

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: P884116

Luminaire Tested: **NAV-SB4D-740-U-T2-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884116
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-4)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4D-740-U-T2-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 4000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II
OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 32467 lumens
Efficiency: N/A
Efficacy: 110.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B3 - U0 - G4

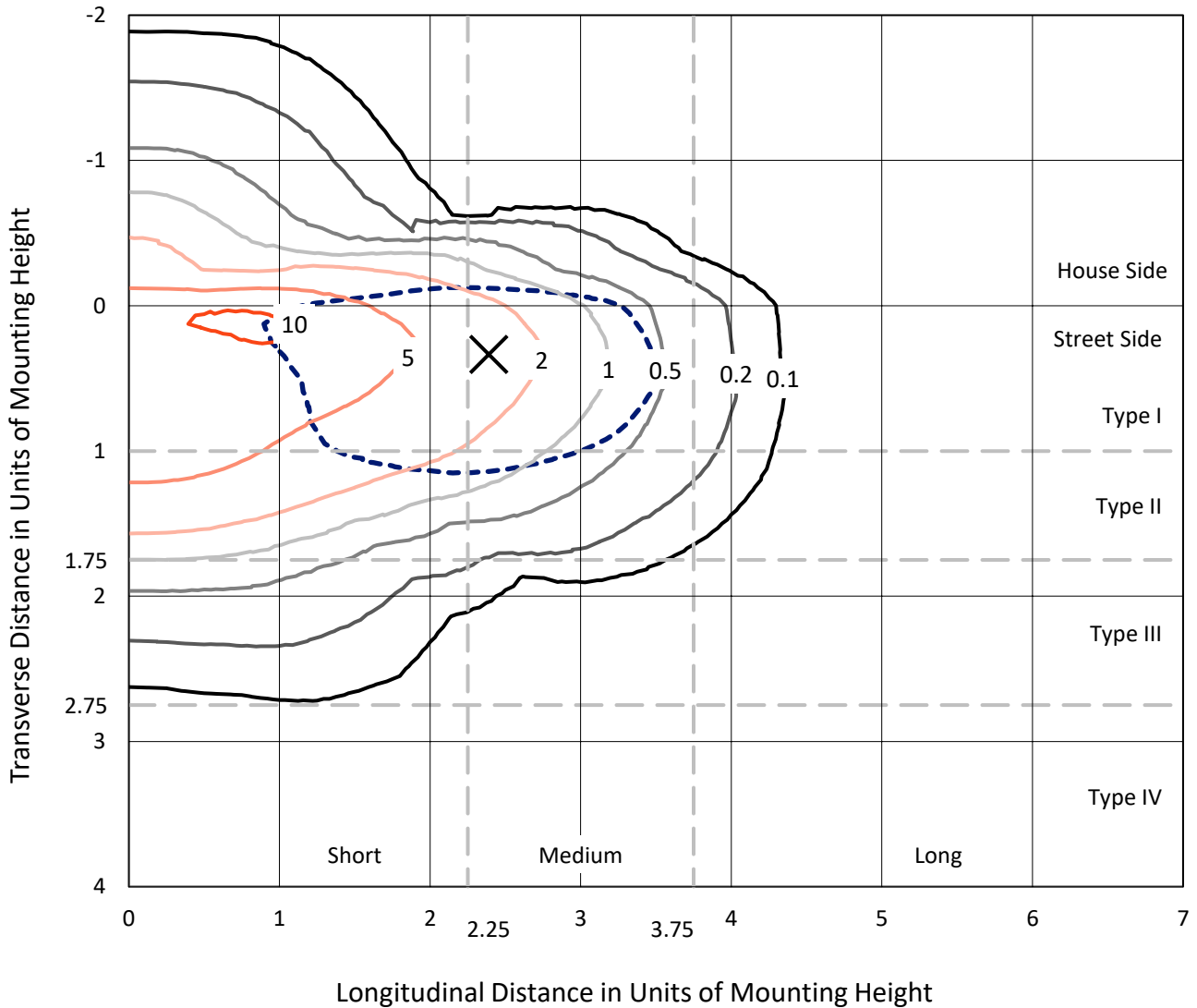
Input Watts (W): 293.6
Input Voltage (V): 120.0
Input Current (Ain): 2.469
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 3.108
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

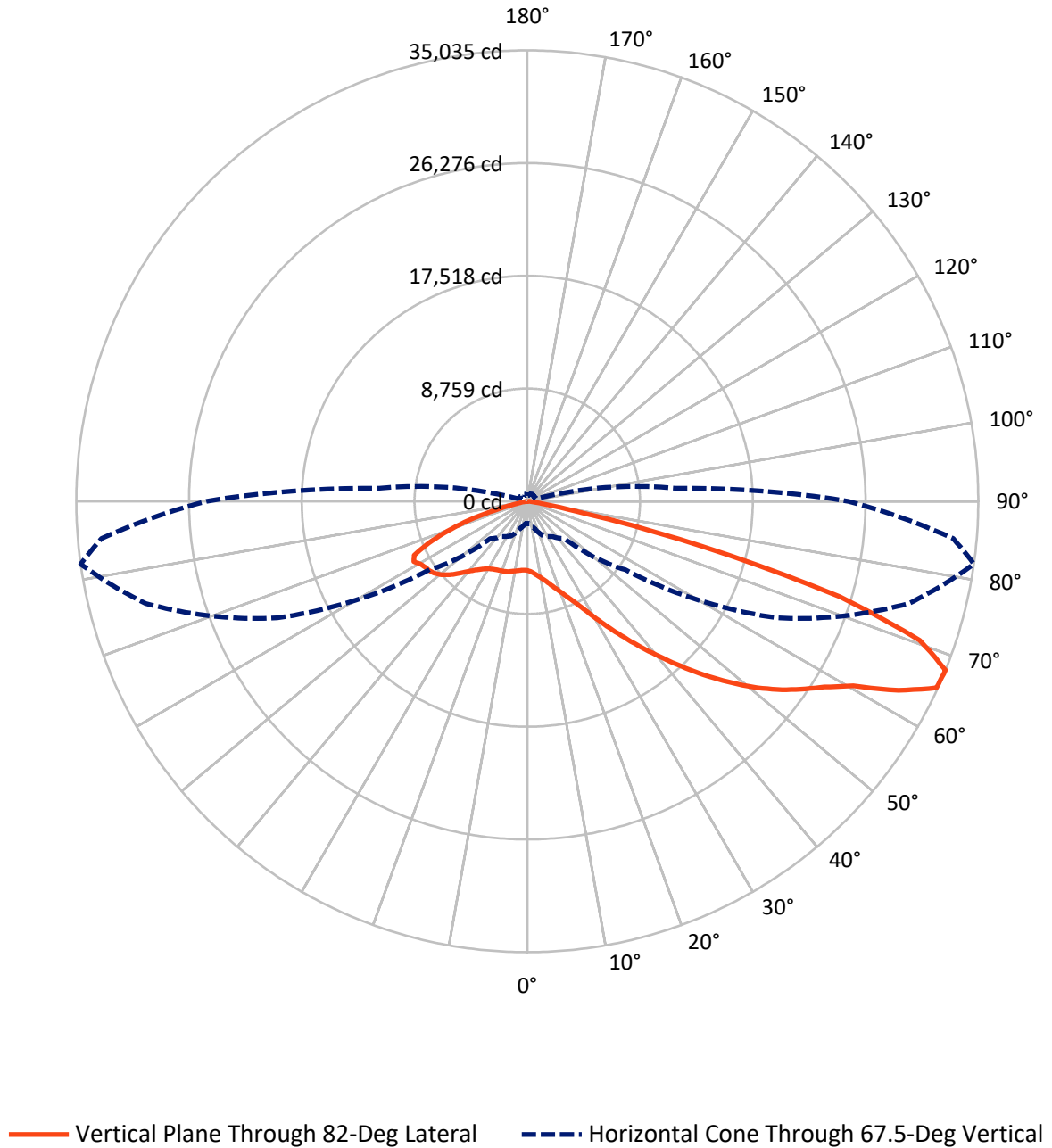
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 11.4 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



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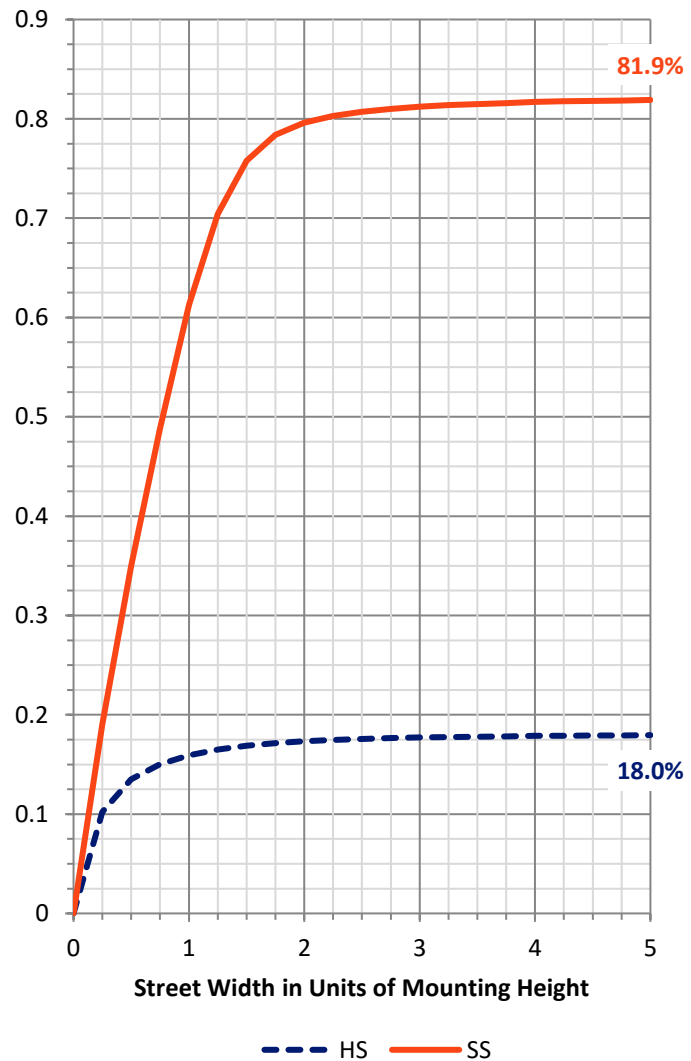
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5881.1	0.0	5881.1
	% Fixture	18.1	0.0	18.1
Street Side	Lumens	26585.9	0.0	26585.9
	% Fixture	81.9	0.0	81.9
Total	Lumens	32467.0	0.0	32467.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	479.2	1.5
10°-20°	1245.3	3.8
20°-30°	1994.5	6.1
