

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: P883806

Luminaire Tested: **NAV-SB4B-827-U-T2-HSS**

Issue Date: 10/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P883806  
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-SB4B-827-U-T2-HSS  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(4) 80 CRI, 2700K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II  
OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

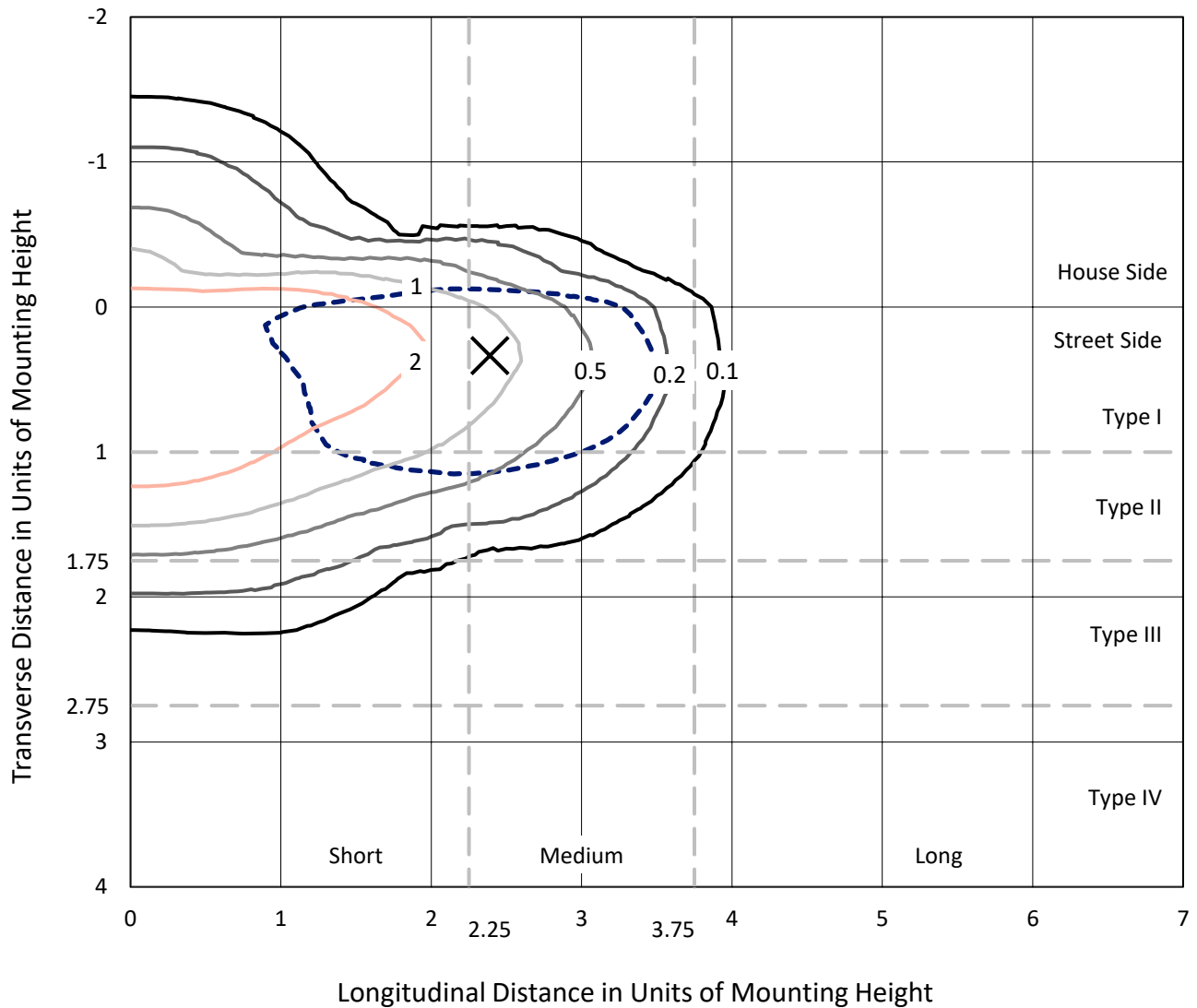
Lumens per Lamp: N/A  
Luminaire Lumens: 13540 lumens  
Efficiency: N/A  
Efficacy: 92.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B2 - U0 - G2  
  
