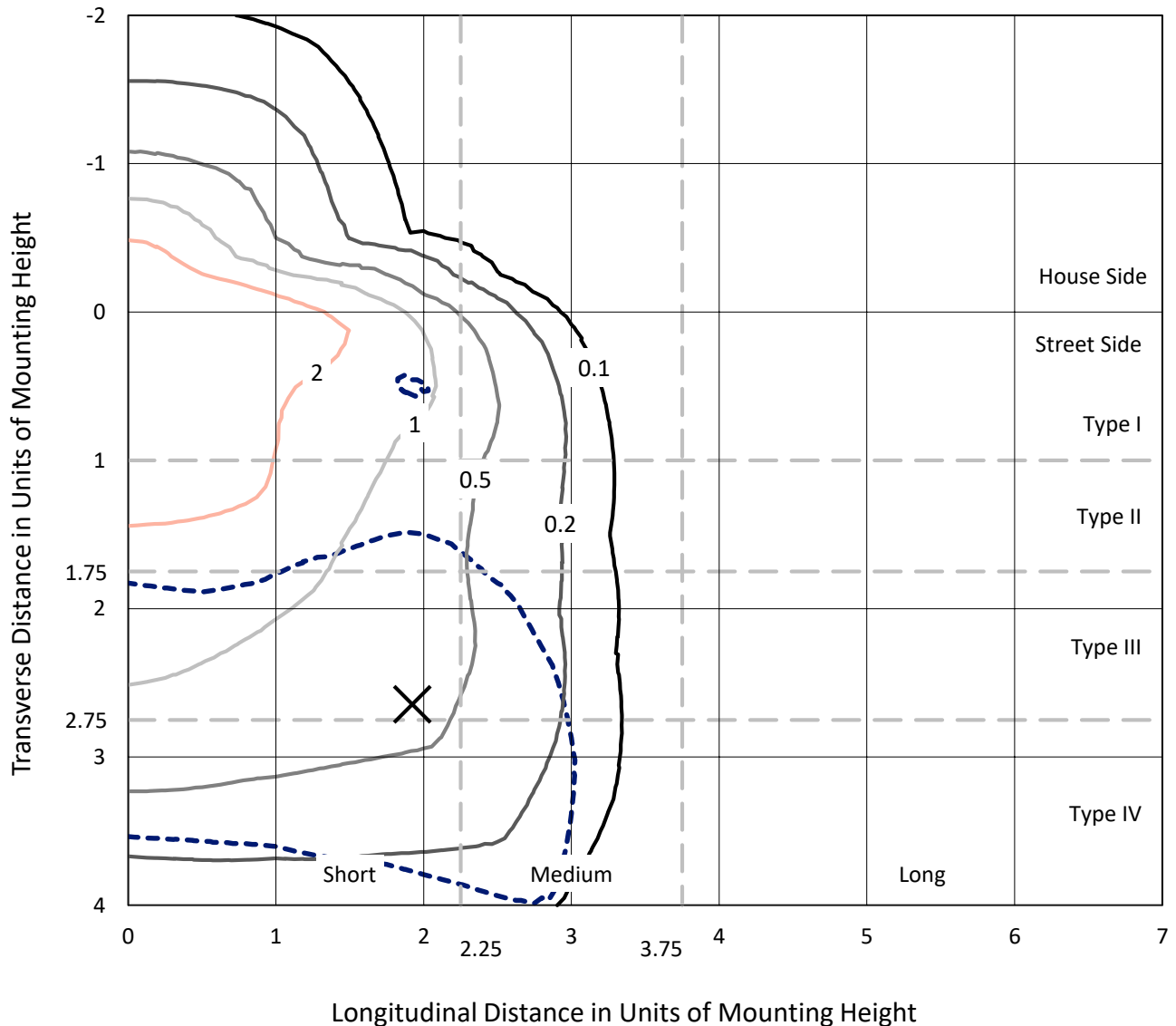
Input Watts (W): 124
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

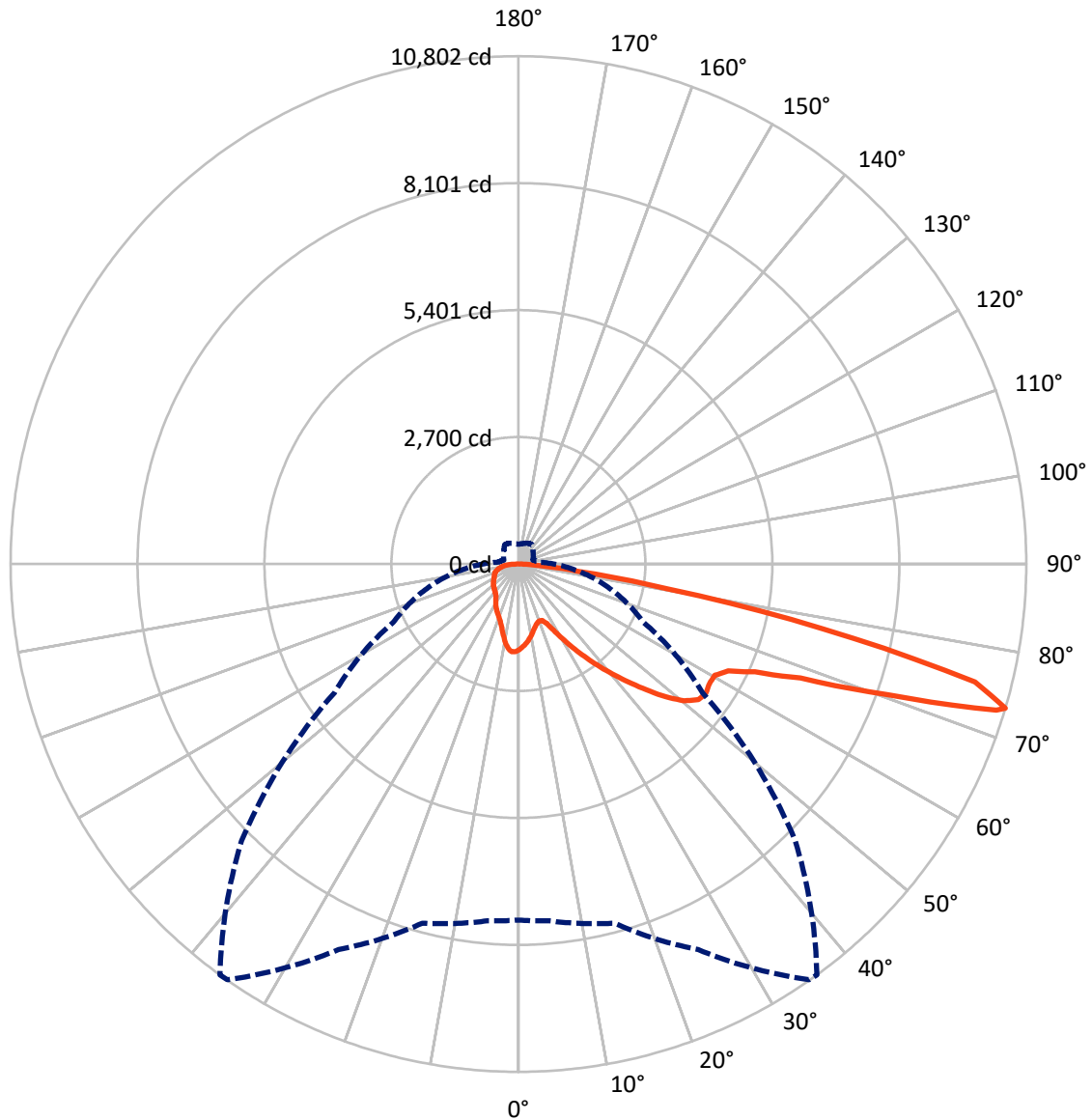
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.6 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 36-Deg Lateral - - - Horizontal Cone Through 73-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2321.1	0.0	2321.1
	% Fixture	19.3	0.0	19.3
Street Side	Lumens	9715.9	0.0	9715.9
	% Fixture	80.7	0.0	80.7
Total	Lumens	12037.0	0.0	12037.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	165.6	1.4
10°-20°	415.9	3.5
20°-30°	666.8	5.5
30°-40°	1103.0	9.2
40°-50°	1706.8	14.2
50°-60°	2284.8	19.0
60°-70°	2984.7	24.8
70°-80°	2438.0	20.3
80°-90°	271.4	2.3
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°	12037.0	100.0
0°-180°	12037.0	100.0



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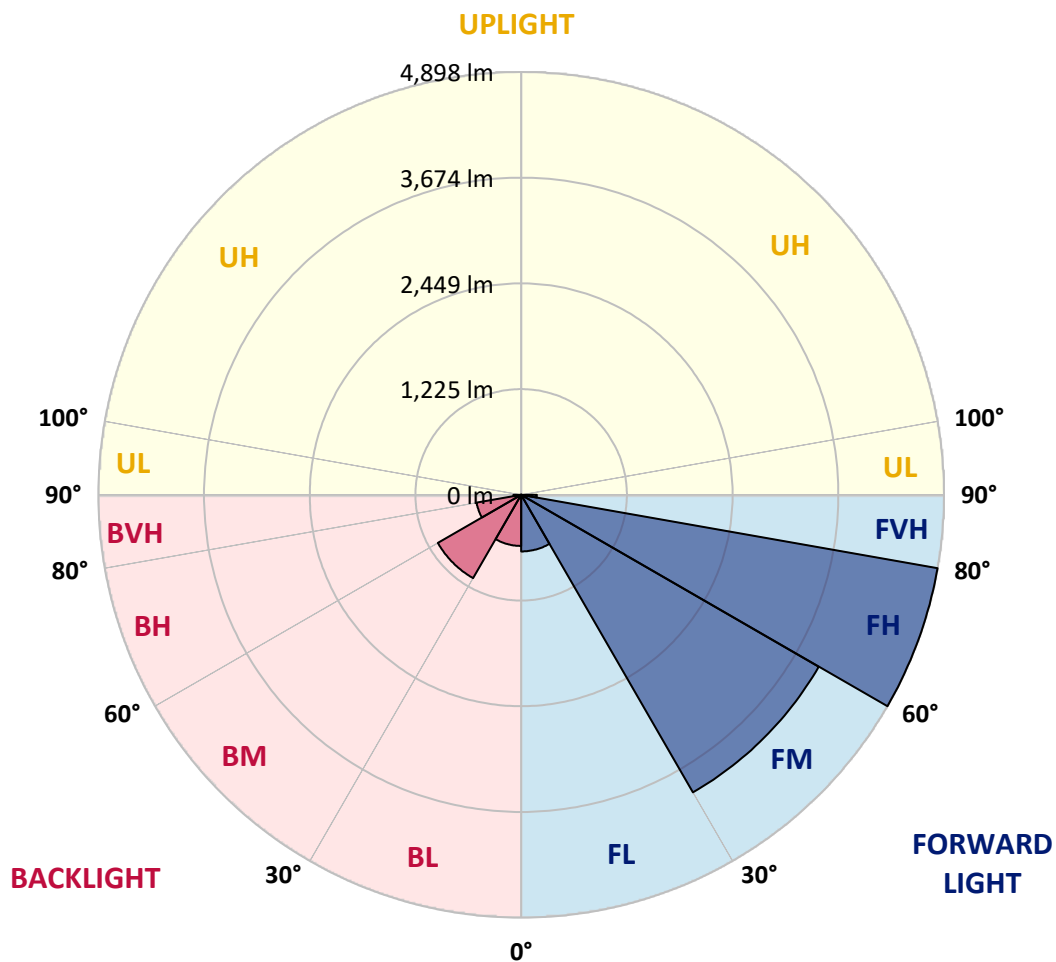
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	655.9	5.4			
FM (30°-60°)	3979.9	33.1			
FH (60°-80°)	4898.2	40.7			G2/5000
FVH (80°-90°)	182.0	1.5			G2/225
BL (0°-30°)	592.5	4.9	B2/1000		
BM (30°-60°)	1114.7	9.3	B2/2500		
BH (60°-80°)	524.5	4.4	B2/1000		G2/1000
BVH (80°-90°)	89.4	0.7			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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	1823.3	1823.3	1823.3	1823.3	1823.3	1823.3	1823.3	1823.3	1823.3	1823.3	1823.3
2.5°	1753.7	1758.2	1759.0	1764.4	1764.4	1763.6	1765.9	1775.1	1779.7	1790.4	1799.5
