

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: P882789

Luminaire Tested: **NAV-SB2D-827-U-T3**

Issue Date: 10/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P882789  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB2D-827-U-T3  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(2) 80 CRI, 2700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE III OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

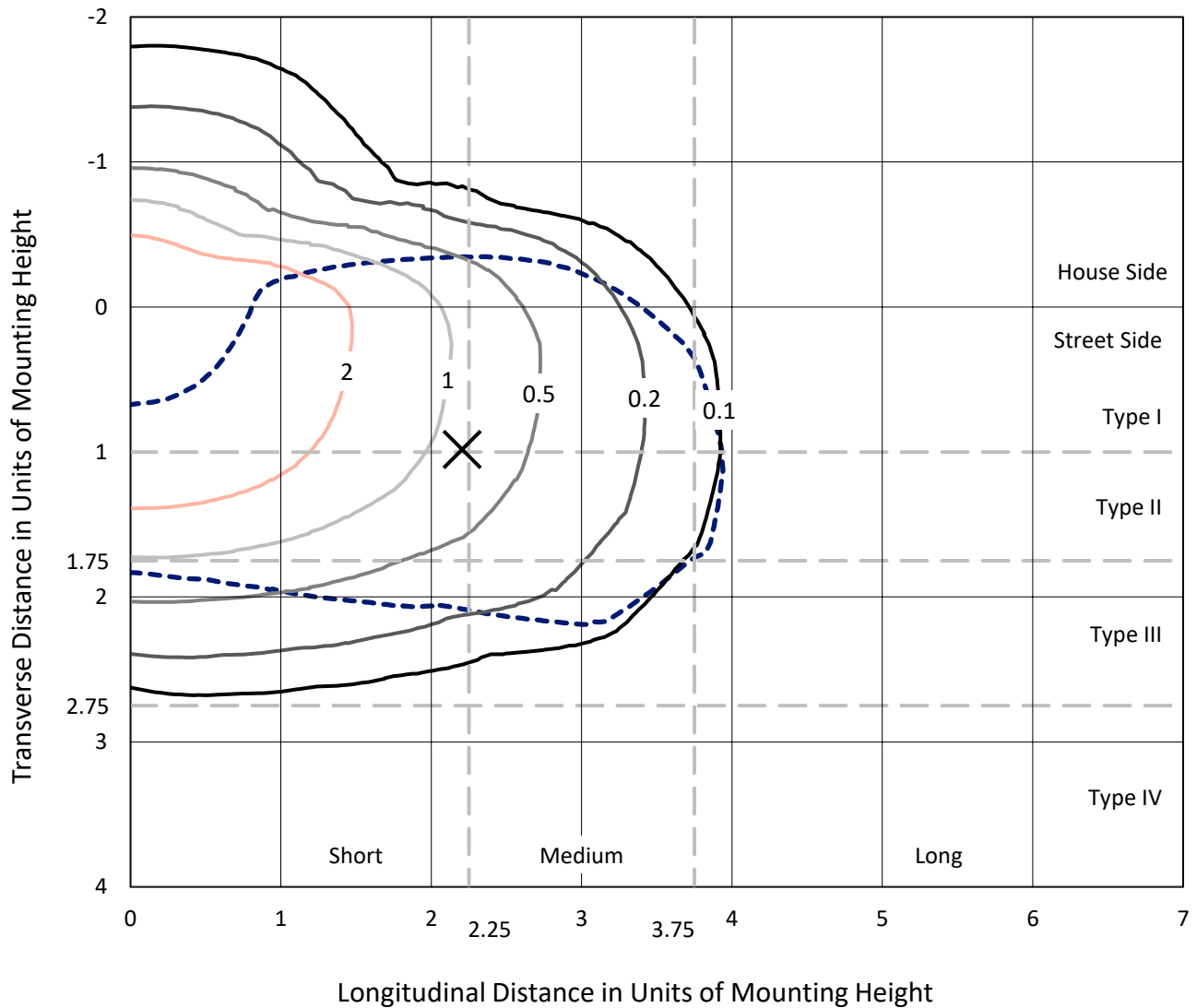
Lumens per Lamp: N/A  
Luminaire Lumens: 16862 lumens  
Efficiency: N/A  
Efficacy: 114.2 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B3 - U0 - G3  
  
Input Watts (W): 147.6  
Input Voltage (V): 120.0  
Input Current (Ain): 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