Input Watts (W): 147  
Input Voltage (V): 120.0  
Input Current (Ain): 1.255  
Voltage Rise (V): NR  
Power Factor: 0.988  
Total Harmonic Distortion (THDi): 13.593  
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

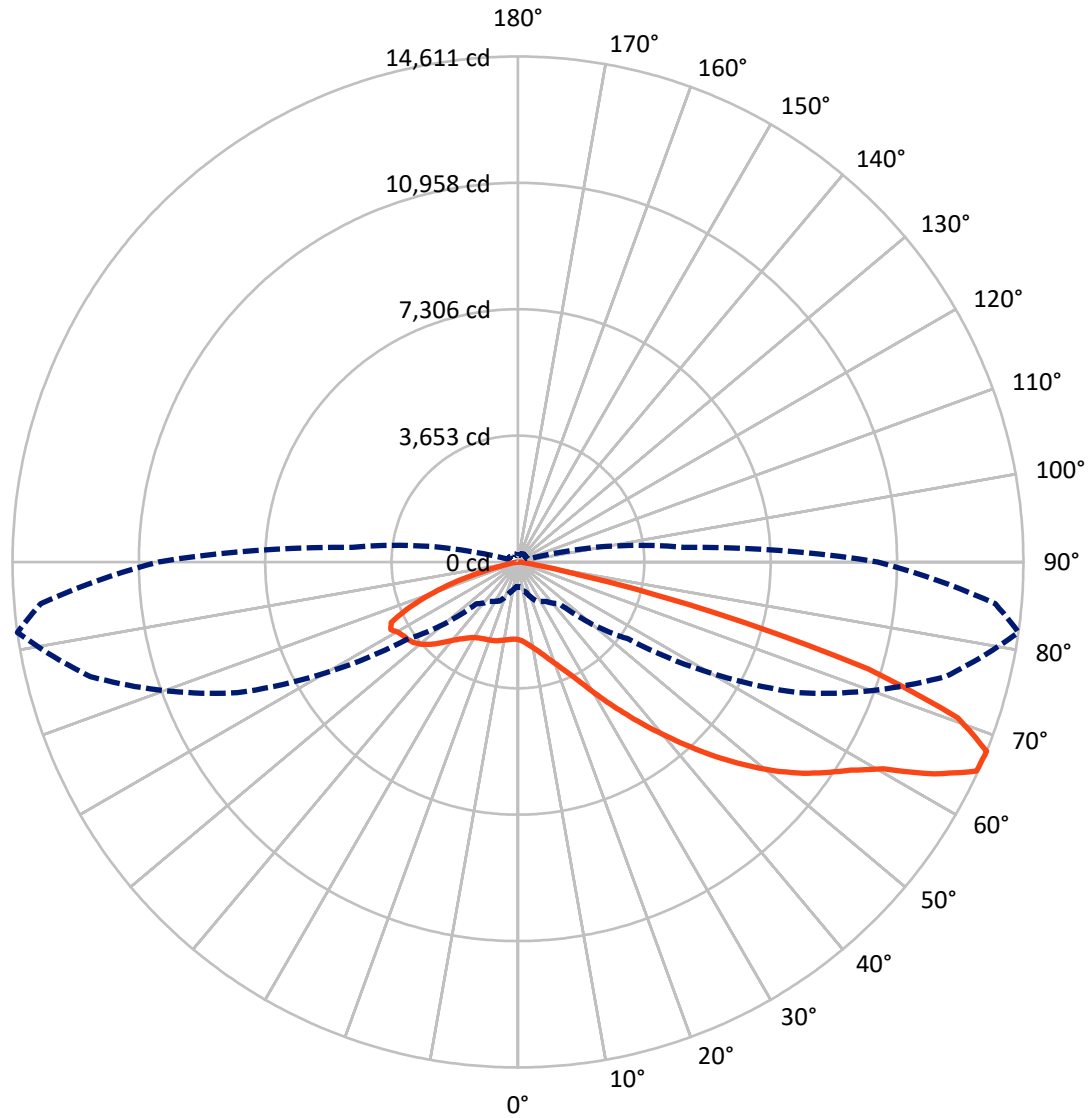
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.7 fc  
 Type II - Medium - N/A

