

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: P882791

Luminaire Tested: **NAV-SB2D-827-U-T4FT**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P882791
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-24)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB2D-827-U-T4FT
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 80 CRI, 2700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV
FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16655 lumens
Efficiency: N/A
Efficacy: 112.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

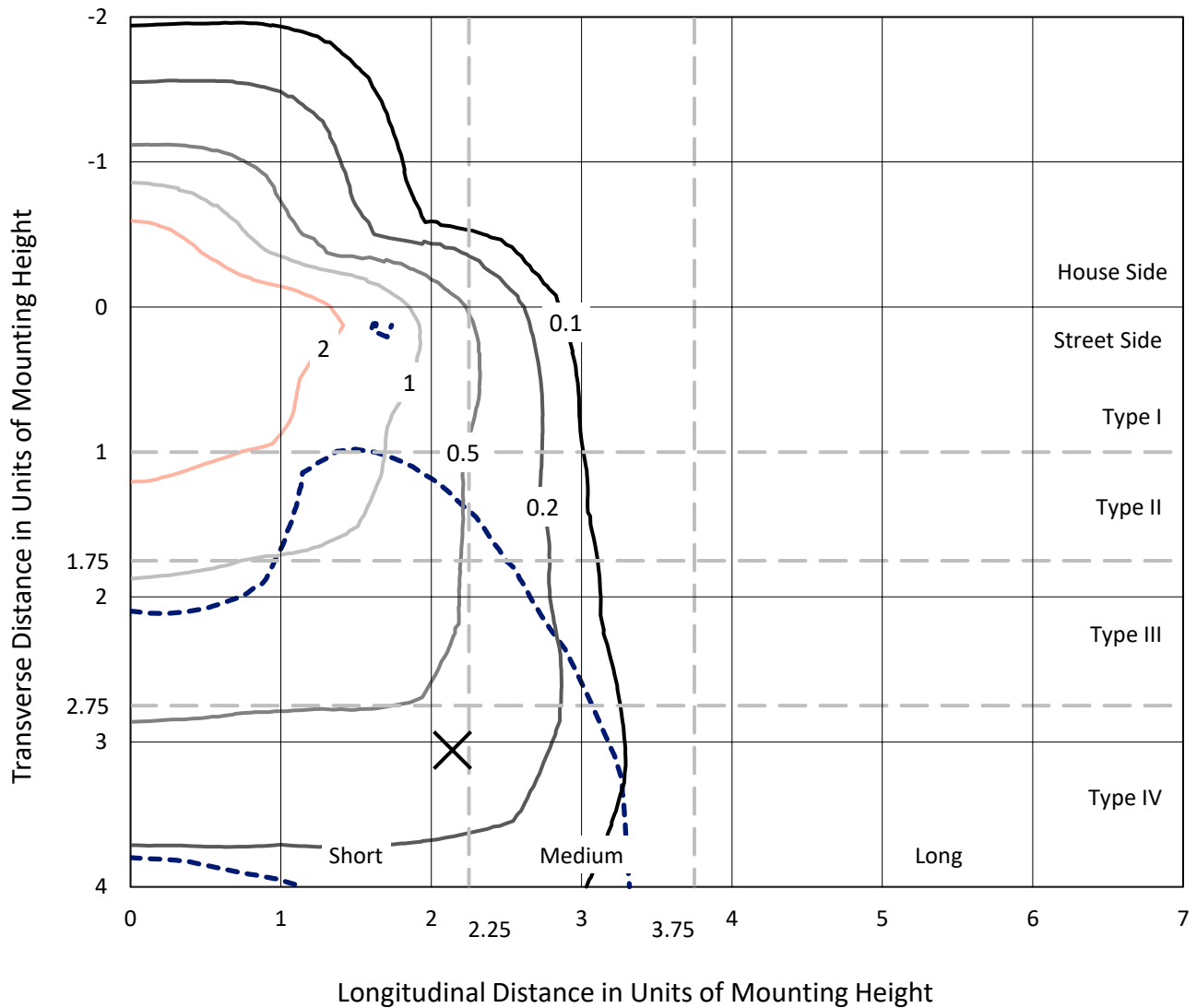
Input Watts (W): 147.6
Input Voltage (V): 120.0
Input Current (Ain): 1.234
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 3.108
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

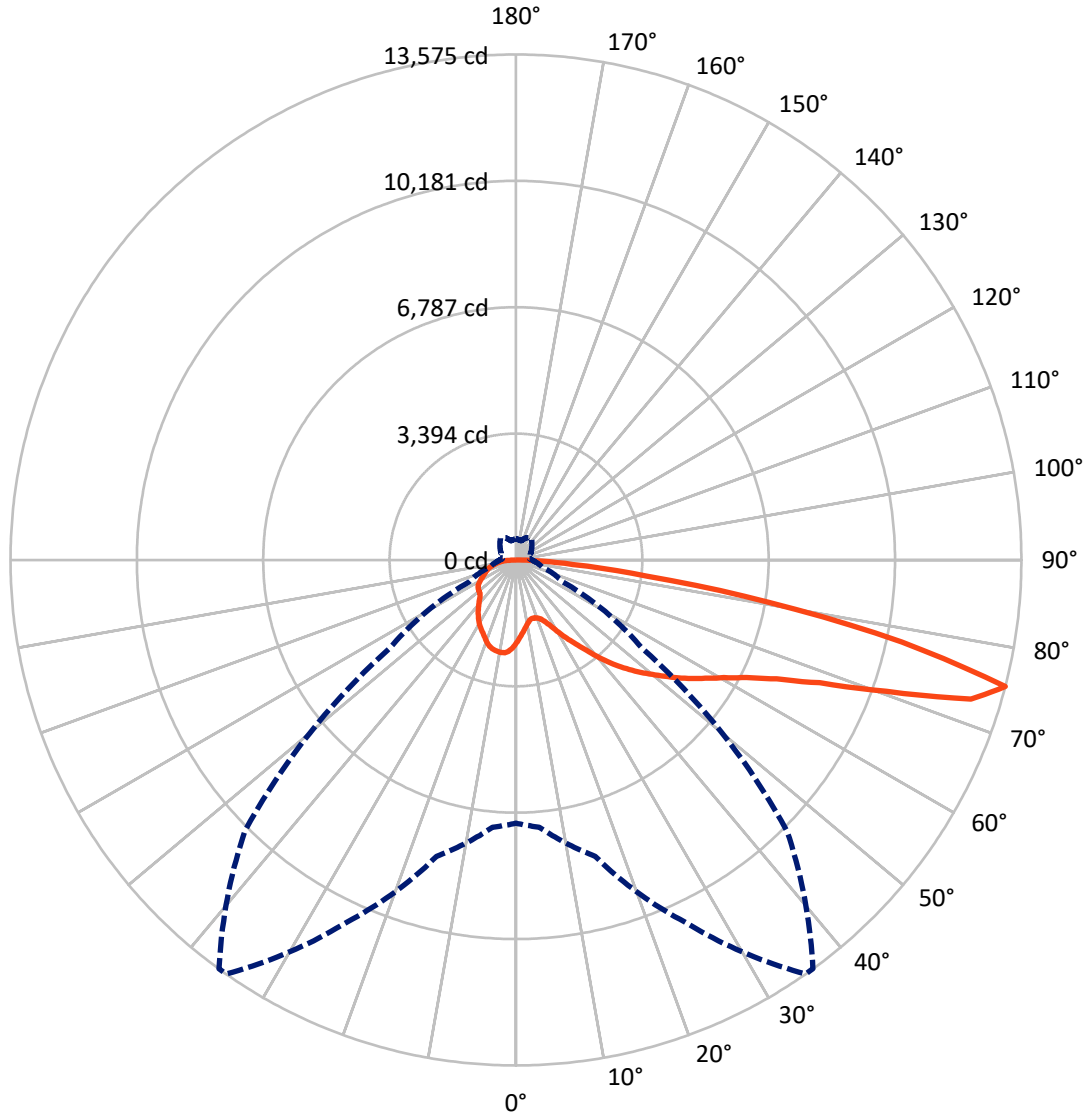
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.9 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 75-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3963.5	0.0	3963.5
	% Fixture	23.8	0.0	23.8
Street Side	Lumens	12691.5	0.0	12691.5
	% Fixture	76.2	0.0	76.2
Total	Lumens	16655.0	0.0	16655.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	210.1	1.3
10°-20°	606.1	3.6
20°-30°	1017.8	6.1
30°-40°	1581.8	9.5
40°-50°	2347.9	14.1
50°-60°	3241.4	19.5
60°-70°	3932.5	23.6
70°-80°	3249.9	19.5
80°-90°	467.4	2.8
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°	16655.0	100.0
0°-180°	16655.0	100.0



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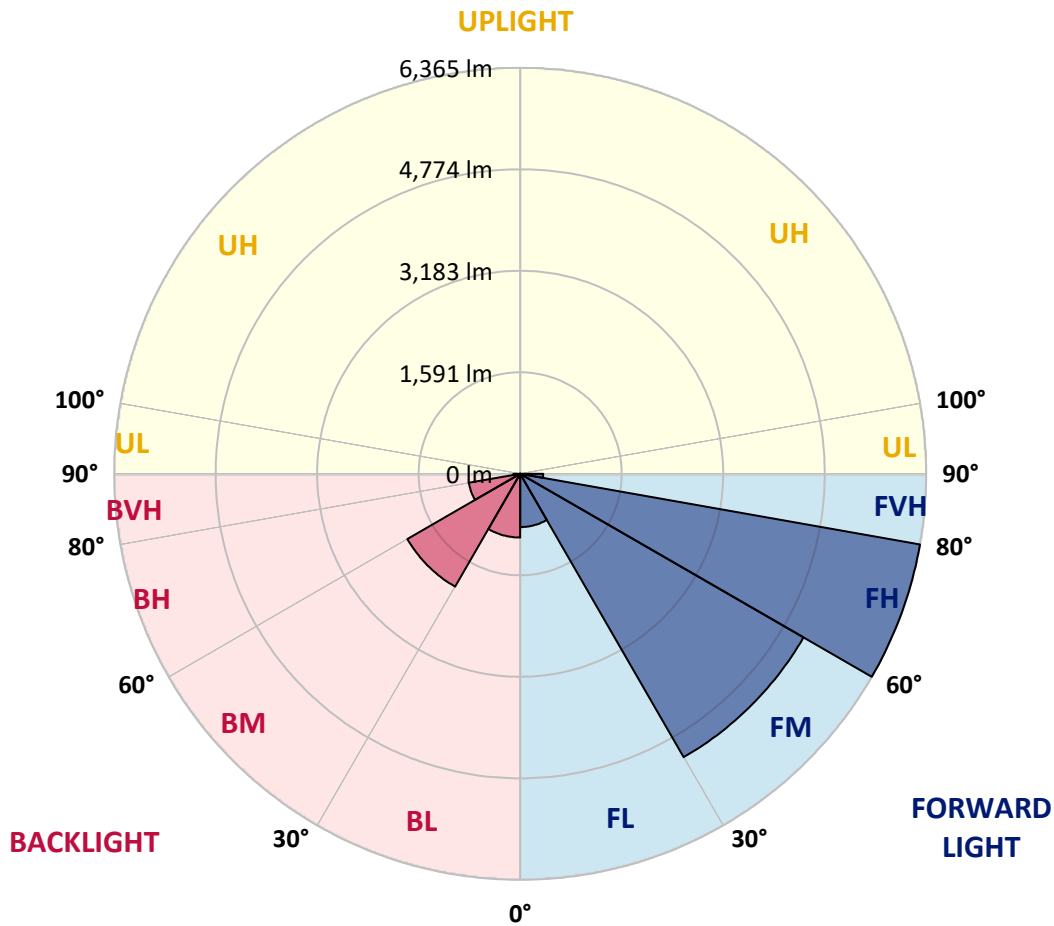
