

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: P196833

Luminaire Tested: **NAV-AF-03-D-UNV-T4FT-7030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196833
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-7030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 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: 14267.1 lumens
Efficiency: N/A
Efficacy: 115.1 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 - G3

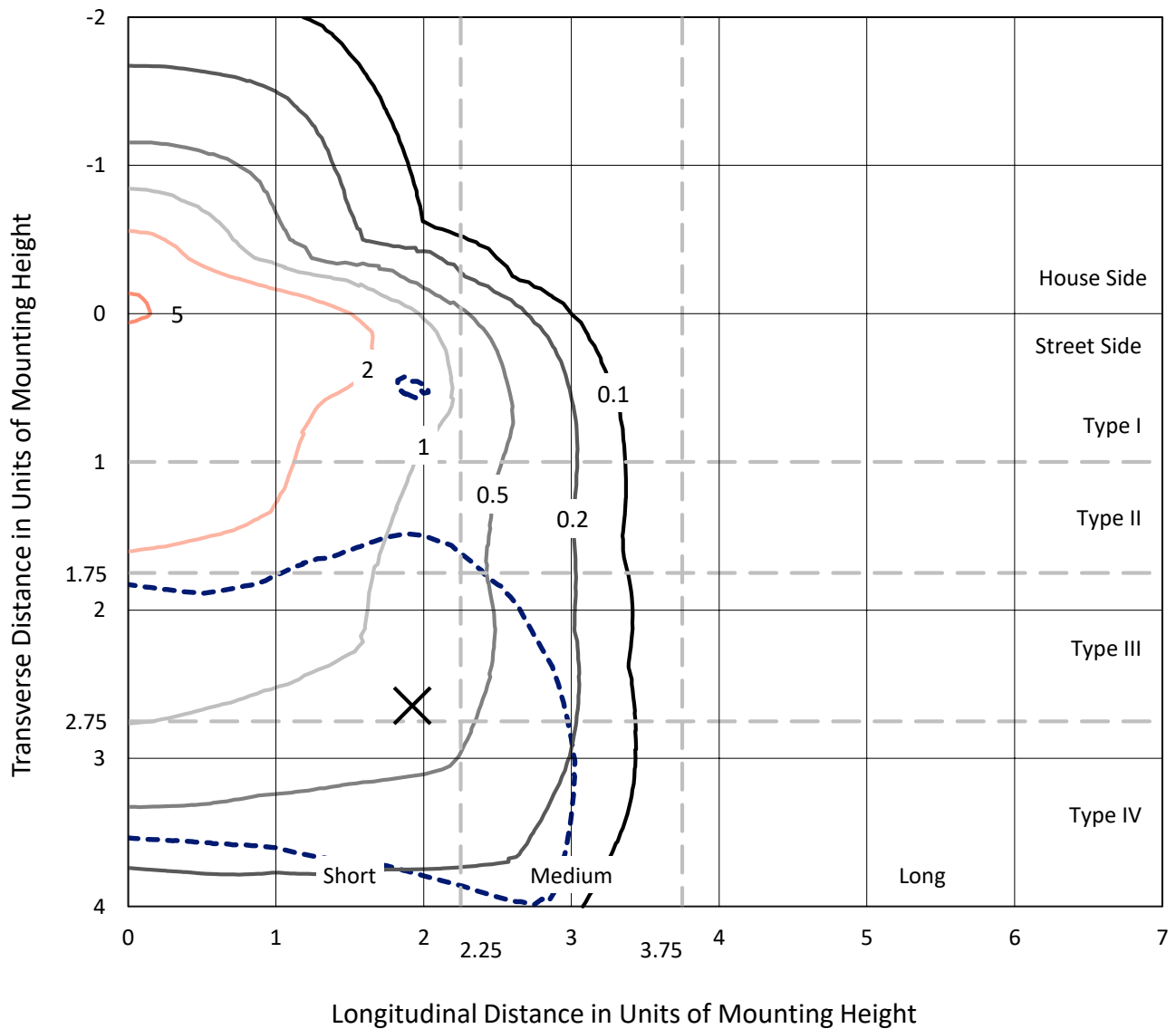
Input Watts (W): 124
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

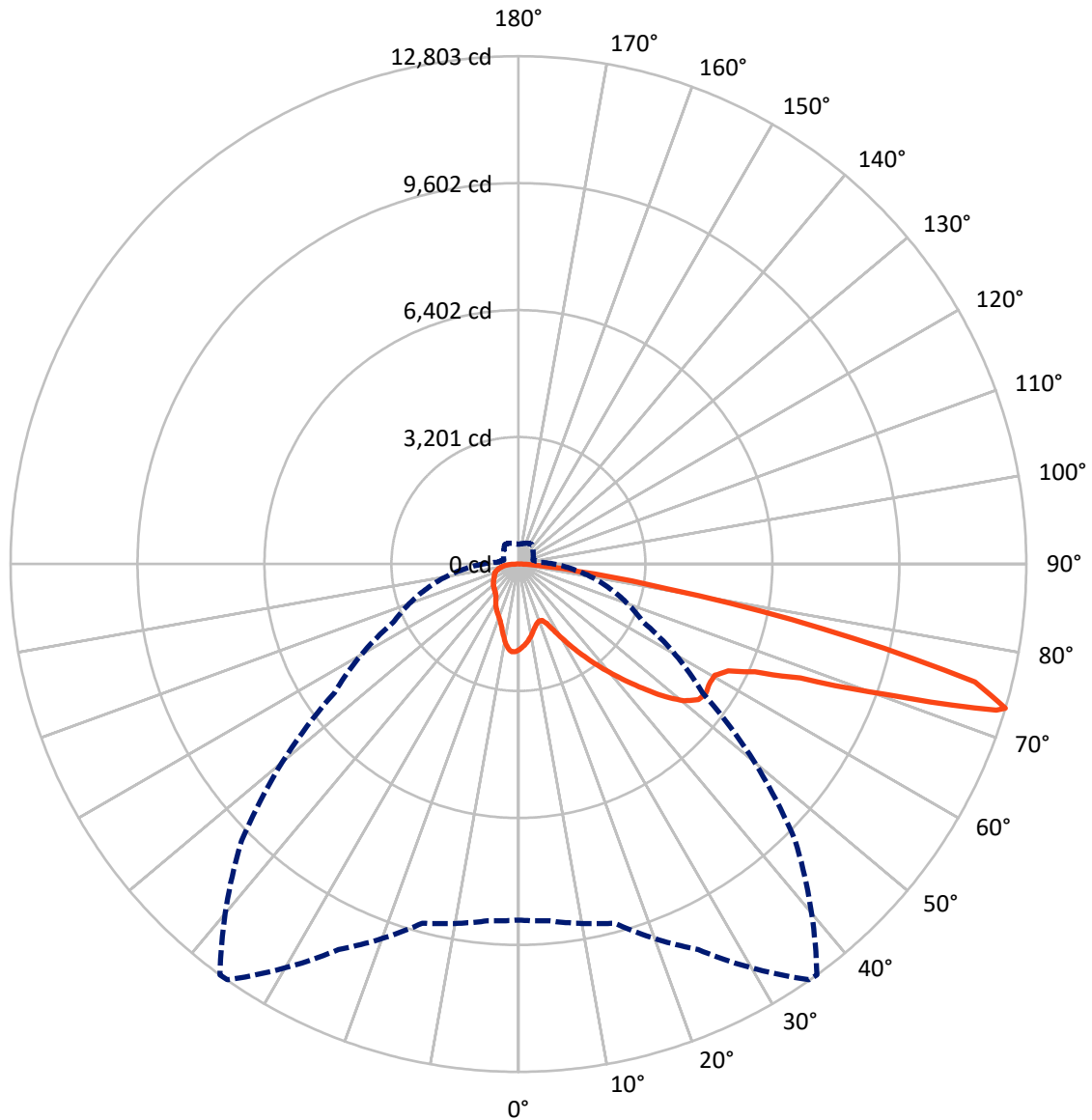
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5.4 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	2751.1	0.0	2751.1
	% Fixture	19.3	0.0	19.3
Street Side	Lumens	11515.9	0.0	11515.9
	% Fixture	80.7	0.0	80.7
Total	Lumens	14267.1	0.0	14267.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	196.3	1.4
10°-20°	493.0	3.5
20°-30°	790.4	5.5
30°-40°	1307.3	9.2
40°-50°	2023.0	14.2
50°-60°	2708.1	19.0
60°-70°	3537.7	24.8
70°-80°	2889.7	20.3
80°-90°	321.6	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°	14267.1	100.0
0°-180°	14267.1	100.0

Coefficient of Utilization



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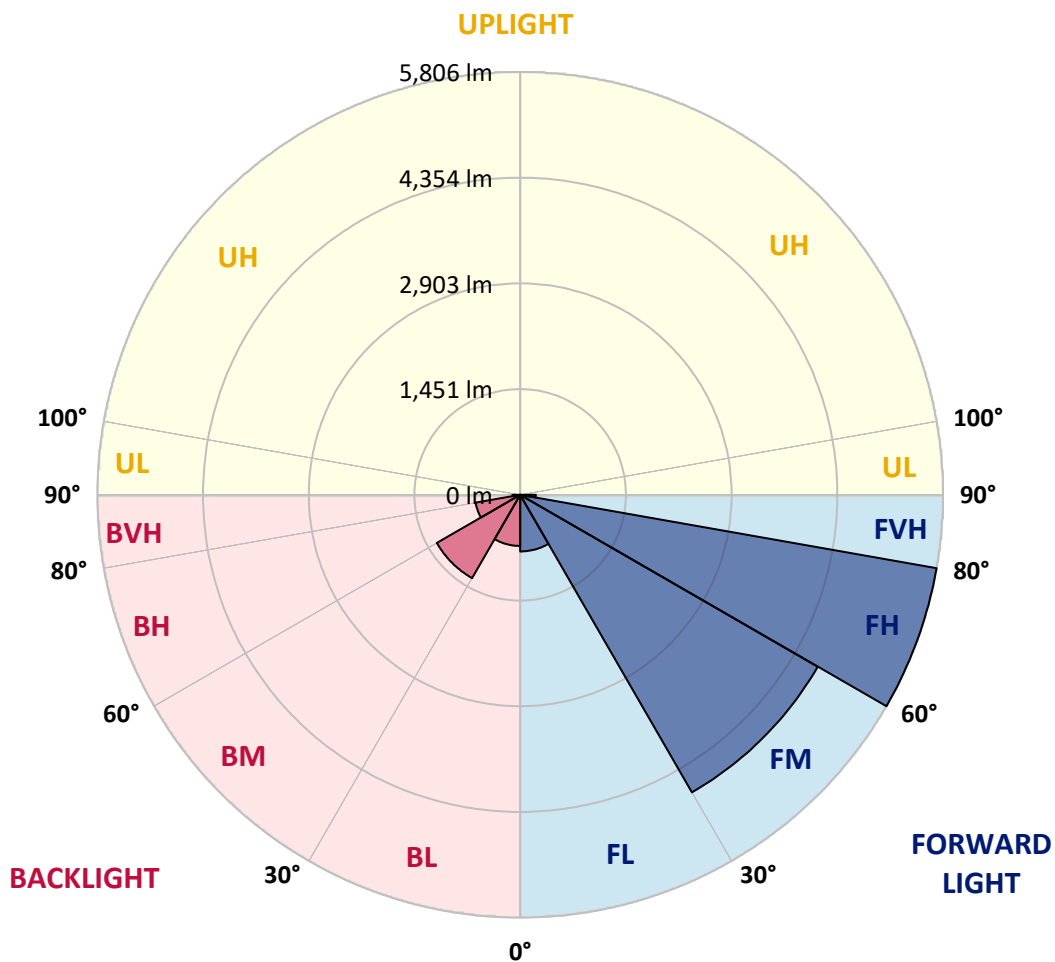
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	777.4	5.4			
FM (30°-60°)	4717.2	33.1			
FH (60°-80°)	5805.7	40.7			G3/7500
FVH (80°-90°)	215.7	1.5			G2/225
BL (0°-30°)	702.3	4.9	B2/1000		
BM (30°-60°)	1321.2	9.3	B2/2500		