30°-40°	3526.9	10.9
40°-50°	6179.4	19.0
50°-60°	8241.6	25.4
60°-70°	7672.5	23.6
70°-80°	2944.7	9.1
80°-90°	182.9	0.6
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°	32467.0	100.0
0°-180°	32467.0	100.0

Coefficient of Utilization



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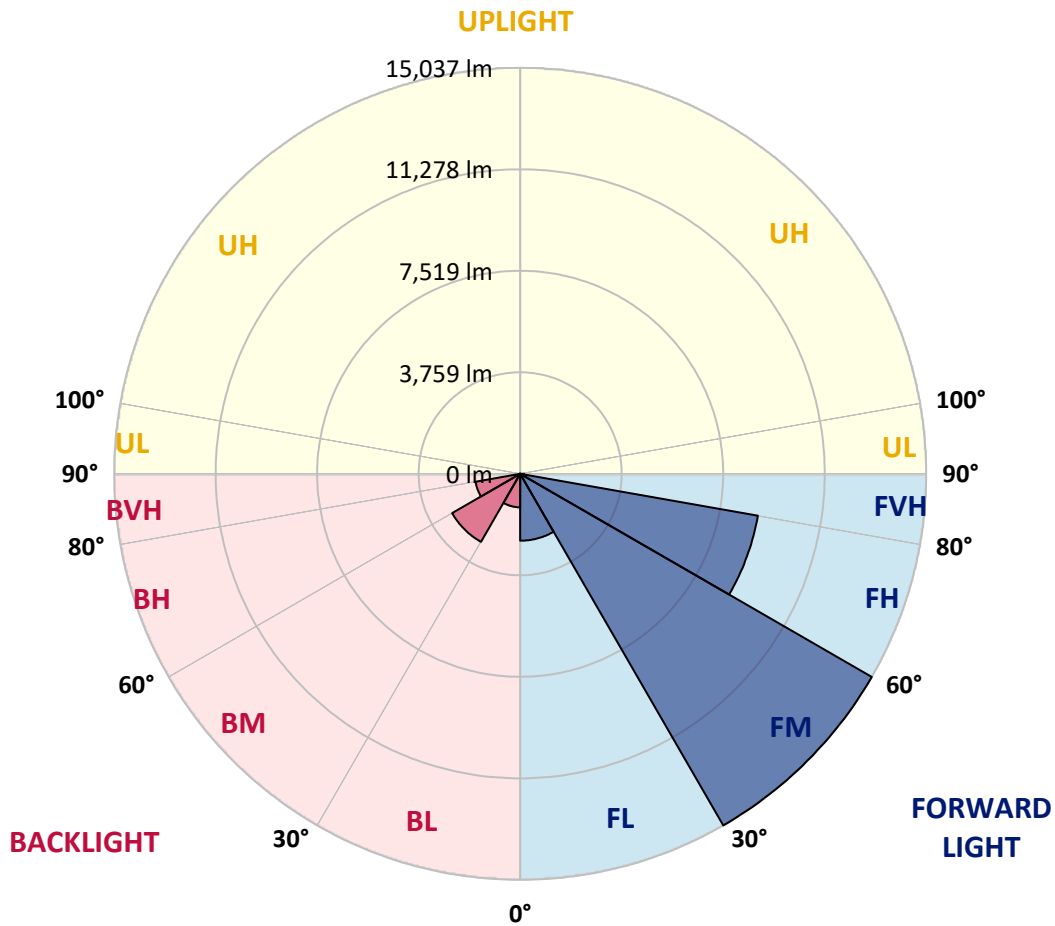
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2476.9	7.6			
FM (30°-60°)	15037.4	46.3			
FH (60°-80°)	8938.7	27.5			G4/12000
FVH (80°-90°)	133.0	0.4			G2/225
BL (0°-30°)	1242.1	3.8	B3/2500		
BM (30°-60°)	2910.5	9.0	B3/5000		
BH (60°-80°)	1678.6	5.2	B3/2500		G3/2500
BVH (80°-90°)	49.9	0.2			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type II Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	82°	85°
0°	5378.7	5378.7	5378.7	5378.7	5378.7	5378.7	5378.7	5378.7	5378.7	5378.7	5378.7
2.5°	5684.9	5717.6	5698.9	5689.6	5673.2	5649.8	5631.1	5572.7	5511.9	5472.2	5458.2
5°	5799.4	5832.2	5829.8	5839.2	5850.9	5857.9	5853.2	5787.8	5701.3	5633.5	5593.7
7.5°	5701.3	5738.7	5769.1	5815.8	5897.6	5984.1	6026.2	6012.2	5923.3	5829.8	5780.7
10°	5423.1	5462.8	5535.3	5645.2	5818.1	6005.1	6161.8	6234.2	6178.1	6075.3	6007.5
12.5°	4913.5	4953.3	5095.8	5334.3	5624.1	5949.0	6248.2	6442.3	6456.3	6353.4	6274.0
15°	4340.8	4380.6	4532.5	4831.7	5273.5	5794.8	6295.0	6662.0	6785.9	6697.1	6601.2