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	835.2	5.0			
FM (30°-60°)	5128.8	30.8			
FH (60°-80°)	6365.3	38.2			G3/7500
FVH (80°-90°)	362.2	2.2			G3/500
BL (0°-30°)	998.8	6.0	B2/1000		
BM (30°-60°)	2042.2	12.3	B2/2500		
BH (60°-80°)	817.1	4.9	B2/1000		G2/1000
BVH (80°-90°)	105.3	0.6			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°	2219.4	2219.4	2219.4	2219.4	2219.4	2219.4	2219.4	2219.4	2219.4	2219.4	2219.4
2.5°	2046.5	2059.1	2064.5	2061.8	2075.3	2073.5	2092.4	2115.8	2148.3	2179.8	2225.7
5°	1889.0	1902.5	1914.2	1925.0	1951.1	1959.2	1988.9	2033.9	2093.3	2153.7	2229.3
7.5°	1742.2	1753.9	1771.9	1791.7	1835.8	1843.9	1893.5	1963.7	2046.5	2134.8	2239.2
10°	1622.5	1634.2	1653.1	1675.6	1730.5	1740.4	1803.4	1897.1	2005.1	2116.8	2250.0
12.5°	1571.1	1574.7	1585.5	1608.0	1655.8	1662.1	1731.4	1838.5	1964.6	2103.2	2266.2
15°	1568.4	1575.6	1576.5	1588.2	1627.9	1630.6	1694.5	1800.7	1939.4	2100.5	2290.5
17.5°	1595.4	1600.8	1592.7	1599.9	1633.3	1637.8	1688.2	1782.7	1931.3	2112.2	2331.9
20°	1667.5	1672.0	1647.7	1637.8	1662.1	1665.7	1715.2	1794.4	1939.4	2136.6	2388.7
22.5°	1820.5	1823.2	1763.8	1723.3	1725.1	1726.9	1770.1	1842.1	1970.9	2180.7	2460.7
25°	2059.1	2057.3	1962.8	1884.5	1839.4	1829.5	1858.3	1919.6	2024.0	2239.2	2553.4
27.5°	2338.2	2324.7	2230.2	2113.1	2015.0	2000.6	1994.3	2020.4	2099.6	2316.6	2666.9
30°	2653.4	2640.8	2539.0	2386.0	2250.0	2226.6	2167.2	2153.7	2212.2	2422.0	2824.4
32.5°	2999.1	2991.0	2869.5	2684.0	2502.1	2475.1	2375.2	2339.1	2385.1	2581.3	3044.1
35°	3289.0	3281.8	3181.0	2990.1	2767.7	2734.4	2632.7	2592.1	2615.6	2785.7	3331.3