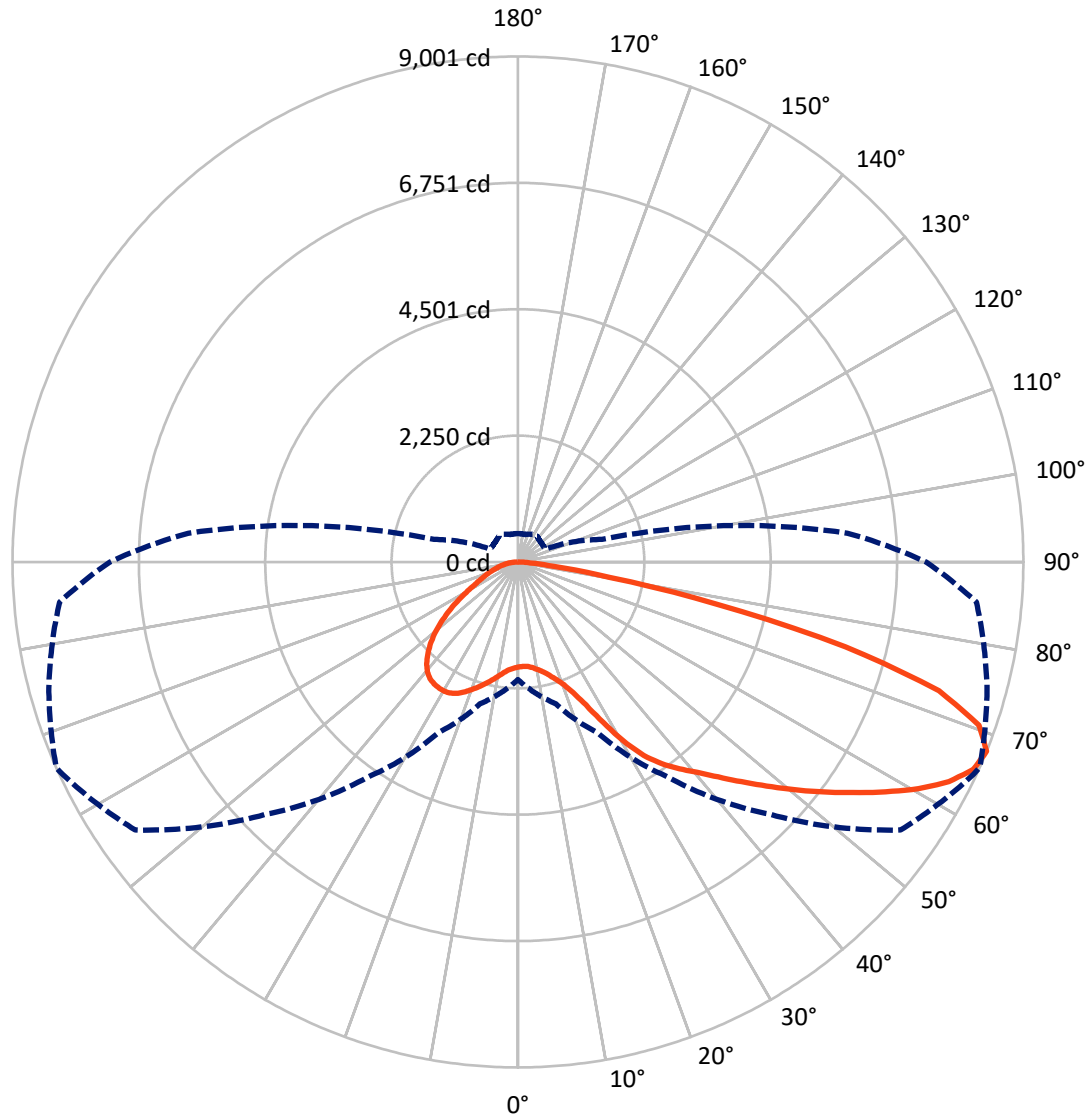
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.2 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral      - - - Horizontal Cone Through 67.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4192.7	0.0	4192.7
	% Fixture	24.9	0.0	24.9
<b>Street Side</b>	Lumens	12669.3	0.0	12669.3
	% Fixture	75.1	0.0	75.1
<b>Total</b>	Lumens	16862.0	0.0	16862.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	185.4	1.1
10°-20°	612.6	3.6
20°-30°	1180.8	7.0
30°-40°	2070.4	12.3
40°-50°	3077.9	18.3
50°-60°	3901.6	23.1
60°-70°	3817.6	22.6
70°-80°	1821.0	10.8
80°-90°	194.6	1.2
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°	16862.0	100.0
0°-180°	16862.0	100.0