REPORT NUMBER: P883806  
CATALOG NUMBER: NAV-SB4B-827-U-T2-HSS

### Luminous Intensity Polar Plot



— Vertical Plane Through 82-Deg Lateral      - - - Horizontal Cone Through 67.5-Deg Vertical

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CATALOG NUMBER: NAV-SB4B-827-U-T2-HSS

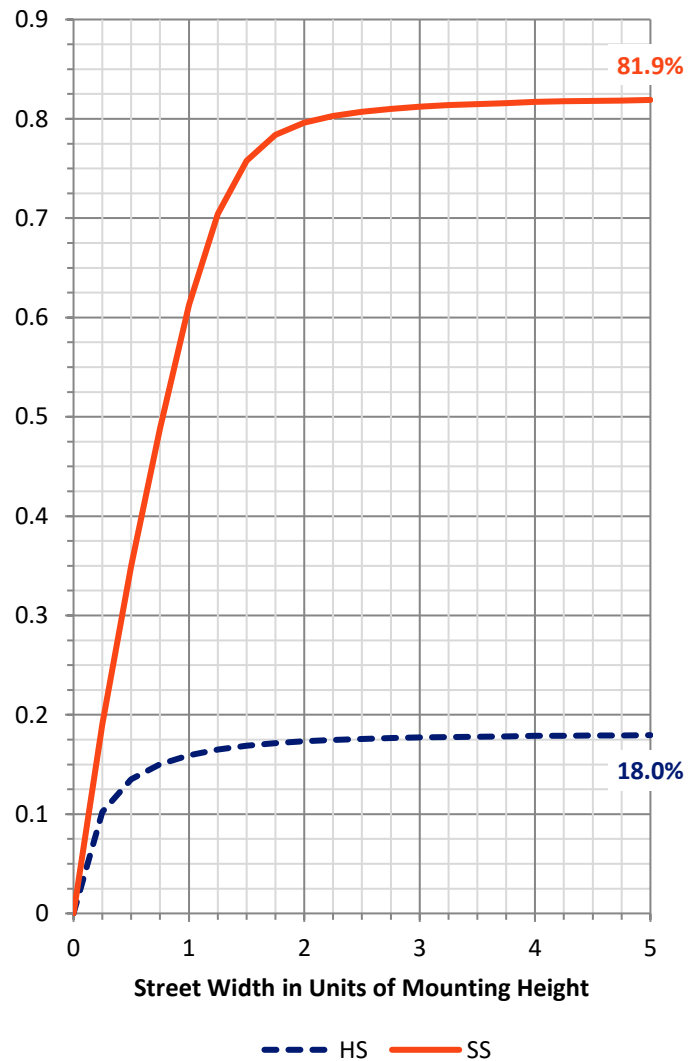
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2452.7	0.0	2452.7
	% Fixture	18.1	0.0	18.1
<b>Street Side</b>	Lumens	11087.3	0.0	11087.3
	% Fixture	81.9	0.0	81.9
<b>Total</b>	Lumens	13540.0	0.0	13540.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	199.8	1.5
10°-20°	519.3	3.8
20°-30°	831.8	6.1
30°-40°	1470.8	10.9
40°-50°	2577.1	19.0
50°-60°	3437.1	25.4
60°-70°	3199.7	23.6
70°-80°	1228.1	9.1
80°-90°	76.3	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°	13540.0	100.0
0°-180°	13540.0	100.0