5°	1667.2	1672.6	1674.9	1684.1	1695.5	1696.3	1704.7	1722.3	1739.1	1762.8	1782.7
7.5°	1570.1	1576.2	1582.3	1601.5	1618.3	1619.8	1635.9	1664.2	1686.4	1715.4	1751.4
10°	1476.0	1477.6	1483.7	1508.2	1530.3	1532.6	1555.6	1587.7	1617.5	1658.1	1698.6
12.5°	1398.8	1403.4	1401.9	1420.2	1439.3	1440.9	1471.5	1512.0	1555.6	1601.5	1649.6
15°	1372.0	1371.3	1355.2	1354.4	1362.9	1364.4	1394.2	1441.6	1490.6	1547.2	1609.1
17.5°	1390.4	1384.3	1342.2	1316.2	1310.8	1312.4	1334.6	1386.6	1438.6	1503.6	1577.8
20°	1491.3	1467.6	1369.0	1306.3	1288.7	1288.7	1301.7	1343.7	1401.1	1476.8	1570.1
22.5°	1730.7	1694.0	1483.7	1372.0	1310.1	1304.0	1294.0	1326.1	1389.6	1480.6	1601.5
25°	2032.0	2014.5	1694.0	1547.2	1419.4	1399.6	1333.8	1345.3	1413.3	1521.9	1687.1
27.5°	2311.2	2280.6	1970.1	1801.8	1621.4	1590.8	1451.6	1404.9	1469.9	1598.4	1811.0
30°	2474.1	2453.4	2253.8	2093.2	1878.3	1839.3	1639.7	1522.7	1570.9	1724.6	1986.9
32.5°	2651.5	2639.3	2538.3	2392.3	2156.7	2111.6	1882.9	1714.7	1725.4	1892.1	2198.8
35°	2823.6	2839.7	2782.3	2675.2	2456.5	2414.4	2209.5	1965.5	1915.8	2080.2	2425.1
37.5°	3030.1	3033.9	2998.0	2928.4	2771.6	2737.2	2568.2	2233.2	2123.1	2280.6	2643.9
40°	3442.3	3381.9	3241.2	3186.1	3092.8	3071.4	2878.7	2478.7	2315.8	2486.3	2850.4
42.5°	3888.2	3794.1	3573.9	3483.6	3446.1	3426.3	3137.2	2642.3	2496.3	2692.1	3053.0
45°	4247.6	4171.2	3955.5	3843.8	3848.4	3816.3	3362.8	2788.4	2692.1	2898.5	3279.4
