

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: P963019

Luminaire Tested: **NAV-SB2D-740-U-T2R**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P963019
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-3)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB2D-740-U-T2R
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 70 CRI, 4000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II
ROADWAY OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 22477.2 lumens
Efficiency: N/A
Efficacy: 152.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B3 - U0 - G3

Input Watts (W): 147.6
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: 24 FT

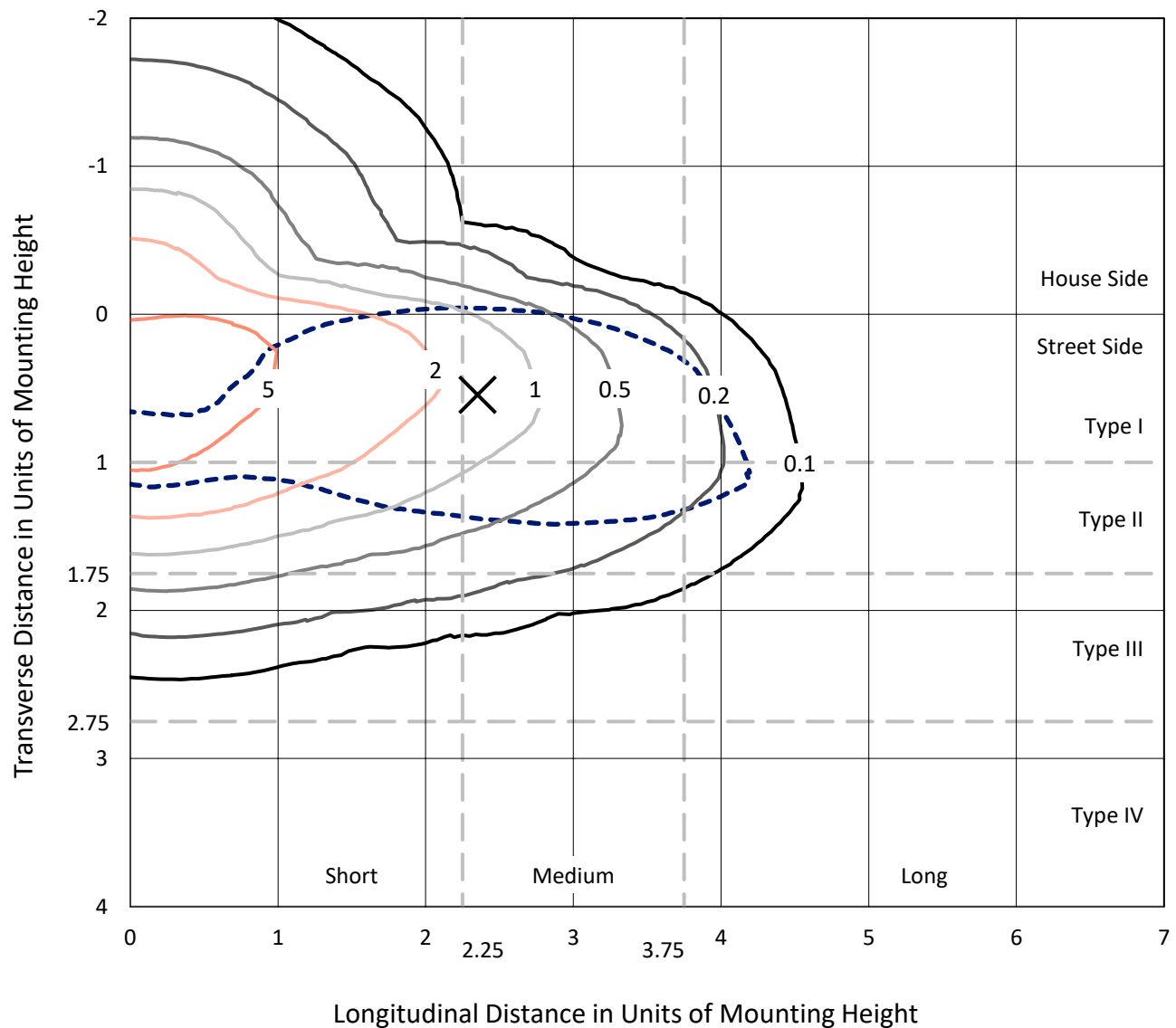


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Iso-Footcandle Lines of Horizontal Illumination

