

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: P197349

Luminaire Tested: **NAV-AF-03-D-UNV-T4W-8030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197349
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-8030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16023 lumens
Efficiency: N/A
Efficacy: 83.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G3

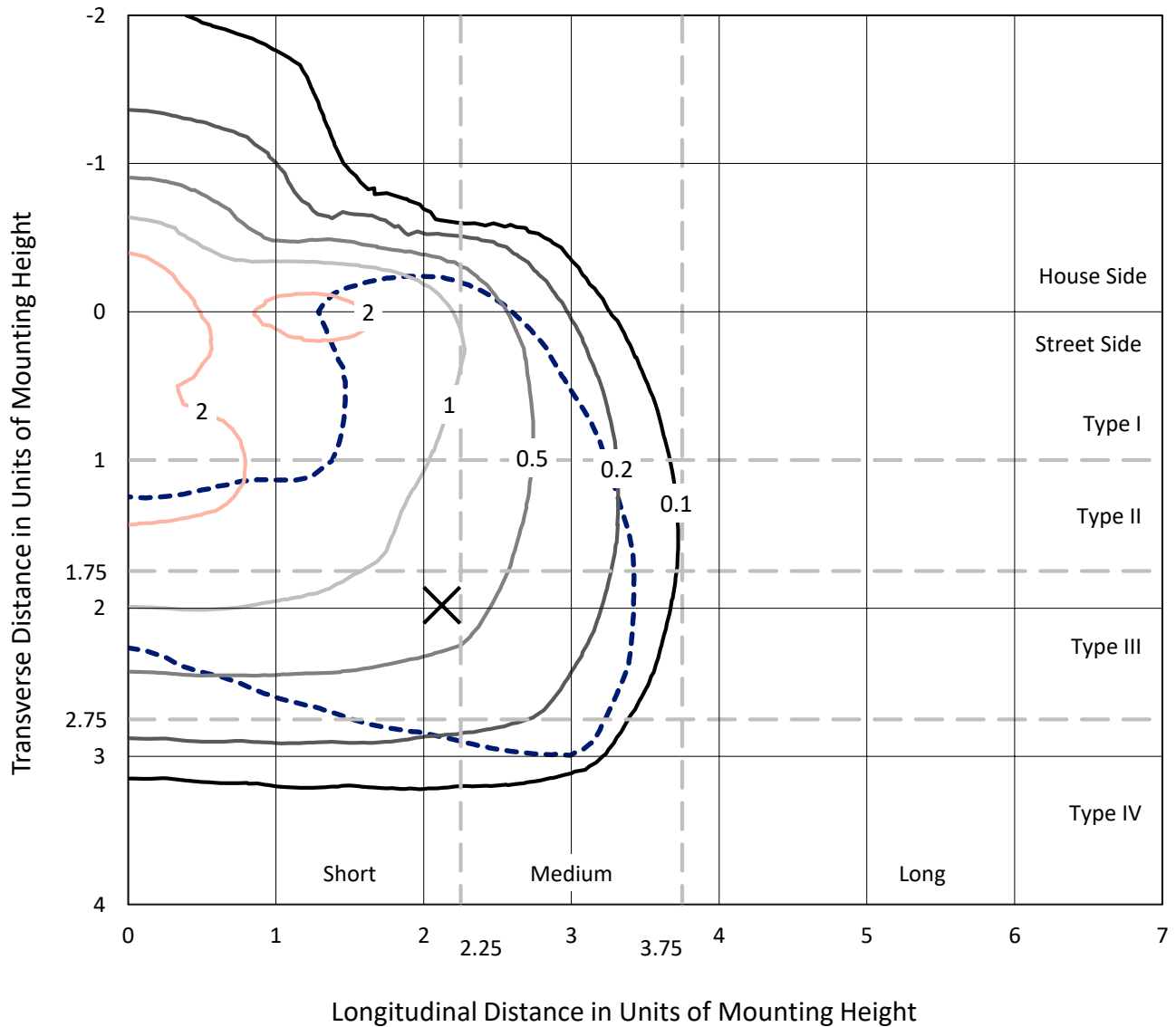
Input Watts (W): 191
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

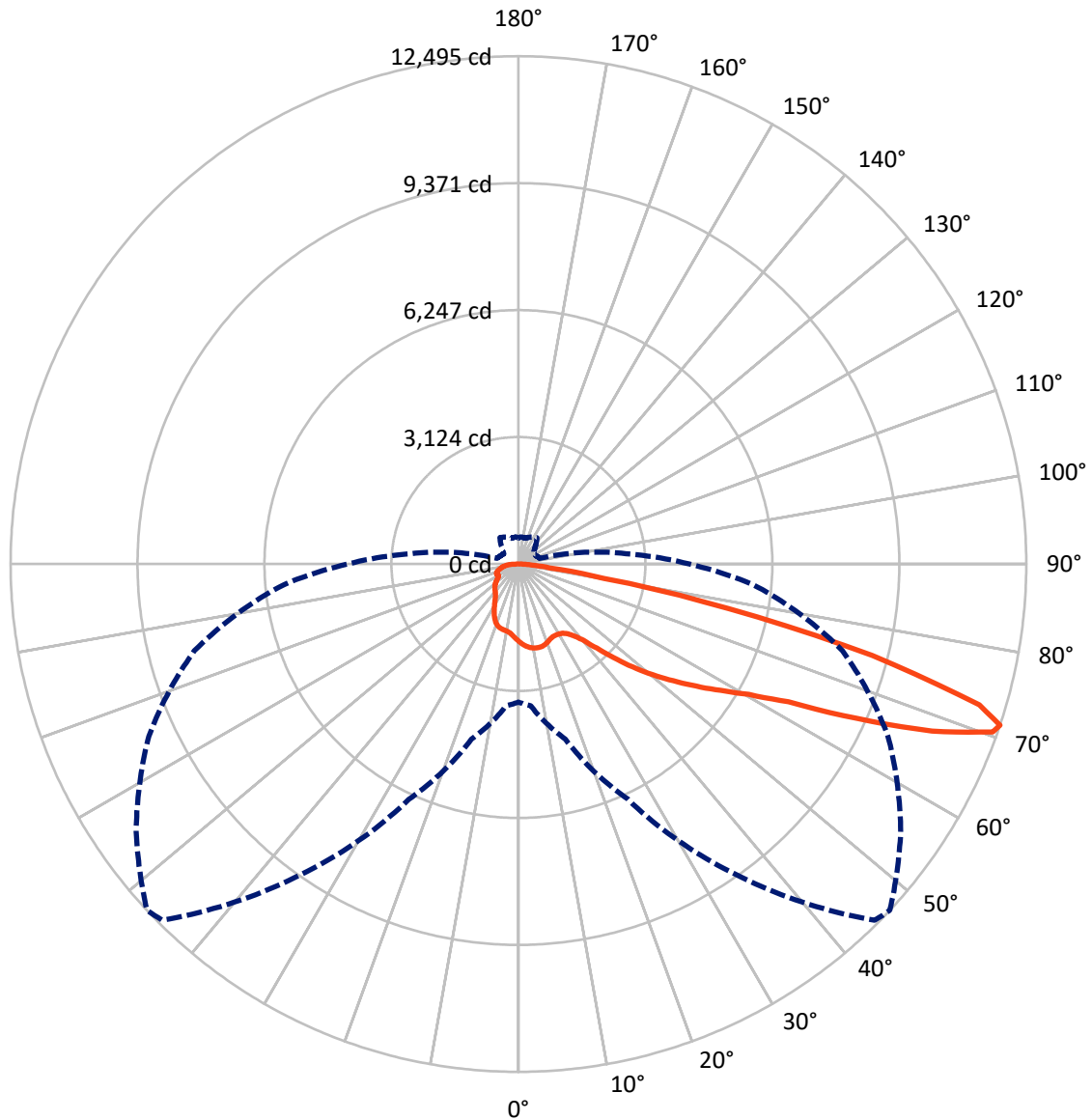
× Max cd
- - - 1/2 Max cd



Based on 25 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	3433.9	0.0	3433.9
	% Fixture	21.4	0.0	21.4
Street Side	Lumens	12589.0	0.0	12589.0
	% Fixture	78.6	0.0	78.6
Total	Lumens	16023.0	0.0	16023.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	181.9	1.1
10°-20°	532.2	3.3
20°-30°	790.9	4.9
30°-40°	1135.6	7.1
40°-50°	2013.5	12.6
50°-60°	3445.3	21.5
60°-70°	4891.1	30.5
70°-80°	2678.8	16.7
80°-90°	353.6	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°	16023.0	100.0
0°-180°	16023.0	100.0



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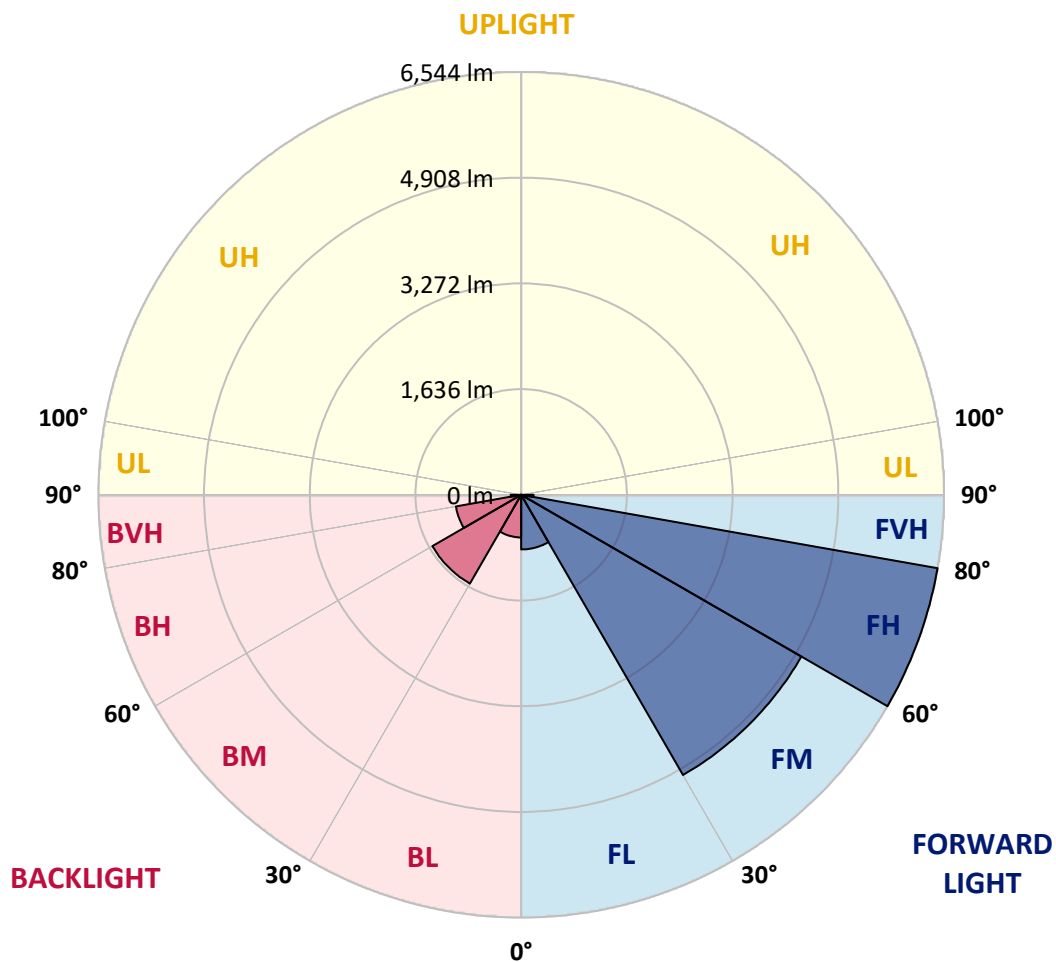
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	845.6	5.3			
FM (30°-60°)	5007.7	31.3			
FH (60°-80°)	6544.0	40.8			G3/7500
FVH (80°-90°)	191.8	1.2			G2/225
BL (0°-30°)	659.4	4.1	B2/1000		
BM (30°-60°)	1586.7	9.9	B2/2500		
BH (60°-80°)	1026.0	6.4	B3/2500		G3/2500