17.5°	3985.5	4020.6	4135.1	4375.9	4836.4	5486.2	6278.6	6895.7	7178.6	7108.5	6993.9
20°	3878.0	3908.4	3962.1	4130.4	4513.8	5166.0	6171.1	7115.5	7601.7	7561.9	7433.4
22.5°	3992.5	4020.6	4036.9	4111.7	4352.5	4955.6	6035.5	7339.9	8092.6	8097.2	7940.6
25°	4256.7	4284.7	4266.0	4312.8	4418.0	4890.1	5984.1	7604.0	8709.7	8761.1	8583.5
27.5°	4691.4	4693.8	4649.4	4647.0	4663.4	4988.3	6037.9	7886.9	9488.1	9583.9	9364.2
30°	5563.3	5528.3	5357.6	5173.0	5088.8	5282.8	6187.5	8221.1	10406.7	10577.4	10301.5
32.5°	6907.4	6856.0	6542.8	6101.0	5656.9	5757.4	6456.3	8602.2	11407.2	11715.8	11379.2
35°	8366.1	8352.0	8024.8	7367.9	6591.9	6432.9	6893.4	9102.4	12498.8	12989.7	12590.0
37.5°	9721.8	9714.8	9527.8	8754.1	7809.7	7374.9	7594.7	9756.9	13667.6	14378.2	13906.0
40°	10960.7	10981.8	10794.8	10102.9	9151.5	8583.5	8548.4	10565.7	14967.3	15890.6	15329.6
42.5°	12031.3	12054.7	11865.4	11353.4	10476.9	9920.5	9719.5	11556.8	16236.6	17515.2	16851.3
45°	12758.3	12903.2	12875.2	12466.1	11837.3	11259.9	11126.7	12800.4	17683.5	19238.0	18459.6
47.5°	12964.0	13097.2	13307.6	13363.7	12980.4	12412.3	12571.3	14298.7	19146.8	20963.1	20077.1
50°	12456.8	12580.6	13017.8	13599.8	13866.3	13691.0	13976.2	15904.6	20645.2	22683.5	21664.3
52.5°	11456.3	11582.5	12134.2	13055.2	14142.1	14693.8	15385.7	17487.1	22096.8	24312.8	23167.4