**Coefficient of Utilization**



REPORT NUMBER: P883806

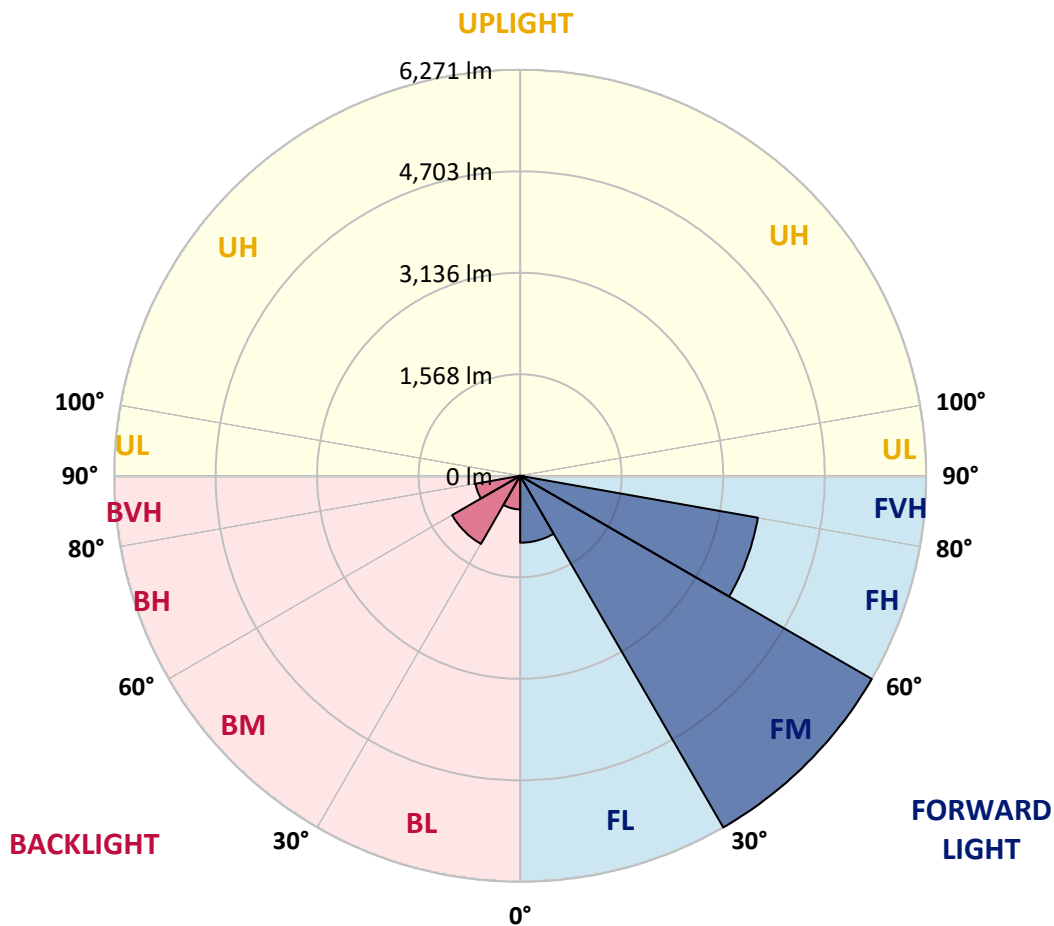
CATALOG NUMBER: NAV-SB4B-827-U-T2-HSS

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1033.0	7.6			
FM (30°-60°)	6271.2	46.3			
FH (60°-80°)	3727.8	27.5			G2/5000
FVH (80°-90°)	55.5	0.4			G1/100
BL (0°-30°)	518.0	3.8	B2/1000		
BM (30°-60°)	1213.8	9.0	B2/2500		
BH (60°-80°)	700.0	5.2	B2/1000		G2/1000
BVH (80°-90°)	20.8	0.2			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type II Medium