BH (60°-80°)	621.7	4.4	B2/1000		G2/1000
BVH (80°-90°)	105.9	0.7			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°	36°	45°	55°	65°	75°	85°
0°	2161.0	2161.0	2161.0	2161.0	2161.0	2161.0	2161.0	2161.0	2161.0	2161.0	2161.0
2.5°	2078.5	2084.0	2084.8	2091.2	2091.2	2090.3	2093.1	2103.9	2109.4	2122.1	2133.0
5°	1976.2	1982.5	1985.2	1996.0	2009.8	2010.6	2020.5	2041.4	2061.2	2089.5	2113.0
7.5°	1861.0	1868.3	1875.6	1898.2	1918.1	1919.9	1939.0	1972.4	1998.8	2033.2	2075.8
10°	1749.5	1751.3	1758.5	1787.6	1813.8	1816.6	1843.7	1881.9	1917.2	1965.2	2013.3
12.5°	1657.9	1663.4	1661.7	1683.3	1706.0	1707.8	1744.1	1792.1	1843.7	1898.2	1955.3
15°	1626.3	1625.3	1606.3	1605.3	1615.4	1617.1	1652.5	1708.7	1766.7	1833.8	1907.2
17.5°	1647.9	1640.7	1591.0	1560.0	1553.6	1555.6	1581.8	1643.5	1705.1	1782.1	1870.1
20°	1767.6	1739.5	1622.6	1548.3	1527.5	1527.5	1542.8	1592.7	1660.6	1750.5	1861.0
22.5°	2051.4	2007.8	1758.5	1626.3	1552.8	1545.6	1533.8	1571.8	1647.1	1754.9	1898.2
25°	2408.5	2387.7	2007.8	1833.8	1682.4	1658.9	1580.9	1594.5	1675.2	1803.9	1999.7
27.5°	2739.3	2703.1	2335.1	2135.7	1921.8	1885.5	1720.5	1665.2	1742.2	1894.5	2146.5
30°	2932.4	2907.9	2671.4	2481.1	2226.2	2180.0	1943.5	1804.9	1861.9	2044.1	2355.1
32.5°	3142.8	3128.3	3008.6	2835.5	2556.2	2502.8	2231.7	2032.3	2045.0	2242.6	2606.2
35°	3346.7	3365.7	3297.8	3170.8	2911.6	2861.7	2618.8	2329.6	2270.7	2465.7	2874.4
37.5°	3591.5	3596.0	3553.4	3470.9	3285.1	3244.2	3044.0	2647.0	2516.3	2703.1	3133.7
40°	4080.1	4008.5	3841.7	3776.4	3665.7	3640.4	3411.9	2937.9	2744.8	2946.9	3378.4