37.5°	3551.0	3547.4	3461.0	3310.6	3081.0	3040.5	2926.2	2912.7	2908.2	3054.9	3679.8
40°	3794.1	3785.1	3695.1	3615.9	3445.7	3408.8	3307.9	3296.2	3262.0	3386.3	4074.1
42.5°	4063.3	4039.9	3909.4	3872.5	3826.5	3795.9	3735.6	3737.4	3661.8	3759.9	4491.9
45°	4283.0	4269.5	4135.4	4113.8	4163.3	4150.7	4202.9	4216.4	4069.6	4151.6	4925.9
47.5°	4518.9	4506.3	4392.9	4377.6	4511.7	4515.3	4699.9	4704.4	4467.6	4558.5	5360.8
50°	4809.7	4791.7	4679.2	4698.1	4848.4	4862.0	5199.6	5169.0	4834.0	4971.8	5792.0
52.5°	5001.5	5012.3	4988.0	5018.6	5223.9	5236.5	5691.2	5612.9	5196.9	5379.7	6215.2
55°	5142.9	5164.5	5240.1	5310.3	5620.1	5632.7	6154.9	6035.1	5497.6	5757.8	6613.2
57.5°	5324.7	5294.1	5435.5	5572.3	5996.4	6029.7	6606.0	6442.1	5764.1	6083.7	6886.0
60°	5585.8	5564.2	5674.1	5876.7	6417.8	6470.9	7083.1	6808.5	5959.5	6342.1	6939.1
62.5°	6115.3	6061.2	6078.3	6257.5	6949.0	7019.2	7621.6	7128.2	6056.7	6443.0	6654.6
65°	6906.7	6813.9	6727.5	6851.8	7697.2	7766.5	8229.3	7379.4	6020.7	6247.6	5899.2
67.5°	7903.4	7811.5	7705.3	7822.3	8799.2	8854.2	8979.3	7520.7	5737.1	5494.9	4563.9
70°	8725.4	8691.2	8818.1	9299.8	10559.4	10561.2	9940.9	7403.7	4960.1	3895.9	2640.8
72.5°	8616.5	8595.8	9264.7	10753.9	12777.9	12730.2	10851.2	6517.7	3341.2	1757.5	989.5
75°	7068.7	7202.9	8239.2	10727.8	13574.8	13568.4	10293.8	4143.5	1382.1	728.4	511.4
77.5°	3790.5	4003.0	5349.0	7920.5	10597.3	10756.6	7237.1	1449.6	593.3	466.4	353.8
80°	1236.2	1421.7	2132.1	4032.7	6886.0	6856.3	3101.7	569.0	406.1	330.4	244.9