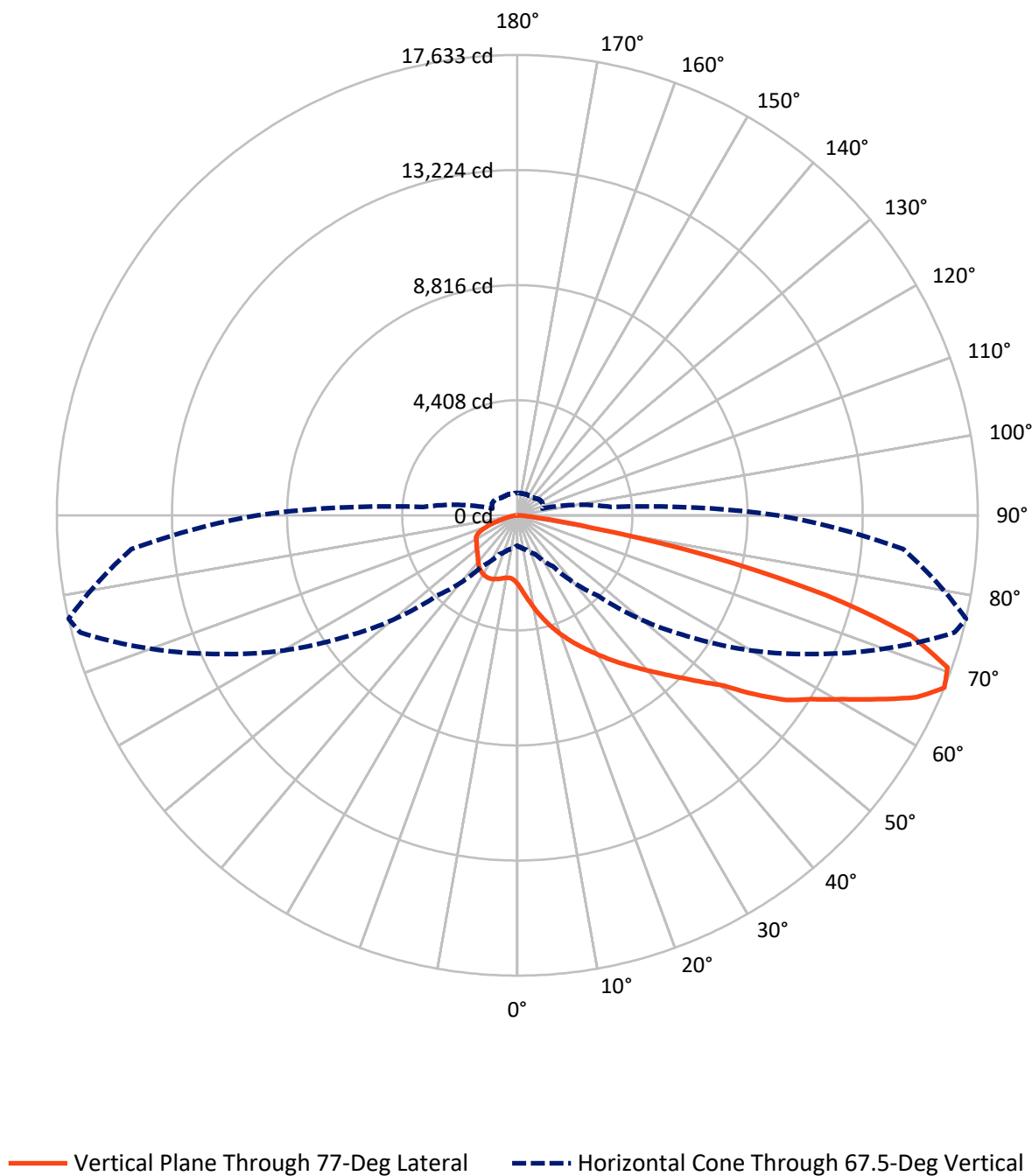
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.2 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4251.8	0.0	4251.8
	% Fixture	18.9	0.0	18.9
Street Side	Lumens	18225.4	0.0	18225.4
	% Fixture	81.1	0.0	81.1
Total	Lumens	22477.2	0.0	22477.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	282.7	1.3
10°-20°	1015.6	4.5
20°-30°	1917.5	8.5
30°-40°	3089.0	13.7
40°-50°	4225.2	18.8
50°-60°	4766.1	21.2
60°-70°	4448.5	19.8
70°-80°	2438.5	10.8
80°-90°	294.1	1.3
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°	22477.2	100.0
0°-180°	22477.2	100.0