42.5°	4608.5	4497.0	4236.0	4129.0	4084.5	4061.0	3718.4	3131.9	2958.7	3190.8	3618.6
45°	5034.5	4944.0	4688.4	4556.0	4561.3	4523.4	3985.8	3305.0	3190.8	3435.5	3887.0
47.5°	5454.3	5302.9	5016.4	4997.4	5060.9	5004.6	4241.5	3478.2	3432.8	3702.0	4155.3
50°	5481.4	5343.7	5227.6	5379.9	5488.7	5418.9	4473.5	3704.8	3683.9	4024.8	4501.6
52.5°	5150.6	5130.7	5307.5	5563.9	5744.3	5681.8	4662.9	3937.7	3940.4	4428.2	4923.1
55°	5030.1	5004.6	5216.8	5532.3	5776.1	5739.0	4804.3	4200.6	4225.0	4917.6	5375.4
57.5°	5233.1	5169.6	5211.3	5472.5	5701.8	5680.0	4951.2	4492.5	4536.9	5481.4	5793.4
60°	5863.1	5733.5	5512.3	5561.3	5704.4	5691.8	5161.5	4817.9	4892.3	6069.0	6058.0
62.5°	6806.8	6659.9	6209.4	5991.8	5960.1	5935.6	5508.7	5217.6	5254.9	6493.1	5904.0
65°	7842.0	7684.2	7148.5	6792.2	6605.5	6553.0	6069.0	5699.9	5467.0	6492.1	5303.8
67.5°	9004.0	8837.2	8303.3	7963.5	7761.2	7671.5	6978.1	6089.7	5398.1	5942.8	4244.1
70°	10194.2	10035.7	9790.8	9909.6	9998.5	9861.6	8410.3	6219.4	4903.1	4659.3	2849.9
72.5°	9562.5	9549.8	9735.5	10861.5	12573.8	12601.0	9840.8	5853.1	3788.1	2769.2	1519.2
73°	8975.9	9029.4	9373.9	10720.9	12794.0	12803.1	9868.9	5663.7	3478.2	2385.9	1334.4
75°	4650.3	5012.9	6290.9	8693.1	11846.8	11889.4	8699.4	4287.7	2073.0	1325.4	899.2
77.5°	1245.5	1229.1	2026.9	4235.1	7898.2	7842.0	5497.0	2075.8	993.5	831.3	630.9
80°	426.9	432.3	689.9	1549.2	3686.6	3818.1	2385.9	905.5	653.6	579.3	446.9
82.5°	217.5	224.8	360.8	659.1	1541.9	1509.3	767.8	532.9	437.8	351.7	250.2