82.5°	524.9	546.5	952.6	1904.3	3533.9	3479.0	987.7	326.8	285.4	226.0	151.3
85°	205.3	229.6	420.5	880.6	1530.6	1497.3	356.5	162.1	182.8	147.7	90.0
87.5°	67.5	81.9	150.4	301.6	476.3	459.2	87.3	55.8	79.2	67.5	32.4
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°	2219.4	2219.4	2219.4	2219.4	2219.4	2219.4	2219.4	2219.4	2219.4	2219.4	2219.4
2.5°	2238.3	2252.7	2269.8	2295.0	2316.6	2334.6	2353.5	2365.2	2369.8	2383.3	2382.4
5°	2254.5	2286.0	2328.3	2369.8	2410.3	2434.6	2456.2	2467.0	2476.9	2484.1	2485.9
7.5°	2281.5	2322.0	2388.7	2442.7	2476.9	2496.7	2511.1	2507.5	2511.1	2512.9	2515.6
10°	2304.9	2361.6	2440.9	2492.2	2518.3	2519.2	2515.6	2503.0	2496.7	2497.6	2499.4
12.5°	2332.8	2395.9	2481.4	2524.6	2531.8	2512.0	2496.7	2475.1	2467.0	2463.4	2461.6
15°	2370.7	2442.7	2525.5	2541.7	2523.7	2498.5	2472.4	2437.3	2419.3	2404.9	2409.4
17.5°	2416.6	2495.8	2559.7	2548.0	2509.3	2467.9	2425.6	2372.5	2335.5	2320.2	2321.1
20°	2480.5	2551.6	2585.8	2534.5	2476.0	2413.0	2340.9	2276.1	2241.9	2226.6	2224.8
22.5°	2557.9	2626.4	2611.0	2511.1	2428.3	2327.4	2237.4	2189.7	2172.6	2161.8	2163.6
25°	2650.7	2709.2	2629.1	2476.9	2349.9	2214.0	2144.7	2129.4	2121.3	2113.1	2113.1
27.5°	2771.3	2802.8	2642.6	2426.5	2227.5	2093.3	2068.1	2070.8	2068.1	2054.6	2057.3
30°	2930.7	2924.4	2655.2	2344.5	2087.0	1984.4	1986.2	1997.9	1999.7	1990.7	1995.2
32.5°	3140.5	3076.5	2661.5	2238.3	1952.9	1889.0	1890.8	1903.4	1912.4	1897.1	1904.3
35°	3394.4	3253.9	2651.6	2105.0	1849.3	1798.0	1784.5	1788.1	1790.8	1776.4	1786.3
37.5°	3690.6	3452.9	2607.4	1957.4	1763.8	1708.9	1680.1	1655.8	1641.4	1627.9	1636.9
