

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: P270480

Luminaire Tested: **NAV-AF-03-D-UNV-T4W-7027-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270480
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-7027-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 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: 17060.1 lumens
Efficiency: N/A
Efficacy: 89.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: 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

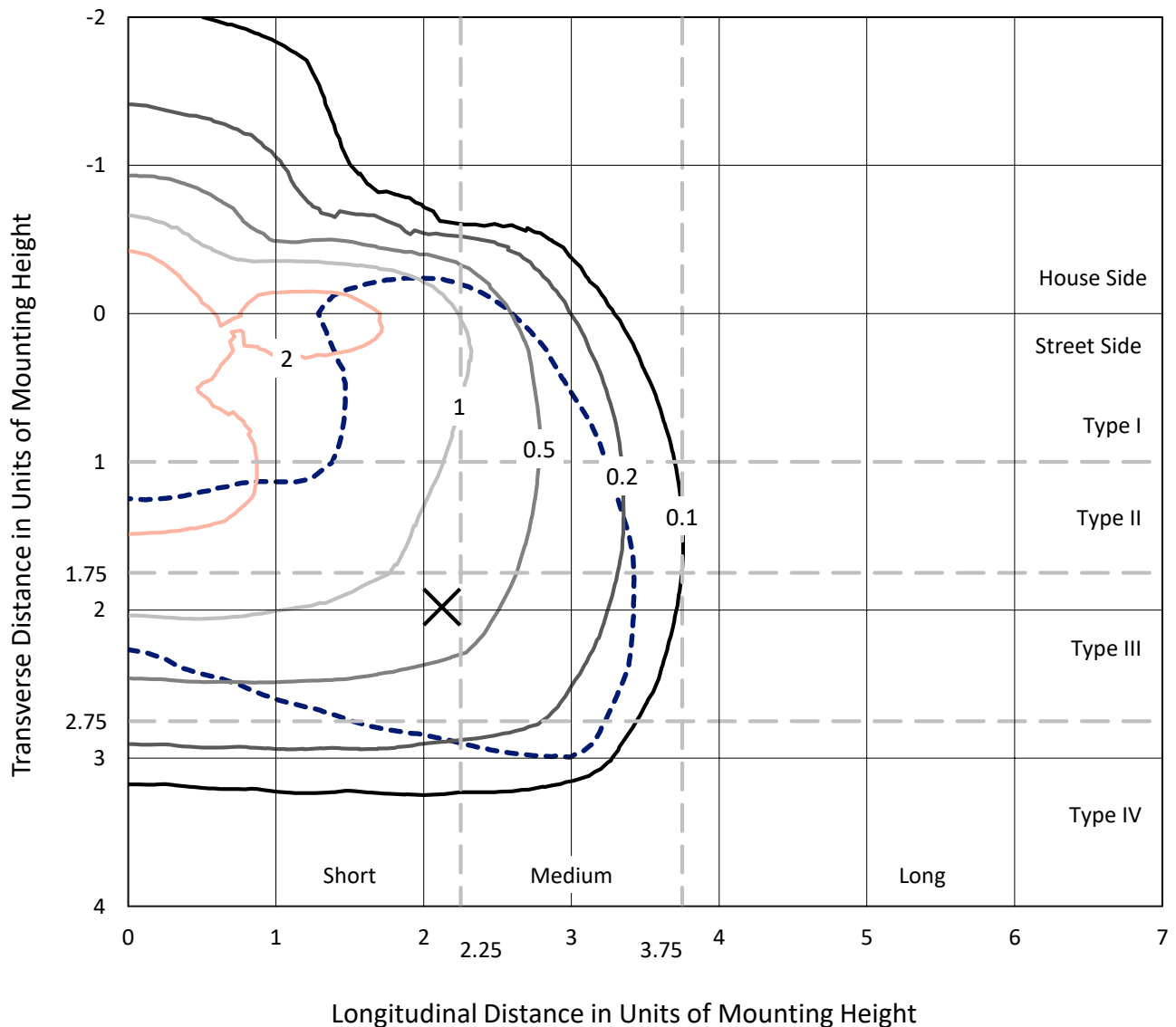


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Iso-Footcandle Lines of Horizontal Illumination

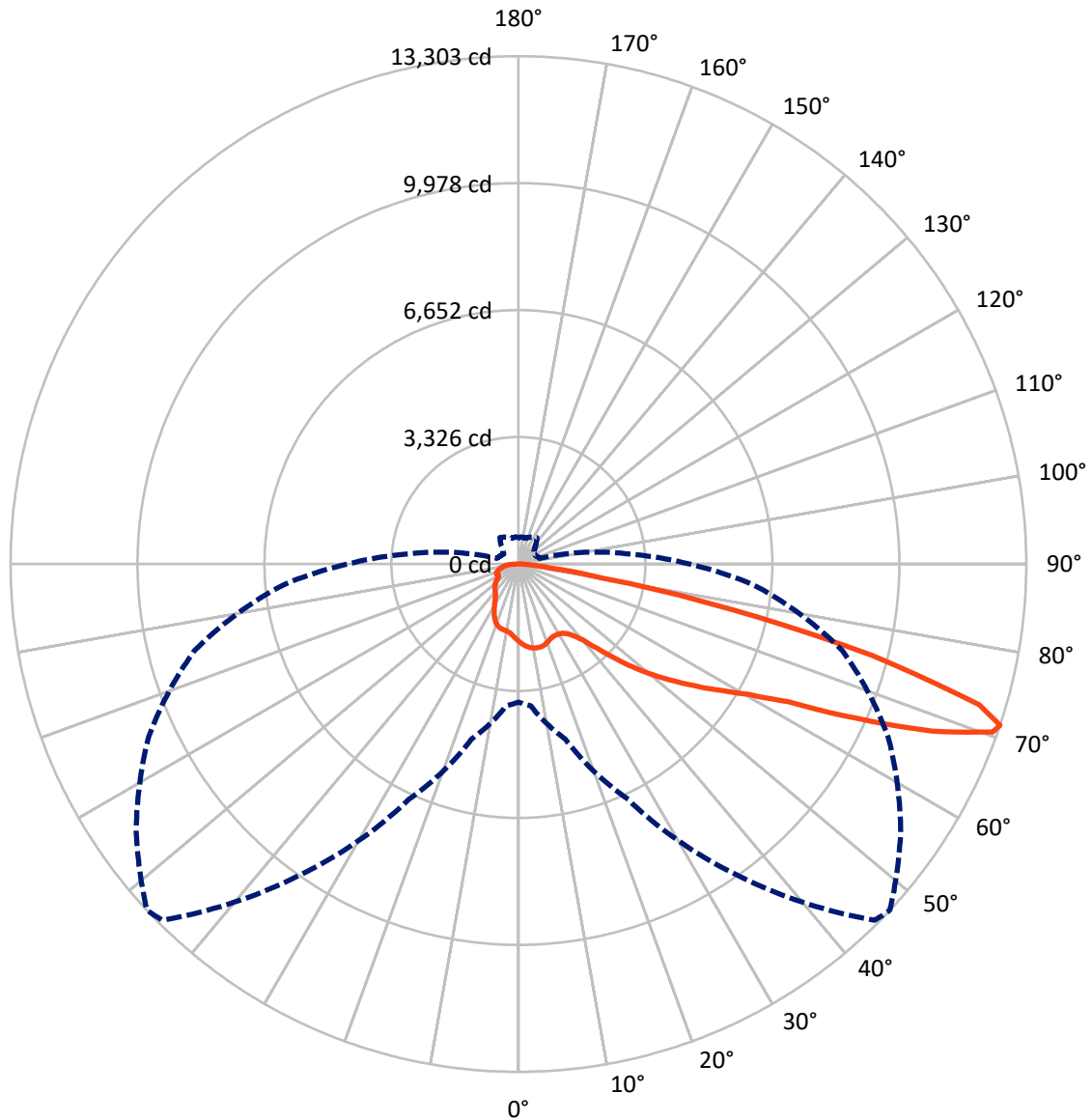
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.7 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	3656.2	0.0	3656.2
	% Fixture	21.4	0.0	21.4
Street Side	Lumens	13403.9	0.0	13403.9
	% Fixture	78.6	0.0	78.6
Total	Lumens	17060.1	0.0	17060.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	193.7	1.1
10°-20°	566.7	3.3
20°-30°	842.1	4.9
30°-40°	1209.1	7.1
40°-50°	2143.8	12.6
50°-60°	3668.3	21.5
60°-70°	5207.7	30.5
70°-80°	2852.2	16.7
80°-90°	376.5	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°	17060.1	100.0
0°-180°	17060.1	100.0

Coefficient of Utilization



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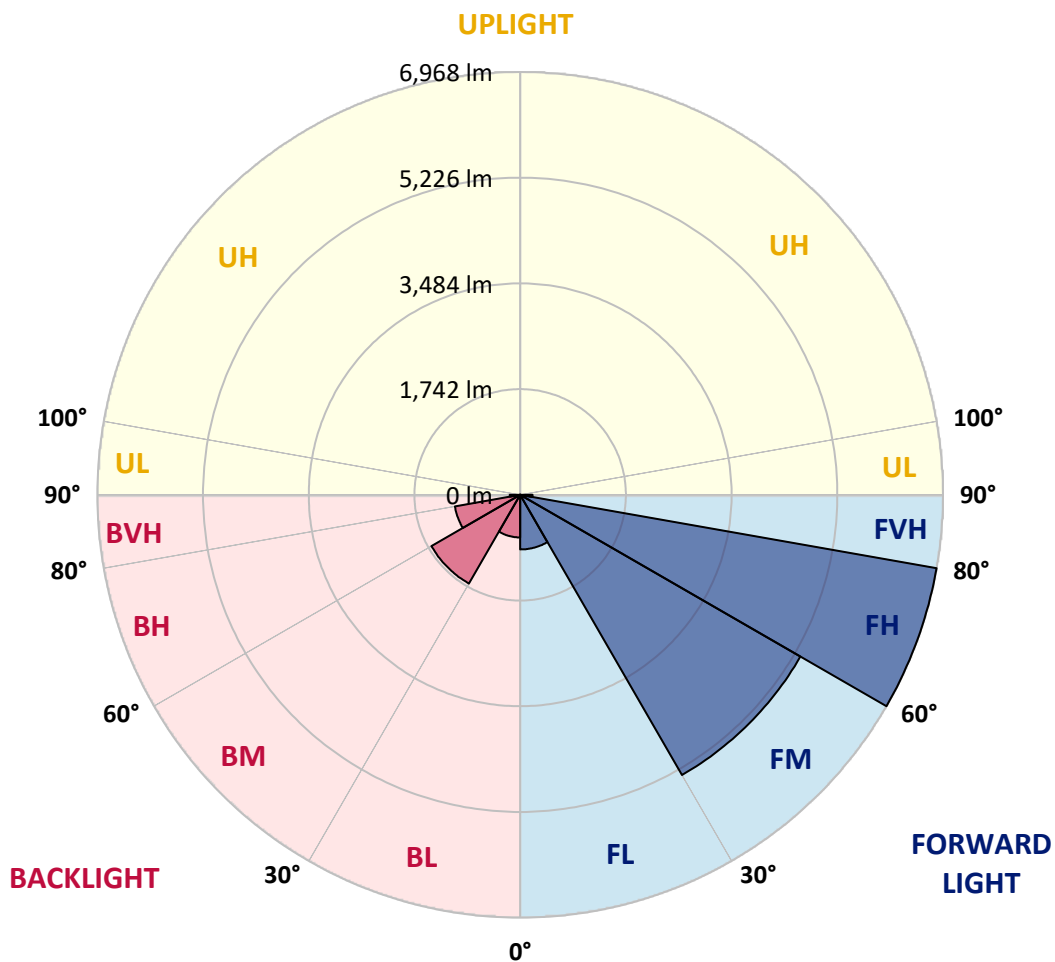
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	900.4	5.3			
FM	(30°-60°)	5331.8	31.3			
FH	(60°-80°)	6967.5	40.8			G3/7500
FVH	(80°-90°)	204.2	1.2			G2/225