85°	116.1	119.6	198.6	341.8	565.6	572.0	270.1	284.6	278.3	199.4	123.3
87.5°	57.2	58.9	95.2	150.4	209.4	202.1	94.3	123.3	136.9	112.4	68.0
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°	2161.0	2161.0	2161.0	2161.0	2161.0	2161.0	2161.0	2161.0	2161.0	2161.0	2161.0
2.5°	2146.5	2146.5	2158.3	2178.3	2192.8	2206.4	2215.4	2230.0	2238.0	2237.2	2236.3
5°	2132.0	2141.2	2164.7	2189.1	2205.5	2216.4	2216.4	2222.7	2222.7	2219.9	2216.4
7.5°	2098.6	2113.9	2148.4	2170.1	2174.7	2162.9	2139.3	2121.2	2098.6	2086.8	2082.2
10°	2045.0	2065.0	2108.4	2118.4	2094.8	2053.2	1996.0	1947.1	1903.7	1883.6	1877.3
12.5°	1992.5	2018.8	2059.5	2044.1	1987.9	1906.3	1818.4	1751.3	1702.4	1683.3	1677.0
15°	1948.9	1980.7	2012.3	1964.4	1866.4	1753.2	1656.2	1593.5	1556.4	1541.9	1538.3
17.5°	1919.9	1957.1	1968.0	1878.2	1742.2	1615.4	1529.2	1488.4	1472.2	1465.8	1464.0
20°	1921.8	1963.4	1937.1	1794.8	1622.6	1494.7	1437.7	1426.0	1426.0	1426.0	1425.0
22.5°	1971.6	2007.8	1924.5	1716.9	1507.4	1393.3	1368.8	1378.8	1386.0	1386.0	1385.1
25°	2075.0	2094.8	1933.6	1641.6	1399.6	1305.3	1306.2	1325.4	1331.7	1331.7	1329.8
27.5°	2232.7	2216.4	1949.8	1558.2	1293.5	1225.6	1238.2	1255.5	1260.0	1257.2	1256.4
30°	2430.3	2365.0	1963.4	1460.4	1193.8	1151.3	1162.1	1172.1	1168.4	1162.1	1161.2
32.5°	2651.5	2516.3	1955.3	1350.7	1105.9	1074.1	1080.6	1085.9	1080.6	1065.1	1065.1
35°	2870.8	2653.3	1910.8	1231.1	1036.1	999.8	998.9	1016.1	1015.2	997.1	998.1
37.5°	3063.0	2761.1	1824.7	1121.3	976.2	945.4	949.1	960.0	965.5	940.9	938.2
40°	3230.7	2835.5	1703.3	1027.9	928.2	930.1	920.1	902.8	896.5	885.6	883.8