**Coefficient of Utilization**



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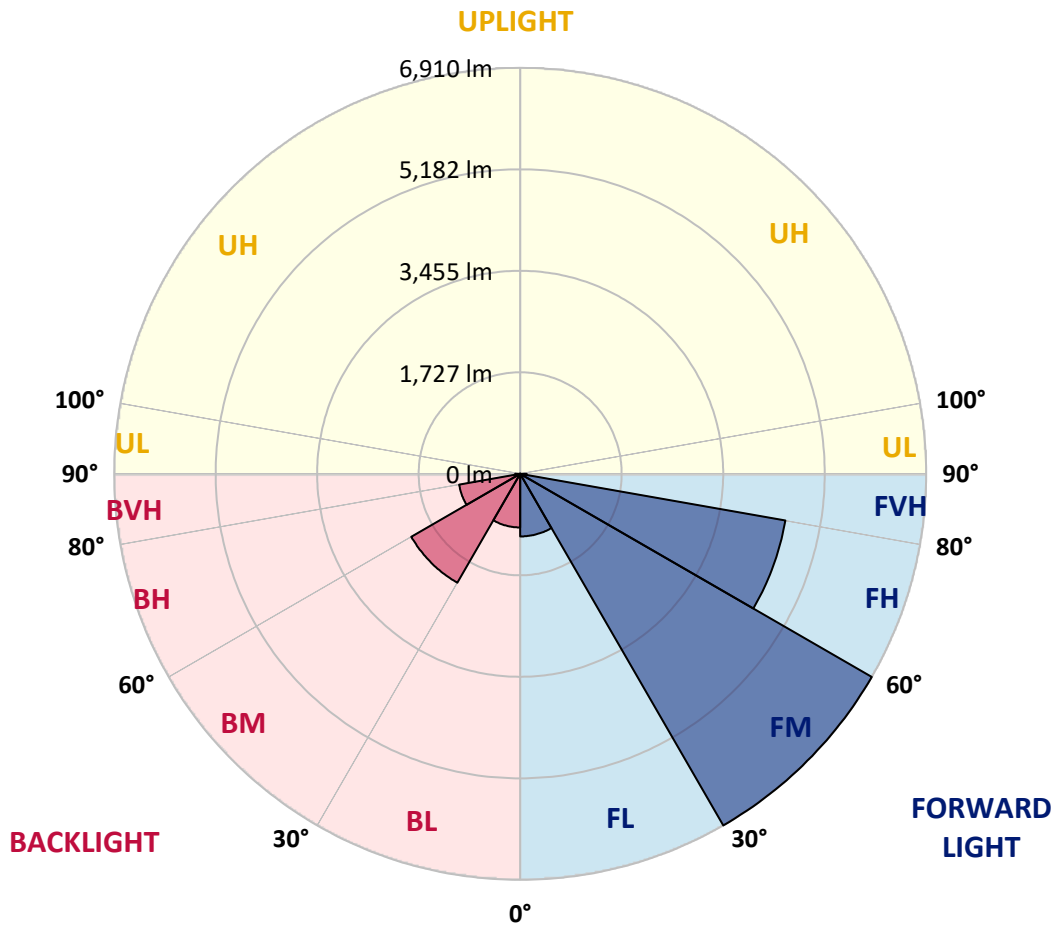
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1065.5	6.3			
FM (30°-60°)	6909.9	41.0			
FH (60°-80°)	4583.5	27.2			G2/5000
FVH (80°-90°)	110.3	0.7			G2/225
BL (0°-30°)	913.3	5.4	B2/1000		
BM (30°-60°)	2140.0	12.7	B2/2500		
BH (60°-80°)	1055.1	6.3	B3/2500		G3/2500
BVH (80°-90°)	84.3	0.5			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G3**