Coefficient of Utilization



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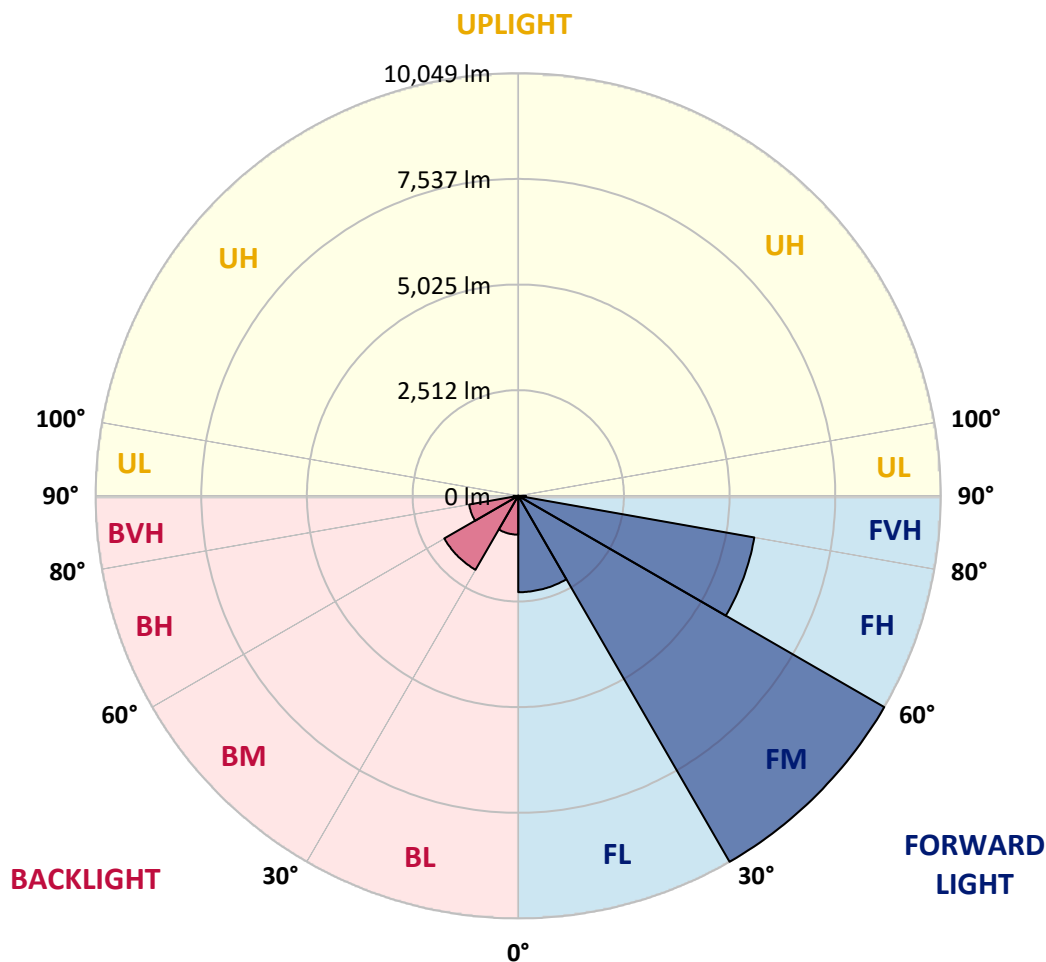
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2291.3	10.2			
FM	(30°-60°)	10049.3	44.7			
FH	(60°-80°)	5700.9	25.4			G3/7500
FVH	(80°-90°)	183.9	0.8			G2/225
BL	(0°-30°)	924.4	4.1	B2/1000		
BM	(30°-60°)	2031.0	9.0	B2/2500		
BH	(60°-80°)	1186.2	5.3	B3/2500		G3/2500
BVH	(80°-90°)	110.2	0.5			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 II Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77°	85°
0°	2637.3	2637.3	2637.3	2637.3	2637.3	2637.3	2637.3	2637.3	2637.3	2637.3	2637.3
2.5°	3302.1	3325.3	3296.3	3296.3	3198.8	3147.8	3050.3	2976.1	2842.6	2819.5	2731.2
5°	3903.1	3932.1	3891.5	3874.1	3759.3	3653.7	3490.0	3328.8	3091.0	3066.6	2858.9
7.5°	4368.3	4405.6	4369.6	4351.0	4248.9	4130.5	3939.1	3714.0	3378.7	3331.1	3030.6
10°	4747.8	4753.6	4742.0	4748.9	4668.9	4571.4	4375.3	4113.1	3694.3	3629.3	3238.3
12.5°	4962.4	4989.1	5012.4	5054.1	5040.1	4979.9	4803.5	4490.2	4028.5	3944.9	3464.5
15°	5063.4	5109.8	5162.0	5258.4	5336.0	5351.1	5216.5	4895.2	4368.3	4267.5	3693.1
17.5°	5099.4	5143.4	5225.9	5365.1	5532.1	5644.7	5584.3	5288.5	4704.9	4588.8	3933.3
20°	5281.5	5294.2	5344.1	5476.5	5657.5	5844.2	5889.4	5666.7	5037.9	4906.8	4181.6
22.5°	5671.3	5645.8	5659.7	5720.1	5850.1	6031.0	6134.3	6000.9	5380.1	5229.3	4432.2
25°	6315.3	6241.0	6166.8	6097.2	6163.3	6265.4	6382.6	6335.0	5738.7	5547.2	4685.2
27.5°	7128.7	7038.2	6874.6	6646.0	6565.9	6601.9	6654.1	6644.9	6070.5	5876.7	4946.2
30°	7929.2	7823.6	7628.8	7298.1	7086.8	6991.7	6952.3	6925.6	6431.4	6224.8	5209.6
32.5°	8568.6	8484.9	8293.6	7923.5	7617.1	7454.7	7323.6	7228.4	6808.5	6601.9	5488.1
35°	9127.8	9050.0	8830.8	8427.0	8094.0	7921.1	7749.4	7546.4	7200.6	6991.7	5787.4
37.5°	9638.3	9560.6	9260.1	8840.0	8504.7	8385.2	8232.1	7887.5	7593.9	7396.7	6104.2
40°	9960.8	9943.4	9662.7	9187.0	8838.9	8779.7	8728.7	8283.1	8030.2	7846.9	6452.2
42.5°	10043.3	10081.5	9858.8	9467.7	9135.9	9088.4	9207.9	8730.9	8519.8	8344.6	6846.7
45°	9844.8	9955.0	9808.8	9543.2	9347.1	9321.6	9632.5	9220.6	9061.6	8901.5	7322.4
47.5°	9342.5	9529.2	9468.9	9431.7	9404.0	9514.2	10006.2	9740.4	9675.4	9536.2	7865.4