42.5°	3388.4	2887.1	1574.5	950.0	903.8	924.7	891.1	850.2	833.1	843.1	849.4
45°	3543.4	2945.2	1450.4	885.6	873.0	908.3	862.0	816.7	796.8	801.3	807.7
47.5°	3732.9	3025.8	1300.8	816.7	825.8	878.3	843.9	795.0	765.1	746.9	741.6
50°	3982.2	3142.8	1106.8	742.4	776.0	845.7	828.5	763.2	730.6	694.4	685.3
52.5°	4294.0	3253.3	911.0	682.6	735.2	817.7	803.2	736.1	696.2	652.8	645.4
55°	4604.9	3268.8	742.4	630.9	688.9	779.6	772.4	714.3	658.1	622.8	615.4
57.5°	4822.4	3122.8	629.2	587.4	644.5	732.5	744.3	688.0	626.4	599.2	594.7
60°	4826.1	2773.9	560.2	558.5	611.0	691.6	715.2	657.2	606.4	588.3	584.6
62.5°	4442.7	2235.3	515.8	536.7	586.5	658.1	693.5	639.9	601.9	594.7	591.0
65°	3723.8	1651.6	480.4	516.7	563.8	630.0	675.3	634.6	600.1	597.3	594.7
67.5°	2749.4	1132.2	450.4	491.3	538.4	601.0	658.1	626.4	589.2	600.1	596.4
70°	1729.6	756.0	422.4	462.2	504.9	567.5	635.5	611.9	575.6	569.2	557.4
72.5°	976.2	546.7	388.9	425.1	461.4	523.1	604.6	587.4	544.7	519.4	507.6
73°	882.0	517.6	380.8	416.1	451.5	513.9	597.3	580.1	535.7	507.6	496.8
75°	645.4	423.4	343.5	378.9	409.7	472.3	562.9	543.9	495.8	462.2	455.1
77.5°	467.7	326.3	295.5	327.2	354.4	414.3	511.3	489.5	442.4	424.3	417.0
80°	337.2	247.5	244.7	275.6	299.2	359.9	455.9	433.3	388.0	441.4	429.7
82.5°	201.2	158.7	179.5	213.9	238.4	301.9	396.2	369.9	326.3	330.0	281.1
85°	96.0	89.7	111.5	140.5	157.8	206.7	330.0	309.1	261.0	213.9	209.4
87.5°	42.6	40.8	53.4	62.5	84.3	124.2	225.7	200.4	189.4	113.3	88.8
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)