55°	10009.4	10142.6	10850.9	11893.4	13616.2	15107.5	16561.5	19067.3	23426.8	25778.4	24523.1
57.5°	8041.1	8139.3	8875.6	10334.3	12293.1	14696.1	17428.7	20792.4	24679.8	27218.3	25867.2
60°	5240.8	5327.3	6182.8	7809.7	10100.5	13321.6	17601.7	22716.2	26344.1	29090.7	27678.8
62.5°	3485.3	3543.7	4051.0	5245.4	7113.1	10682.6	16589.5	24252.0	28784.5	32349.2	30785.4
65°	2391.3	2449.7	2957.0	3789.2	4595.6	7066.4	13679.3	24048.6	30995.8	34936.9	33087.9
67.5°	1706.4	1755.5	2185.6	2971.0	3326.3	4104.7	9273.0	21449.3	30677.9	35035.1	33211.8
70°	1222.5	1250.6	1605.9	2314.2	2643.8	2466.1	5156.6	16404.9	26860.7	32351.6	30682.6
72.5°	855.5	864.9	1115.0	1762.5	2129.5	1799.9	2454.4	10937.4	20315.6	25392.7	23786.8
75°	579.7	591.4	750.4	1292.7	1708.7	1374.5	1299.7	5864.9	11926.1	14055.6	12599.3
77.5°	355.3	360.0	483.9	883.6	1278.6	1047.2	836.8	2484.8	4614.3	4530.2	3861.6
80°	201.0	201.0	308.6	549.3	871.9	675.5	586.7	1056.6	1461.0	1283.3	1131.4
82.5°	112.2	114.5	224.4	341.3	577.4	399.7	322.6	488.5	631.1	558.7	486.2
85°	46.8	51.4	137.9	161.3	275.8	198.7	130.9	205.7	233.8	208.0	151.9
87.5°	4.7	7.0	42.1	30.4	32.7	39.7	18.7	39.7	32.7	32.7	23.4
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°	5378.7	5378.7	5378.7	5378.7	5378.7	5378.7	5378.7	5378.7	5378.7	5378.7	5378.7
2.5°	5413.7	5378.7	5289.9	5187.0	5051.4	4986.0	4897.1	4836.4	4784.9	4789.6	4742.9