47.5°	4601.7	4474.0	4232.3	4216.3	4269.8	4222.4	3578.4	2934.5	2896.3	3123.4	3505.8
50°	4624.7	4508.4	4410.5	4539.0	4630.8	4571.9	3774.2	3125.7	3108.1	3395.7	3797.9
52.5°	4345.5	4328.7	4477.8	4694.3	4846.5	4793.7	3934.1	3322.2	3324.5	3736.0	4153.6
55°	4243.8	4222.4	4401.4	4667.5	4873.2	4841.9	4053.4	3544.0	3564.7	4149.0	4535.2
57.5°	4415.1	4361.6	4396.8	4617.0	4810.5	4792.2	4177.3	3790.3	3827.8	4624.7	4887.8
60°	4946.7	4837.3	4650.7	4692.0	4812.8	4802.1	4354.7	4064.9	4127.6	5120.3	5111.1
62.5°	5742.8	5618.9	5238.8	5055.3	5028.5	5007.8	4647.6	4402.1	4433.5	5478.2	4981.1
65°	6616.2	6483.1	6031.1	5730.6	5573.0	5528.7	5120.3	4809.0	4612.4	5477.4	4474.8
67.5°	7596.6	7455.9	7005.5	6718.7	6548.1	6472.4	5887.3	5137.8	4554.3	5014.0	3580.7
70°	8600.8	8467.0	8260.5	8360.7	8435.6	8320.1	7095.7	5247.2	4136.7	3931.0	2404.5
72.5°	8067.8	8057.0	8213.8	9163.7	10608.4	10631.3	8302.5	4938.2	3196.1	2336.4	1281.8
73°	7572.9	7618.1	7908.7	9045.2	10794.2	10801.9	8326.3	4778.4	2934.5	2012.9	1125.8
75°	3923.4	4229.3	5307.6	7334.3	9995.0	10031.0	7339.7	3617.4	1749.1	1118.1	758.7
77.5°	1050.8	1037.1	1710.1	3573.1	6663.6	6616.2	4637.7	1751.4	838.2	701.3	532.3
80°	360.2	364.8	582.0	1307.0	3110.4	3221.3	2012.9	764.0	551.4	488.7	377.0
82.5°	183.5	189.7	304.4	556.0	1300.9	1273.4	647.8	449.7	369.4	296.7	211.1
85°	97.9	101.0	167.5	288.3	477.2	482.6	227.9	240.1	234.8	168.3	104.0
87.5°	48.2	49.7	80.3	127.0	176.7	170.5	79.5	104.0	115.5	94.8	57.4