40°	4015.6	3669.9	2526.4	1813.3	1668.4	1614.3	1571.1	1525.2	1476.6	1458.6	1466.7
42.5°	4355.9	3893.2	2428.3	1675.6	1558.5	1514.4	1468.5	1401.9	1328.9	1292.0	1296.5
45°	4708.9	4121.9	2331.9	1539.6	1446.0	1427.1	1374.0	1293.8	1214.6	1167.8	1164.2
47.5°	5054.6	4337.9	2190.6	1402.8	1340.6	1361.3	1319.9	1246.1	1157.9	1084.0	1075.9
50°	5385.1	4540.5	1959.2	1264.1	1255.1	1341.5	1301.9	1195.7	1094.8	1000.3	992.2
52.5°	5712.8	4704.4	1663.0	1138.1	1209.2	1336.1	1278.5	1161.5	1038.1	939.1	928.3
55°	5991.0	4789.0	1377.6	1030.0	1142.6	1290.2	1250.6	1121.0	958.0	852.6	843.6
57.5°	6149.5	4720.6	1139.9	923.8	1050.7	1214.6	1202.9	1034.5	862.5	781.5	770.7
60°	6081.0	4443.3	945.4	831.0	963.4	1132.7	1120.0	949.0	789.6	713.1	702.3
62.5°	5703.8	3914.8	791.4	750.0	884.2	1048.9	1037.2	883.3	733.8	660.0	648.3
65°	4943.9	3184.6	671.7	682.5	804.0	948.1	965.2	828.3	689.7	617.6	605.9
67.5°	3770.7	2306.7	578.0	624.0	725.7	849.0	898.6	788.7	652.8	584.3	573.5
70°	2149.2	1310.0	498.8	567.2	656.4	757.2	847.2	757.2	613.1	556.4	549.2
72.5°	814.8	601.4	431.3	510.5	589.7	679.8	790.5	707.7	567.2	524.9	517.7
75°	434.9	366.4	362.8	443.9	513.2	604.1	719.4	659.1	533.0	554.6	572.6
77.5°	296.2	259.3	303.4	380.0	429.5	520.4	643.8	585.2	461.9	460.1	424.1
80°	205.3	183.7	246.7	306.1	332.2	437.6	561.8	502.4	376.4	351.1	335.8
82.5°	123.3	119.7	184.6	228.7	235.0	337.6	465.5	421.4	307.9	268.3	270.1
85°	67.5	71.1	117.9	134.2	136.9	235.9	364.6	325.9	236.8	199.0	200.8
87.5°	18.9	24.3	43.2	53.1	65.7	122.4	217.0	193.6	118.8	82.8	82.8
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)