50°	8328.3	8682.3	8787.8	9022.2	9291.4	9663.8	10346.0	10307.8	10392.5	10252.0	8526.8
52.5°	6575.2	7062.6	7675.1	8262.2	8945.6	9613.9	10719.7	11122.3	11479.6	11403.0	9578.0
55°	5427.7	5647.0	6118.0	7194.8	8275.0	9404.0	10887.9	11780.1	12558.7	12490.2	10375.0
57.5°	4545.9	4742.0	5032.0	5931.3	7260.9	8927.0	10992.3	12181.6	13297.7	13290.8	11161.7
60°	3600.3	3808.0	4105.0	4742.0	6076.3	8103.2	10969.1	12638.8	14241.0	14299.1	12121.2
62.5°	2532.9	2761.5	3091.0	3685.0	4866.2	7035.8	10495.7	12969.4	15351.4	15509.3	13275.7
65°	1665.0	1815.8	2064.1	2577.0	3625.8	5663.2	9591.8	13012.4	16539.5	16806.4	14359.4
67.5°	1167.3	1225.3	1371.4	1649.9	2390.1	4342.8	8152.0	12567.9	17332.0	17632.5	14829.3
70°	910.8	939.8	1014.0	1125.4	1501.4	2920.4	6246.9	11412.3	17162.6	17475.8	14338.5
72.5°	786.7	814.5	842.3	856.3	1007.1	1803.1	4231.5	9542.0	15567.3	15779.6	12467.0
75°	713.6	720.5	743.7	739.1	768.1	1169.5	2442.4	6952.3	12282.6	12209.5	9203.2
77.5°	599.8	609.2	647.4	641.6	682.2	799.4	1268.1	4486.7	7962.9	7466.3	5122.5
80°	508.2	512.8	554.6	547.7	592.9	578.9	647.4	2286.9	3377.5	2861.2	1477.0
82.5°	176.4	218.1	423.5	436.2	452.5	350.4	373.6	932.9	1031.5	790.2	309.8
85°	85.9	91.6	215.8	306.3	305.1	176.4	182.1	333.0	324.8	255.2	103.2
87.5°	13.9	17.4	25.5	119.5	95.1	46.4	62.6	65.0	67.3	58.0	23.2
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°	2637.3	2637.3	2637.3	2637.3	2637.3	2637.3	2637.3	2637.3	2637.3	2637.3	2637.3
2.5°	2666.3	2608.3	2486.4	2373.9	2285.8	2201.0	2153.4	2112.8	2089.7	2085.0	2085.0
5°	2738.2	2618.7	2397.1	2210.3	2088.4	1997.9	1950.4	1920.2	1905.2	1895.8	1894.7
7.5°	2841.5	2666.3	2350.7	2138.4	2010.7	1945.8	1921.4	1916.7	1915.6	1916.7	1920.2
10°	2984.2	2744.0	2346.0	2120.9	2014.2	1978.2	1977.1	1978.2	1982.9	1984.1	1985.2
12.5°	3138.5	2824.1	2364.6	2136.0	2058.3	2038.6	2035.1	2033.9	2037.4	2039.7	2040.9
15°	3306.8	2929.7	2395.9	2168.5	2107.0	2086.2	2082.7	2075.7	2074.6	2073.4	2072.2
17.5°	3479.7	3034.1	2430.8	2203.3	2138.4	2109.3	2096.6	2080.3	2067.6	2064.1	2067.6
20°	3654.8	3137.3	2455.1	2220.8	2140.7	2100.1	2074.6	2046.7	2024.7	2011.9	2016.6