5°	5518.9	5430.1	5231.4	4983.6	4675.1	4455.4	4221.6	4060.3	3929.4	3901.4	3838.2
7.5°	5663.9	5523.6	5175.3	4728.8	4207.6	3812.5	3459.6	3232.8	3071.5	3020.1	2968.7
10°	5850.9	5647.5	5102.9	4408.6	3658.3	3155.7	2777.0	2599.3	2489.5	2452.1	2424.0
12.5°	6068.3	5790.1	5007.0	4018.2	3092.6	2608.7	2367.9	2279.1	2244.0	2232.4	2225.3
15°	6341.8	5967.7	4862.1	3555.4	2613.4	2274.4	2171.6	2159.9	2164.6	2159.9	2157.6
17.5°	6666.7	6161.8	4626.0	3078.5	2290.8	2103.8	2066.4	2075.7	2087.4	2085.1	2080.4
20°	7022.0	6353.4	4324.5	2655.4	2071.1	1982.2	1961.2	1970.5	1979.9	1975.2	1972.9
22.5°	7426.4	6559.1	3990.2	2325.9	1923.8	1870.0	1846.7	1849.0	1849.0	1839.6	1835.0
25°	7910.2	6785.9	3639.6	2092.1	1811.6	1769.5	1741.5	1732.1	1718.1	1690.0	1685.4
27.5°	8487.6	7026.6	3302.9	1928.5	1722.8	1683.0	1650.3	1626.9	1591.9	1545.1	1540.4
30°	9137.5	7318.8	3017.8	1825.6	1652.6	1612.9	1575.5	1540.4	1489.0	1430.6	1425.9
32.5°	9901.8	7632.1	2809.7	1757.8	1589.5	1547.5	1503.0	1461.0	1404.9	1346.4	1348.8
35°	10813.5	8010.8	2688.2	1711.1	1540.4	1484.3	1435.3	1388.5	1346.4	1295.0	1290.3
37.5°	11802.2	8412.8	2650.8	1687.7	1507.7	1421.2	1365.1	1332.4	1327.7	1297.3	1295.0
40°	12884.5	8889.7	2678.8	1673.7	1472.7	1360.4	1299.7	1292.7	1304.3	1250.6	1252.9
42.5°	14029.9	9455.4	2725.6	1657.3	1423.6	1299.7	1241.2	1241.2	1231.9	1157.1	1157.1
45°	15268.8	10107.5	2772.3	1617.6	1365.1	1238.9	1194.5	1178.1	1138.4	1065.9	1063.6