BL	(0°-30°)	702.1	4.1	B2/1000		
BM	(30°-60°)	1689.4	9.9	B2/2500		
BH	(60°-80°)	1092.4	6.4	B3/2500		G3/2500
BVH	(80°-90°)	172.3	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°	2028.7	2028.7	2028.7	2028.7	2028.7	2028.7	2028.7	2028.7	2028.7	2028.7	2028.7
2.5°	2152.6	2148.1	2150.4	2142.5	2123.9	2103.9	2103.9	2082.9	2060.8	2038.7	2014.4
5°	2286.4	2279.7	2274.1	2249.8	2213.3	2172.5	2165.9	2123.9	2078.5	2033.1	1988.9
7.5°	2397.9	2391.4	2374.8	2330.6	2277.6	2216.7	2208.9	2153.6	2093.9	2031.0	1969.1
10°	2477.5	2473.2	2441.1	2384.7	2322.7	2251.0	2237.7	2181.4	2110.6	2032.1	1953.5
12.5°	2521.8	2515.2	2476.4	2410.2	2337.2	2264.2	2251.0	2196.7	2116.0	2029.8	1938.1
15°	2504.1	2500.8	2464.3	2396.9	2323.9	2260.9	2249.8	2194.6	2112.8	2022.2	1923.7
17.5°	2428.9	2436.7	2407.9	2341.6	2282.0	2237.7	2225.6	2173.5	2096.1	2003.3	1901.6
20°	2325.1	2333.8	2319.6	2252.1	2217.7	2189.0	2182.4	2140.4	2068.5	1975.6	1875.0
22.5°	2214.5	2222.1	2223.3	2160.3	2149.3	2138.1	2132.7	2102.8	2044.3	1959.1	1857.3
25°	2138.1	2146.9	2149.3	2093.9	2100.5	2103.9	2102.8	2081.8	2039.8	1959.1	1859.6
27.5°	2118.4	2122.8	2120.4	2069.7	2081.8	2100.5	2101.8	2097.4	2057.5	1981.2	1890.6
30°	2186.8	2189.0	2161.4	2085.1	2097.4	2121.5	2122.8	2120.4	2095.0	2038.7	1960.2
32.5°	2483.2	2480.8	2385.8	2189.0	2146.9	2155.9	2159.2	2179.1	2181.4	2133.7	2060.8
35°	2934.3	2933.1	2822.6	2486.5	2288.5	2242.1	2246.5	2277.6	2305.1	2273.2	2231.0
37.5°	3430.5	3434.0	3366.5	2911.0	2593.6	2400.2	2395.8	2419.0	2468.7	2479.9	2485.3
40°	3981.2	3997.7	3994.5	3398.6	3021.5	2669.9	2625.7	2599.2	2695.5	2756.2	2834.7