REPORT NUMBER: P883806  
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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	82°	85°
0°	2243.1	2243.1	2243.1	2243.1	2243.1	2243.1	2243.1	2243.1	2243.1	2243.1	2243.1
2.5°	2370.8	2384.5	2376.7	2372.8	2366.0	2356.2	2348.4	2324.0	2298.7	2282.1	2276.3
5°	2418.6	2432.2	2431.3	2435.2	2440.0	2443.0	2441.0	2413.7	2377.6	2349.4	2332.8
7.5°	2377.6	2393.2	2405.9	2425.4	2459.5	2495.6	2513.2	2507.3	2470.3	2431.3	2410.8
10°	2261.6	2278.2	2308.4	2354.3	2426.4	2504.4	2569.7	2599.9	2576.5	2533.6	2505.4
12.5°	2049.1	2065.7	2125.2	2224.6	2345.5	2481.0	2605.8	2686.7	2692.5	2649.6	2616.5
15°	1810.3	1826.9	1890.2	2015.0	2199.3	2416.6	2625.3	2778.3	2830.0	2792.9	2753.0
17.5°	1662.1	1676.7	1724.5	1824.9	2017.0	2288.0	2618.4	2875.8	2993.8	2964.5	2916.7
20°	1617.3	1629.9	1652.4	1722.6	1882.4	2154.4	2573.6	2967.4	3170.2	3153.6	3100.0
22.5°	1665.0	1676.7	1683.6	1714.8	1815.2	2066.7	2517.1	3061.0	3374.9	3376.9	3311.6
25°	1775.2	1786.9	1779.1	1798.6	1842.5	2039.4	2495.6	3171.2	3632.3	3653.7	3579.6
27.5°	1956.5	1957.5	1939.0	1938.0	1944.8	2080.3	2518.0	3289.1	3956.9	3996.9	3905.2
30°	2320.1	2305.5	2234.3	2157.3	2122.2	2203.2	2580.4	3428.5	4340.0	4411.2	4296.1
32.5°	2880.7	2859.2	2728.6	2544.3	2359.1	2401.0	2692.5	3587.4	4757.2	4885.9	4745.5
35°	3489.0	3483.1	3346.6	3072.7	2749.1	2682.8	2874.8	3796.0	5212.5	5417.2	5250.5
37.5°	4054.4	4051.5	3973.5	3650.8	3257.0	3075.6	3167.3	4069.0	5699.9	5996.3	5799.4
40°	4571.1	4579.8	4501.8	4213.3	3816.5	3579.6	3565.0	4406.3	6241.9	6627.0	6393.0
42.5°	5017.5	5027.3	4948.3	4734.8	4369.3	4137.2	4053.4	4819.6	6771.3	7304.5	7027.7
45°	5320.7	5381.1	5369.4	5198.9	4936.6	4695.8	4640.3	5338.3	7374.7	8023.0	7698.4
47.5°	5406.5	5462.1	5549.8	5573.2	5413.3	5176.4	5242.7	5963.1	7985.0	8742.4	8372.9
50°	5195.0	5246.6	5428.9	5671.7	5782.8	5709.7	5828.6	6632.8	8609.8	9459.9	9034.9
52.5°	4777.7	4830.4	5060.4	5444.5	5897.8	6127.9	6416.4	7292.8	9215.2	10139.4	9661.7
55°	4174.3	4229.9	4525.2	4960.0	5678.5	6300.4	6906.8	7951.8	9769.9	10750.6	10227.1
57.5°	3353.5	3394.4	3701.5	4309.8	5126.7	6128.9	7268.4	8671.3	10292.4	11351.1	10787.6
60°	2185.6	2221.7	2578.5	3257.0	4212.3	5555.6	7340.6	9473.5	10986.5	12132.0	11543.1
62.5°	1453.5	1477.9	1689.4	2187.6	2966.5	4455.0	6918.5	10114.0	12004.2	13490.9	12838.7
65°	997.3	1021.6	1233.2	1580.2	1916.5	2947.0	5704.8	10029.2	12926.5	14570.0	13798.9
67.5°	711.6	732.1	911.5	1239.0	1387.2	1711.8	3867.2	8945.2	12793.9	14611.0	13850.6
70°	509.8	521.5	669.7	965.1	1102.6	1028.5	2150.5	6841.5	11202.0	13491.9	12795.8
72.5°	356.8	360.7	465.0	735.0	888.1	750.6	1023.6	4561.3	8472.4	10589.7	9920.0
75°	241.8	246.6	312.9	539.1	712.6	573.2	542.0	2445.9	4973.7	5861.7	5254.4
77.5°	148.2	150.1	201.8	368.5	533.2	436.7	349.0	1036.3	1924.3	1889.3	1610.4
80°	83.8	83.8	128.7	229.1	363.6	281.7	244.7	440.6	609.3	535.2	471.8
82.5°	46.8	47.8	93.6	142.3	240.8	166.7	134.5	203.7	263.2	233.0	202.8
85°	19.5	21.4	57.5	67.3	115.0	82.9	54.6	85.8	97.5	86.8	63.4
87.5°	1.9	2.9	17.5	12.7	13.6	16.6	7.8	16.6	13.6	13.6	9.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