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°	1823.3	1823.3	1823.3	1823.3	1823.3	1823.3	1823.3	1823.3	1823.3	1823.3	1823.3
2.5°	1811.0	1811.0	1821.0	1837.8	1850.0	1861.5	1869.1	1881.4	1888.3	1887.5	1886.7
5°	1798.8	1806.4	1826.3	1847.0	1860.7	1869.9	1869.9	1875.3	1875.3	1873.0	1869.9
7.5°	1770.5	1783.5	1812.5	1830.9	1834.7	1824.8	1804.9	1789.6	1770.5	1760.5	1756.7
10°	1725.4	1742.2	1778.9	1787.3	1767.4	1732.2	1684.1	1642.8	1606.1	1589.2	1583.9
12.5°	1681.0	1703.2	1737.6	1724.6	1677.2	1608.3	1534.2	1477.6	1436.3	1420.2	1414.9
15°	1644.3	1671.1	1697.8	1657.3	1574.7	1479.1	1397.3	1344.5	1313.1	1300.9	1297.8
17.5°	1619.8	1651.2	1660.4	1584.6	1469.9	1362.9	1290.2	1255.8	1242.0	1236.7	1235.1
20°	1621.4	1656.5	1634.4	1514.3	1369.0	1261.1	1213.0	1203.0	1203.0	1203.0	1202.2
22.5°	1663.4	1694.0	1623.6	1448.5	1271.8	1175.5	1154.8	1163.2	1169.4	1169.4	1168.6
25°	1750.6	1767.4	1631.3	1385.0	1180.8	1101.3	1102.1	1118.1	1123.5	1123.5	1121.9
27.5°	1883.7	1869.9	1645.1	1314.7	1091.4	1034.0	1044.7	1059.2	1063.1	1060.8	1060.0
30°	2050.4	1995.3	1656.5	1232.1	1007.2	971.3	980.5	988.9	985.8	980.5	979.7
32.5°	2237.0	2123.1	1649.6	1139.5	933.0	906.3	911.6	916.2	911.6	898.6	898.6
35°	2422.1	2238.5	1612.2	1038.6	874.2	843.6	842.8	857.3	856.6	841.3	842.0
37.5°	2584.2	2329.5	1539.5	946.0	823.7	797.7	800.7	809.9	814.5	793.9	791.6
40°	2725.7	2392.3	1437.0	867.3	783.1	784.7	776.3	761.7	756.4	747.2	745.7
42.5°	2858.8	2435.9	1328.4	801.5	762.5	780.1	751.8	717.4	702.8	711.3	716.6