BVH (80°-90°)	161.8	1.0			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	1905.4	1905.4	1905.4	1905.4	1905.4	1905.4	1905.4	1905.4	1905.4	1905.4	1905.4
2.5°	2021.7	2017.5	2019.6	2012.4	1994.7	1976.0	1976.0	1956.3	1935.5	1914.7	1891.9
5°	2147.3	2141.1	2135.9	2113.1	2078.8	2040.4	2034.2	1994.7	1952.1	1909.6	1868.0
7.5°	2252.2	2246.0	2230.4	2188.9	2139.0	2081.9	2074.7	2022.7	1966.7	1907.5	1849.3
10°	2327.0	2322.8	2292.7	2239.8	2181.6	2114.1	2101.7	2048.7	1982.2	1908.5	1834.8
12.5°	2368.5	2362.3	2325.9	2263.6	2195.1	2126.6	2114.1	2063.2	1987.4	1906.4	1820.3
15°	2351.9	2348.8	2314.5	2251.2	2182.6	2123.5	2113.1	2061.2	1984.3	1899.2	1806.8
17.5°	2281.3	2288.6	2261.6	2199.3	2143.2	2101.7	2090.2	2041.4	1968.7	1881.5	1786.0
20°	2183.7	2192.0	2178.5	2115.2	2083.0	2056.0	2049.7	2010.3	1942.8	1855.6	1761.1
22.5°	2079.8	2087.1	2088.2	2029.0	2018.6	2008.2	2003.0	1975.0	1919.9	1840.0	1744.5
25°	2008.2	2016.5	2018.6	1966.7	1972.9	1976.0	1975.0	1955.2	1915.8	1840.0	1746.5
27.5°	1989.5	1993.7	1991.6	1943.8	1955.2	1972.9	1973.9	1969.8	1932.4	1860.8	1775.6
30°	2053.9	2056.0	2030.0	1958.4	1969.8	1992.6	1993.7	1991.6	1967.7	1914.7	1841.0
32.5°	2332.2	2330.1	2240.8	2056.0	2016.5	2024.8	2027.9	2046.6	2048.7	2004.0	1935.5
35°	2755.8	2754.8	2651.0	2335.3	2149.4	2105.8	2110.0	2139.0	2165.0	2134.9	2095.4
37.5°	3222.1	3225.2	3161.8	2734.0	2436.0	2254.3	2250.1	2271.9	2318.7	2329.1	2334.2
40°	3739.2	3754.7	3751.6	3191.9	2837.9	2507.7	2466.1	2441.2	2531.5	2588.6	2662.4
42.5°	4330.0	4325.8	4327.9	3694.5	3296.8	2906.4	2829.5	2713.3	2818.1	2916.8	3078.8