42.5°	4610.2	4605.8	4608.0	3933.7	3510.1	3094.5	3012.6	2888.9	3000.5	3105.6	3278.1
45°	5150.9	5168.6	5181.9	4503.1	4057.5	3579.8	3496.9	3271.4	3372.0	3529.0	3792.1
47.5°	5694.9	5663.9	5688.2	5136.5	4666.6	4133.7	4026.6	3722.4	3816.4	4037.5	4437.7
50°	6328.3	6313.9	6203.3	5963.5	5402.9	4695.4	4554.9	4193.5	4330.5	4625.7	5235.0
52.5°	6896.6	6819.3	6732.9	6613.5	6127.1	5263.7	5085.7	4683.3	4935.3	5301.3	6224.4
55°	7104.4	7052.5	7156.3	7311.1	6893.2	5842.9	5644.1	5254.8	5617.5	6074.0	7388.6
57.5°	7325.6	7343.3	7577.7	7890.5	7618.5	6461.0	6245.3	5931.4	6365.8	6938.6	8689.8
60°	7436.1	7506.9	7974.6	8561.6	8308.5	7138.7	6932.0	6708.6	7196.2	7893.9	9987.7
62.5°	7454.9	7550.0	8212.2	8797.1	9258.1	8176.8	7938.1	7695.9	8233.2	8949.6	10927.5
65°	7109.9	7255.9	8191.3	9086.7	10123.8	9911.4	9760.1	9337.7	9621.8	9879.4	11087.8
67.5°	6096.2	6255.3	7380.8	8967.3	10818.1	11711.4	11682.6	11059.0	10694.2	10238.7	9899.3
70°	4474.3	4602.6	5683.8	7666.0	10515.1	13124.2	13175.1	12174.5	10993.8	9476.0	7360.9
71°	3618.6	3729.1	4748.4	6805.9	9924.7	13197.3	13303.4	12224.3	10682.0	8787.1	6162.6
72.5°	2252.1	2313.9	3153.1	5136.5	8546.1	12445.5	12624.6	11587.5	9700.3	7427.2	4356.1
75°	850.2	874.5	1169.8	2265.3	5101.1	9349.9	9566.6	8757.2	6814.8	4239.9	1823.1
77.5°	456.6	468.7	580.5	942.0	2044.3	5359.8	5638.4	4994.9	3269.2	1483.7	745.1
80°	306.2	314.0	401.4	558.3	939.7	2040.9	2273.2	2005.6	1223.9	846.9	530.7
82.5°	197.8	202.3	273.1	367.0	607.0	717.6	819.3	855.7	764.0	607.0	320.6