Type III Short



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	1870.2	1870.2	1870.2	1870.2	1870.2	1870.2	1870.2	1870.2	1870.2	1870.2	1870.2
2.5°	1850.7	1861.4	1858.7	1854.3	1853.4	1855.2	1857.8	1860.5	1859.6	1864.0	1871.1
5°	1845.4	1856.0	1855.2	1855.2	1858.7	1865.8	1870.2	1874.6	1870.2	1875.5	1885.3
7.5°	1849.0	1856.9	1860.5	1864.0	1872.9	1886.2	1896.8	1906.5	1901.2	1907.4	1919.8
10°	1894.1	1900.3	1903.9	1903.9	1910.1	1925.1	1935.8	1953.5	1949.1	1958.8	1974.8
12.5°	1976.5	1982.7	1982.7	1979.2	1983.6	1993.4	1996.9	2016.4	2008.4	2024.4	2040.3
15°	2077.5	2089.9	2080.2	2074.0	2075.8	2085.5	2084.6	2099.7	2091.7	2105.0	2119.2
17.5°	2189.2	2205.1	2189.2	2188.3	2184.7	2195.4	2196.2	2209.5	2195.4	2205.1	2214.8
20°	2321.2	2343.3	2330.0	2334.5	2326.5	2330.9	2335.3	2354.8	2332.7	2339.8	2337.1
22.5°	2507.2	2533.8	2519.6	2536.4	2531.1	2527.6	2526.7	2561.3	2526.7	2529.4	2503.7
25°	2778.3	2810.2	2785.4	2808.4	2808.4	2819.9	2833.2	2877.5	2819.9	2803.1	2736.7
27.5°	3178.8	3210.6	3161.9	3176.1	3171.7	3200.0	3185.8	3295.7	3233.7	3206.2	3072.4
30°	3660.7	3717.4	3625.3	3621.7	3617.3	3662.5	3682.9	3755.5	3692.6	3665.1	3503.9
32.5°	4181.6	4241.0	4131.1	4099.2	4082.4	4109.9	4093.0	4151.5	4108.1	4065.6	3866.2
35°	4732.7	4791.2	4686.6	4624.6	4557.3	4499.7	4439.4	4454.5	4413.8	4349.1	4142.7
37.5°	5253.6	5360.8	5250.1	5183.6	5059.6	4947.1	4778.8	4708.8	4670.7	4611.3	4403.1
40°	5784.3	5845.4	5761.3	5704.6	5569.9	5393.6	5124.3	4976.3	4924.9	4867.4	4691.1
42.5°	6175.0	6233.5	6188.3	6149.3	6043.9	5839.2	5491.1	5305.9	5231.5	5166.8	5017.1
45°	6485.1	6528.5	6500.1	6514.3	6469.1	6270.7	5871.1	5659.4	5582.3	5503.5	5385.6
47.5°	6610.0	6656.1	6701.2	6785.4	6862.5	6716.3	6279.5	6042.1	5960.6	5880.0	5763.9
50°	6595.8	6642.8	6773.9	6952.9	7192.1	7143.3	6710.1	6449.6	6374.3	6282.2	6175.0
52.5°	6482.4	6535.6	6703.9	7001.6	7382.5	7463.2	7148.6	6870.5	6799.6	6689.7	6582.5
55°	6184.7	6216.6	6469.1	6890.8	7427.7	7686.4	7578.3	7318.7	7247.9	7094.6	6977.7
57.5°	5632.8	5678.9	6046.5	6592.3	7314.3	7837.9	7955.7	7790.1	7721.9	7501.3	7379.0
60°	4912.5	4986.1	5406.9	6090.8	7025.5	7837.0	8298.6	8253.4	8196.7	7901.7	7774.1
62.5°	4097.5	4182.5	4587.4	5382.1	6520.5	7614.7	8513.0	8641.5	8612.2	8271.1	8108.1
65°	3146.9	3205.3	3608.4	4465.1	5734.7	7137.1	8537.8	8906.4	8911.7	8552.0	8282.6
67.5°	2095.2	2263.6	2613.5	3350.6	4682.2	6356.6	8319.9	8949.8	9001.1	8648.5	8194.9
70°	1022.4	1243.9	1586.7	2177.6	3350.6	5159.7	7750.2	8593.6	8707.9	8366.8	7672.2
72.5°	424.4	496.1	683.1	1074.6	1923.4	3481.7	6605.6	7627.9	7839.7	7413.5	6450.5
75°	286.2	310.1	390.7	551.1	876.2	1717.0	4763.7	5687.7	6028.8	5599.1	4576.8
77.5°	220.6	235.7	284.4	385.4	520.9	649.4	2549.7	3427.7	3604.0	3336.4	2381.4
80°	173.6	185.2	212.6	280.8	369.4	347.3	869.1	1553.1	1654.9	1388.3	765.5
82.5°	150.6	155.0	152.4	190.5	245.4	202.9	285.3	573.2	632.6	458.9	249.8
85°	109.0	121.4	126.7	117.8	130.2	102.8	116.9	202.9	223.3	199.3	140.9
87.5°	44.3	65.6	80.6	76.2	47.8	29.2	36.3	59.4	68.2	74.4	46.1