45°	4837.8	4854.4	4866.8	4229.3	3810.8	3362.2	3284.4	3072.5	3167.0	3314.5	3561.6
47.5°	5348.6	5319.6	5342.4	4824.3	4382.9	3882.5	3781.7	3496.2	3584.4	3792.1	4168.0
50°	5943.6	5930.1	5826.3	5601.0	5074.5	4409.9	4278.1	3938.5	4067.3	4344.5	4916.7
52.5°	6477.3	6404.6	6323.7	6211.5	5754.6	4943.7	4776.5	4398.5	4635.3	4979.0	5846.0
55°	6672.5	6623.7	6721.3	6866.7	6474.2	5487.8	5300.9	4935.4	5275.9	5704.8	6939.4
57.5°	6880.2	6896.8	7117.0	7410.8	7155.4	6068.2	5865.7	5570.8	5978.9	6516.8	8161.6
60°	6984.1	7050.5	7489.7	8041.1	7803.3	6704.7	6510.6	6300.8	6758.7	7413.9	9380.6
62.5°	7001.7	7091.0	7713.0	8262.3	8695.3	7679.8	7455.5	7228.1	7732.7	8405.6	10263.2
65°	6677.7	6814.8	7693.3	8534.3	9508.3	9309.0	9166.7	8770.0	9036.9	9278.8	10413.8
67.5°	5725.6	5875.1	6932.1	8422.2	10160.4	10999.4	10972.4	10386.8	10044.1	9616.3	9297.5
70°	4202.3	4322.7	5338.2	7200.0	9875.9	12326.5	12374.2	11434.5	10325.5	8899.8	6913.4
71°	3398.6	3502.4	4459.8	6392.2	9321.4	12395.0	12494.7	11481.2	10032.7	8252.9	5787.9
72.5°	2115.2	2173.3	2961.4	4824.3	8026.6	11688.9	11857.1	10883.1	9110.6	6975.7	4091.2
75°	798.5	821.3	1098.6	2127.6	4791.0	8781.5	8985.0	8224.9	6400.5	3982.1	1712.3
77.5°	428.8	440.3	545.1	884.7	1919.9	5034.0	5295.7	4691.3	3070.5	1393.5	699.9
80°	287.6	294.9	376.9	524.4	882.6	1916.8	2134.9	1883.6	1149.5	795.4	498.4
82.5°	185.9	190.0	256.5	344.7	570.1	673.9	769.4	803.7	717.5	570.1	301.1
85°	122.5	125.6	169.3	220.1	353.0	332.3	340.6	445.5	489.1	375.9	153.7