45°	2989.6	2484.8	1223.7	747.2	736.5	766.3	727.3	689.1	672.2	676.1	681.4
47.5°	3149.4	2552.9	1097.5	689.1	696.7	741.1	712.0	670.7	645.5	630.2	625.6
50°	3359.7	2651.5	933.8	626.4	654.7	713.5	699.0	644.0	616.4	585.8	578.2
52.5°	3622.8	2744.8	768.6	575.9	620.2	689.8	677.6	621.0	587.4	550.6	544.5
55°	3885.1	2757.8	626.4	532.3	581.2	657.7	651.6	602.7	555.2	525.4	519.3
57.5°	4068.7	2634.7	530.8	495.6	543.8	617.9	627.9	580.5	528.5	505.5	501.7
60°	4071.7	2340.3	472.6	471.1	515.5	583.5	603.4	554.5	511.6	496.3	493.3
62.5°	3748.2	1886.0	435.2	452.8	494.8	555.2	585.1	539.9	507.8	501.7	498.6
65°	3141.8	1393.4	405.3	435.9	475.7	531.5	569.8	535.4	506.3	504.0	501.7
67.5°	2319.6	955.2	380.1	414.5	454.3	507.1	555.2	528.5	497.1	506.3	503.2
70°	1459.2	637.8	356.4	390.0	426.0	478.8	536.1	516.2	485.6	480.3	470.3
72.5°	823.7	461.2	328.1	358.7	389.3	441.3	510.1	495.6	459.6	438.2	428.3
73°	744.1	436.7	321.2	351.0	380.9	433.6	504.0	489.5	452.0	428.3	419.1
75°	544.5	357.2	289.9	319.7	345.7	398.5	474.9	458.9	418.3	390.0	383.9
77.5°	394.6	275.3	249.3	276.1	299.0	349.5	431.3	413.0	373.2	357.9	351.8
80°	284.5	208.8	206.5	232.5	252.4	303.6	384.7	365.6	327.3	372.5	362.5
82.5°	169.8	133.8	151.4	180.5	201.1	254.7	334.2	312.0	275.3	278.4	237.1
85°	81.1	75.7	94.1	118.5	133.1	174.4	278.4	260.8	220.3	180.5	176.7
87.5°	35.9	34.4	45.1	52.8	71.1	104.8	190.4	169.0	159.8	95.6	74.9
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)