85°	130.4	133.8	180.2	234.4	375.9	353.8	362.6	474.2	520.7	400.3	163.6
87.5°	75.2	77.4	108.3	120.6	169.2	132.7	143.6	225.6	309.6	260.9	94.0
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°	2028.7	2028.7	2028.7	2028.7	2028.7	2028.7	2028.7	2028.7	2028.7	2028.7	2028.7
2.5°	2003.3	1994.4	1974.6	1962.3	1956.9	1954.6	1952.5	1956.9	1956.9	1954.6	1950.2
5°	1966.7	1950.2	1917.1	1893.8	1881.7	1878.4	1882.8	1888.3	1891.7	1891.7	1888.3
7.5°	1940.2	1915.9	1871.8	1839.6	1820.9	1815.4	1827.5	1847.5	1860.7	1867.3	1868.5
10°	1918.2	1885.1	1836.3	1803.2	1787.6	1785.6	1801.0	1826.4	1854.0	1866.1	1868.5
12.5°	1898.3	1860.7	1807.6	1776.7	1765.6	1771.2	1792.2	1815.4	1847.5	1865.2	1866.1
15°	1879.4	1840.7	1784.5	1752.4	1750.1	1759.1	1778.9	1797.7	1822.0	1844.1	1844.1
17.5°	1857.3	1815.4	1756.7	1726.9	1726.9	1734.6	1747.9	1757.9	1773.3	1794.4	1793.2
20°	1830.8	1787.6	1728.0	1697.1	1690.4	1685.9	1685.9	1688.3	1701.5	1720.3	1723.6
22.5°	1811.0	1766.6	1703.6	1666.0	1636.3	1607.4	1595.3	1590.9	1603.0	1620.8	1625.3
25°	1811.0	1766.6	1696.0	1632.8	1559.9	1504.8	1481.5	1474.8	1487.1	1503.7	1510.2
27.5°	1840.7	1796.6	1713.6	1603.0	1469.3	1380.9	1353.2	1347.6	1358.7	1372.0	1378.7
30°	1910.4	1867.3	1764.5	1568.8	1368.7	1252.6	1221.7	1216.1	1221.7	1227.2	1234.9
32.5°	2026.5	1990.0	1847.5	1537.9	1267.0	1136.5	1098.9	1090.2	1092.2	1093.3	1100.1
35°	2215.6	2199.1	1957.9	1501.3	1170.9	1041.5	1002.8	985.1	984.0	989.6	997.2
37.5°	2505.3	2515.2	2100.5	1448.2	1091.3	974.0	935.3	917.6	908.7	919.9	928.7
40°	2914.3	2937.5	2265.3	1376.5	1026.0	934.1	893.4	876.7	864.6	861.2	865.6