87.5°	70.6	72.7	101.8	113.2	158.9	124.6	135.0	211.8	290.7	245.1	88.3
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°	1905.4	1905.4	1905.4	1905.4	1905.4	1905.4	1905.4	1905.4	1905.4	1905.4	1905.4
2.5°	1881.5	1873.2	1854.5	1843.1	1837.9	1835.8	1833.8	1837.9	1837.9	1835.8	1831.7
5°	1847.3	1831.7	1800.5	1778.7	1767.3	1764.2	1768.3	1773.5	1776.6	1776.6	1773.5
7.5°	1822.3	1799.5	1758.0	1727.8	1710.2	1705.0	1716.4	1735.1	1747.6	1753.8	1754.8
10°	1801.6	1770.4	1724.7	1693.6	1679.0	1677.0	1691.5	1715.4	1741.3	1752.8	1754.8
12.5°	1782.9	1747.6	1697.7	1668.7	1658.3	1663.5	1683.2	1705.0	1735.1	1751.7	1752.8
15°	1765.2	1728.9	1675.9	1645.8	1643.7	1652.0	1670.7	1688.4	1711.2	1732.0	1732.0
17.5°	1744.5	1705.0	1650.0	1621.9	1621.9	1629.2	1641.7	1651.0	1665.5	1685.3	1684.2
20°	1719.5	1679.0	1623.0	1593.9	1587.7	1583.5	1583.5	1585.6	1598.0	1615.7	1618.8
22.5°	1700.8	1659.3	1600.1	1564.8	1536.8	1509.8	1498.4	1494.2	1505.6	1522.2	1526.4
25°	1700.8	1659.3	1592.9	1533.7	1465.1	1413.2	1391.4	1385.2	1396.6	1412.2	1418.4
27.5°	1728.9	1687.3	1609.5	1505.6	1380.0	1296.9	1271.0	1265.8	1276.2	1288.6	1294.8
30°	1794.3	1753.8	1657.2	1473.4	1285.5	1176.5	1147.4	1142.2	1147.4	1152.6	1159.9
32.5°	1903.3	1869.1	1735.1	1444.4	1190.0	1067.4	1032.1	1023.8	1025.9	1026.9	1033.2
35°	2080.9	2065.3	1838.9	1410.1	1099.6	978.1	941.8	925.2	924.1	929.3	936.6
37.5°	2352.9	2362.3	1972.9	1360.3	1024.9	914.8	878.5	861.8	853.5	863.9	872.2
40°	2737.1	2758.9	2127.6	1292.8	963.6	877.4	839.0	823.4	812.0	808.9	813.0