47.5°	16517.1	10771.4	2807.4	1545.1	1295.0	1187.5	1147.7	1110.3	1051.9	986.4	984.1
50°	17702.2	11367.5	2770.0	1437.6	1215.5	1138.4	1096.3	1044.9	981.8	937.4	930.3
52.5°	18761.1	11884.1	2611.0	1311.4	1131.4	1087.0	1049.6	995.8	944.4	897.6	892.9
55°	19682.1	12302.5	2330.5	1192.1	1056.6	1042.5	1005.1	937.4	867.2	827.5	822.8
57.5°	20565.7	12620.4	1979.9	1094.0	988.8	993.5	937.4	876.6	811.1	769.1	764.4
60°	21741.5	13045.8	1624.6	1002.8	916.3	930.3	869.6	825.2	743.3	689.6	682.6
62.5°	23620.9	13707.3	1290.3	890.6	832.2	836.8	811.1	757.4	659.2	596.1	591.4
65°	25112.2	13464.2	1016.8	769.1	736.3	743.3	743.3	684.9	579.7	507.2	500.2
67.5°	24943.9	11528.8	811.1	649.8	645.2	649.8	666.2	617.1	514.3	455.8	446.5
70°	22978.0	9170.2	649.8	540.0	561.0	549.3	596.1	563.3	462.8	404.4	397.4
72.5°	18749.4	6605.9	495.6	446.5	430.1	448.8	537.6	507.2	385.7	320.2	313.2
75°	10956.1	3525.0	369.3	353.0	310.9	374.0	476.9	432.4	294.5	236.1	229.1
77.5°	3567.1	1229.5	271.2	259.5	231.4	301.5	406.7	364.7	240.8	187.0	180.0
80°	956.1	371.7	184.7	170.6	149.6	224.4	322.6	289.9	173.0	121.6	119.2
82.5°	383.4	156.6	107.5	95.8	81.8	154.3	254.8	233.8	128.6	77.1	77.1
85°	123.9	51.4	39.7	30.4	37.4	95.8	151.9	159.0	91.2	39.7	30.4
87.5°	16.4	7.0	7.0	9.4	7.0	16.4	46.8	44.4	25.7	4.7	0.0
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)