REPORT NUMBER: P883806  
 CATALOG NUMBER: NAV-SB4B-827-U-T2-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2243.1	2243.1	2243.1	2243.1	2243.1	2243.1	2243.1	2243.1	2243.1	2243.1	2243.1
2.5°	2257.7	2243.1	2206.1	2163.2	2106.6	2079.3	2042.3	2017.0	1995.5	1997.5	1978.0
5°	2301.6	2264.6	2181.7	2078.4	1949.7	1858.1	1760.6	1693.3	1638.7	1627.0	1600.7
7.5°	2362.1	2303.6	2158.3	1972.1	1754.7	1590.0	1442.8	1348.2	1280.9	1259.5	1238.1
10°	2440.0	2355.2	2128.1	1838.6	1525.6	1316.0	1158.1	1084.0	1038.2	1022.6	1010.9
12.5°	2530.7	2414.7	2088.1	1675.8	1289.7	1087.9	987.5	950.5	935.9	931.0	928.1
15°	2644.8	2488.8	2027.7	1482.7	1089.9	948.5	905.6	900.8	902.7	900.8	899.8
17.5°	2780.3	2569.7	1929.2	1283.9	955.3	877.4	861.8	865.7	870.5	869.6	867.6
20°	2928.4	2649.6	1803.5	1107.4	863.7	826.7	817.9	821.8	825.7	823.7	822.8
22.5°	3097.1	2735.4	1664.1	970.0	802.3	779.9	770.1	771.1	771.1	767.2	765.3
25°	3298.9	2830.0	1517.8	872.5	755.5	738.0	726.3	722.4	716.5	704.8	702.9
27.5°	3539.7	2930.4	1377.5	804.2	718.5	701.9	688.2	678.5	663.9	644.4	642.4
30°	3810.7	3052.2	1258.5	761.4	689.2	672.6	657.0	642.4	621.0	596.6	594.7
32.5°	4129.4	3182.9	1171.8	733.1	662.9	645.3	626.8	609.3	585.9	561.5	562.5
35°	4509.6	3340.8	1121.1	713.6	642.4	619.0	598.6	579.1	561.5	540.1	538.1
37.5°	4922.0	3508.5	1105.5	703.8	628.8	592.7	569.3	555.7	553.7	541.0	540.1
40°	5373.3	3707.3	1117.2	698.0	614.2	567.4	542.0	539.1	544.0	521.5	522.5
42.5°	5851.0	3943.3	1136.7	691.2	593.7	542.0	517.6	517.6	513.7	482.5	482.5
45°	6367.7	4215.2	1156.2	674.6	569.3	516.7	498.1	491.3	474.7	444.5	443.6
47.5°	6888.3	4492.1	1170.8	644.4	540.1	495.2	478.6	463.1	438.7	411.4	410.4
50°	7382.5	4740.7	1155.2	599.5	506.9	474.7	457.2	435.8	409.4	390.9	388.0
52.5°	7824.1	4956.1	1088.9	546.9	471.8	453.3	437.7	415.3	393.8	374.3	372.4
55°	8208.2	5130.6	971.9	497.2	440.6	434.8	419.2	390.9	361.7	345.1	343.1
57.5°	8576.7	5263.2	825.7	456.2	412.4	414.3	390.9	365.6	338.3	320.7	318.8
60°	9067.0	5440.6	677.5	418.2	382.1	388.0	362.6	344.1	310.0	287.6	284.7
62.5°	9850.8	5716.5	538.1	371.4	347.0	349.0	338.3	315.8	274.9	248.6	246.6
65°	10472.8	5615.1	424.1	320.7	307.1	310.0	310.0	285.6	241.8	211.5	208.6
67.5°	10402.6	4807.9	338.3	271.0	269.1	271.0	277.8	257.4	214.5	190.1	186.2
70°	9582.7	3824.3	271.0	225.2	234.0	229.1	248.6	234.9	193.0	168.6	165.7
72.5°	7819.2	2754.9	206.7	186.2	179.4	187.2	224.2	211.5	160.8	133.6	130.6
75°	4569.1	1470.1	154.0	147.2	129.7	156.0	198.9	180.3	122.8	98.5	95.5
77.5°	1487.6	512.8	113.1	108.2	96.5	125.8	169.6	152.1	100.4	78.0	75.1
80°	398.7	155.0	77.0	71.2	62.4	93.6	134.5	120.9	72.1	50.7	49.7
82.5°	159.9	65.3	44.8	40.0	34.1	64.3	106.3	97.5	53.6	32.2	32.2
85°	51.7	21.4	16.6	12.7	15.6	40.0	63.4	66.3	38.0	16.6	12.7
87.5°	6.8	2.9	2.9	3.9	2.9	6.8	19.5	18.5	10.7	1.9	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)