42.5°	3236.6	3230.4	2285.4	1206.6	897.1	852.5	812.0	795.4	776.7	752.8	747.6
45°	3828.5	3739.2	2417.3	1100.7	821.3	828.6	787.1	764.2	735.2	699.9	695.7
47.5°	4527.3	4281.2	2498.3	987.5	750.7	797.5	759.0	723.7	681.2	658.3	655.2
50°	5369.4	4915.6	2555.4	872.2	687.4	758.0	719.6	672.9	631.3	625.1	624.1
52.5°	6366.2	5664.3	2626.0	768.4	637.6	707.1	680.1	632.4	599.1	602.3	602.3
55°	7426.4	6438.9	2628.1	686.4	593.9	647.9	651.1	612.6	586.7	597.1	600.2
57.5°	8393.1	7115.9	2421.5	628.2	552.4	601.2	641.7	619.9	600.2	636.5	639.6
60°	9236.3	7637.2	1977.1	580.4	518.1	583.6	662.5	664.6	660.4	759.0	766.3
62.5°	9544.7	7642.4	1403.9	540.0	499.5	593.9	706.1	709.2	709.2	800.6	814.1
65°	9112.7	7005.9	934.5	516.1	487.0	616.8	741.4	727.9	695.7	759.0	744.5
67.5°	7590.5	5453.5	683.2	500.5	469.3	617.8	772.5	738.3	683.2	737.2	712.3
70°	5216.8	3470.2	572.1	486.0	448.6	590.8	789.2	735.2	664.6	687.4	654.2
71°	4199.2	2769.3	543.1	480.8	440.3	575.3	791.2	731.0	655.2	669.7	639.6
72.5°	2766.2	1706.0	507.8	469.3	427.8	548.3	786.0	721.7	642.7	643.8	624.1
75°	1091.3	707.1	456.9	443.4	392.5	504.6	763.2	701.9	618.9	598.1	589.8
77.5°	551.4	462.1	401.8	407.0	351.0	460.0	731.0	669.7	585.6	557.6	551.4
80°	402.9	351.0	343.7	353.0	304.2	416.4	690.5	626.1	543.1	572.1	559.7
82.5°	245.1	213.9	268.9	291.8	254.4	371.7	642.7	575.3	489.1	450.7	436.1
85°	116.3	125.6	194.2	214.9	187.9	297.0	587.7	519.2	426.8	368.6	374.9
87.5°	57.1	69.6	111.1	128.8	123.6	218.1	443.4	402.9	336.4	277.2	271.0
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)