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°	1870.2	1870.2	1870.2	1870.2	1870.2	1870.2	1870.2	1870.2	1870.2	1870.2	1870.2
2.5°	1872.0	1878.2	1882.6	1887.9	1891.5	1896.8	1907.4	1913.6	1914.5	1918.9	1918.1
5°	1888.8	1897.7	1907.4	1921.6	1937.6	1950.8	1971.2	1985.4	1990.7	1995.1	1994.3
7.5°	1925.1	1937.6	1955.3	1980.1	2003.1	2020.8	2045.6	2062.5	2079.3	2085.5	2086.4
10°	1979.2	1996.9	2022.6	2056.3	2081.1	2104.1	2129.8	2144.0	2160.8	2167.9	2171.4
12.5°	2046.5	2065.1	2098.8	2145.7	2168.8	2184.7	2193.6	2190.0	2193.6	2199.8	2201.6
15°	2123.6	2144.0	2182.1	2232.6	2248.5	2234.3	2214.8	2197.1	2194.5	2196.2	2202.4
17.5°	2214.8	2229.9	2274.2	2316.7	2305.2	2246.7	2204.2	2175.9	2161.7	2157.3	2163.5
20°	2342.4	2342.4	2378.7	2405.3	2328.2	2229.0	2162.6	2116.5	2087.3	2074.9	2072.2
22.5°	2497.5	2483.3	2506.3	2487.7	2323.8	2179.4	2087.3	2007.5	1963.2	1945.5	1942.9
25°	2694.1	2677.3	2671.1	2555.9	2291.9	2100.6	1950.8	1854.3	1815.3	1805.5	1807.3
27.5°	2990.9	2948.4	2867.8	2593.1	2233.5	1976.5	1791.4	1701.9	1679.7	1680.6	1683.3
30°	3386.1	3301.0	3103.4	2599.3	2137.8	1801.1	1628.4	1564.6	1553.9	1558.4	1573.4
32.5°	3752.0	3671.3	3344.4	2571.0	1990.7	1629.2	1482.2	1439.7	1423.7	1429.0	1436.1
35°	4039.0	4016.9	3567.7	2531.1	1810.0	1468.0	1351.1	1314.7	1283.7	1276.6	1282.0
37.5°	4310.1	4301.2	3735.1	2475.3	1631.0	1353.7	1245.6	1197.8	1152.6	1127.8	1128.7
40°	4607.8	4598.9	3845.0	2389.4	1472.4	1254.5	1150.8	1087.9	1032.1	986.9	991.4
42.5°	4942.7	4890.4	3897.2	2266.2	1337.8	1170.3	1073.8	988.7	915.2	873.5	876.2
45°	5308.6	5190.7	3896.4	2109.4	1224.4	1093.2	991.4	870.9	802.7	763.7	761.9
47.5°	5696.6	5477.8	3848.5	1935.8	1114.5	1008.2	863.8	771.7	726.5	702.6	697.2
50°	6097.0	5746.2	3767.0	1736.4	1002.0	911.6	784.1	721.2	686.6	664.5	656.5
52.5°	6473.6	5989.8	3668.7	1510.5	887.7	817.7	748.6	699.9	663.6	638.8	628.1
55°	6823.5	6199.8	3529.6	1279.3	794.7	754.8	731.8	691.0	649.4	620.2	608.6
57.5°	7134.5	6336.2	3289.5	1062.2	728.2	711.4	714.1	676.0	628.1	603.3	587.4
60°	7393.2	6436.4	2934.2	861.1	674.2	668.9	686.6	647.6	591.8	563.5	551.1
62.5°	7548.2	6434.6	2498.3	705.2	628.1	629.9	650.3	612.2	555.5	528.9	520.9
65°	7534.9	6276.9	2019.9	603.3	583.8	585.6	612.2	573.2	525.4	509.4	508.5
67.5°	7268.2	5892.4	1549.5	536.9	535.1	543.1	574.1	546.6	506.8	505.0	507.6
70°	6546.2	5094.2	1116.3	483.7	484.6	496.1	536.9	529.8	497.0	500.6	499.7
72.5°	5249.2	3884.0	749.5	427.9	428.8	447.4	501.4	516.5	487.3	534.2	541.3
75°	3495.9	2422.2	482.0	368.6	369.4	393.4	470.4	490.8	460.7	532.4	536.9
77.5°	1679.7	1088.8	349.1	310.1	310.1	332.2	406.6	439.4	392.5	413.7	379.2
80°	580.3	409.3	274.6	249.8	244.5	259.6	342.9	381.0	338.4	311.9	292.4
82.5°	228.6	212.6	220.6	194.0	176.3	186.0	266.7	314.5	248.9	225.0	224.1
85°	131.1	138.2	155.9	128.5	101.9	114.3	195.8	225.9	187.8	165.7	169.2
87.5°	35.4	48.7	71.8	66.4	46.1	48.7	93.0	124.9	108.1	83.3	85.9
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)