22.5°	3841.6	3245.3	2470.2	2216.2	2119.8	2064.1	2017.7	1985.2	1951.6	1929.6	1930.7
25°	4023.7	3339.2	2469.0	2191.8	2079.2	2008.4	1949.2	1907.4	1861.1	1837.8	1837.8
27.5°	4199.0	3423.9	2440.0	2148.8	2021.2	1942.3	1871.5	1821.6	1776.3	1754.3	1753.2
30°	4380.0	3494.7	2394.8	2086.2	1952.7	1865.7	1788.0	1745.1	1704.5	1683.6	1682.3
32.5°	4559.8	3559.7	2331.0	2008.4	1873.8	1790.3	1713.7	1674.2	1649.9	1649.9	1651.1
35°	4750.2	3604.9	2246.3	1917.9	1790.3	1710.2	1649.9	1626.7	1624.3	1610.5	1607.0
37.5°	4950.9	3633.9	2143.0	1825.1	1708.0	1632.5	1614.0	1586.1	1562.9	1532.7	1528.1
40°	5162.0	3662.9	2018.8	1728.8	1620.9	1579.1	1571.0	1533.9	1467.7	1393.5	1383.0
42.5°	5418.5	3682.7	1890.1	1632.5	1529.2	1515.3	1526.9	1463.1	1357.5	1301.9	1303.0
45°	5715.5	3715.1	1771.7	1537.4	1435.2	1435.2	1484.0	1400.5	1313.4	1278.6	1284.4
47.5°	6100.7	3790.6	1661.5	1432.9	1348.2	1371.4	1388.9	1325.0	1276.3	1233.4	1232.2
50°	6657.6	3971.6	1547.7	1327.4	1282.1	1328.5	1304.1	1267.0	1210.1	1175.4	1171.9
52.5°	7349.1	4078.4	1446.9	1232.2	1225.3	1271.6	1236.9	1202.0	1159.1	1112.7	1103.4
55°	7820.1	4098.1	1362.1	1162.6	1186.9	1182.3	1169.5	1138.3	1115.0	1053.5	1054.7
57.5°	8346.9	4137.5	1292.5	1120.8	1162.6	1111.5	1106.9	1080.2	1050.0	1008.3	994.4
60°	8976.9	4199.0	1232.2	1104.5	1141.7	1065.1	1041.9	1031.5	1001.3	980.4	986.3
62.5°	9663.8	4254.7	1170.8	1106.9	1117.4	1019.9	985.0	981.5	963.0	956.0	956.0
65°	10132.5	4102.7	1094.1	1104.5	1079.0	973.4	929.4	928.2	913.2	910.8	909.7
67.5°	9968.9	3621.2	990.9	1072.0	1039.6	927.0	878.3	873.7	853.9	855.2	855.2
70°	9149.9	2934.3	848.2	992.0	990.9	885.3	824.9	809.9	783.2	787.8	792.4
72.5°	7613.6	2174.3	656.7	858.6	913.2	847.0	763.4	739.1	705.4	710.1	708.9
75°	5498.5	1478.2	478.1	653.2	794.8	801.8	703.2	661.3	620.7	627.7	630.1
77.5°	2813.6	837.7	351.6	450.2	624.2	728.7	648.6	592.9	583.6	648.6	639.3
80°	917.8	420.0	243.6	315.6	409.6	596.3	568.6	504.7	502.4	517.5	444.3
82.5°	273.8	177.5	156.6	207.7	226.2	457.2	490.8	381.7	328.3	345.7	357.3
85°	94.0	85.9	89.4	103.2	107.9	268.0	343.5	253.0	239.0	263.4	259.9
87.5°	22.0	30.1	25.5	23.2	23.2	65.0	133.5	105.6	146.2	97.5	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

(END OF REPORT)