42.5°	3446.1	3439.4	2433.4	1284.7	955.2	907.6	864.6	846.9	827.0	801.6	796.0
45°	4076.2	3981.2	2573.7	1171.8	874.5	882.2	837.9	813.8	782.8	745.1	740.7
47.5°	4820.3	4558.3	2660.1	1051.3	799.3	849.1	808.1	770.6	725.2	700.9	697.7
50°	5717.0	5233.9	2720.8	928.7	731.8	807.0	766.2	716.4	672.2	665.6	664.4
52.5°	6778.3	6031.0	2796.1	818.1	678.8	752.9	724.2	673.3	637.9	641.2	641.2
55°	7907.2	6855.7	2798.2	730.9	632.3	689.9	693.2	652.3	624.6	635.7	639.1
57.5°	8936.3	7576.6	2578.1	668.9	588.2	640.1	683.3	660.1	639.1	677.7	681.0
60°	9834.1	8131.5	2105.0	618.0	551.6	621.4	705.3	707.5	703.2	808.1	815.9
62.5°	10162.4	8137.0	1494.7	574.8	531.7	632.3	751.8	755.1	755.1	852.4	866.8
65°	9702.6	7459.3	995.1	549.5	518.5	656.8	789.4	775.0	740.7	808.1	792.8
67.5°	8081.8	5806.5	727.4	532.9	499.6	657.7	822.6	786.0	727.4	784.9	758.3
70°	5554.4	3694.9	609.2	517.5	477.5	629.1	840.3	782.8	707.5	731.8	696.5
71°	4471.0	2948.5	578.1	511.9	468.7	612.5	842.4	778.3	697.7	713.2	681.0
72.5°	2945.3	1816.5	540.6	499.6	455.5	583.8	837.0	768.4	684.4	685.4	664.4
75°	1162.0	752.9	486.4	472.1	417.9	537.2	812.5	747.4	658.9	636.8	627.9
77.5°	587.0	492.0	427.9	433.4	373.6	489.8	778.3	713.2	623.6	593.7	587.0
80°	429.0	373.6	366.0	375.9	323.8	443.4	735.3	666.6	578.1	609.2	595.8
82.5°	260.9	227.7	286.3	310.6	270.8	395.9	684.4	612.5	520.7	479.9	464.3
85°	123.8	133.8	206.7	228.9	200.1	316.3	625.8	552.7	454.5	392.5	399.0
87.5°	60.8	74.1	118.2	137.1	131.5	232.2	472.1	429.0	358.2	295.3	288.5
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)