

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: P883636

Luminaire Tested: **NAV-SB4A-827-U-T2-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P883636
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-SB4A-827-U-T2-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 2700K, 350mA 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: 10786 lumens
Efficiency: N/A
Efficacy: 94.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B2 - U0 - G2

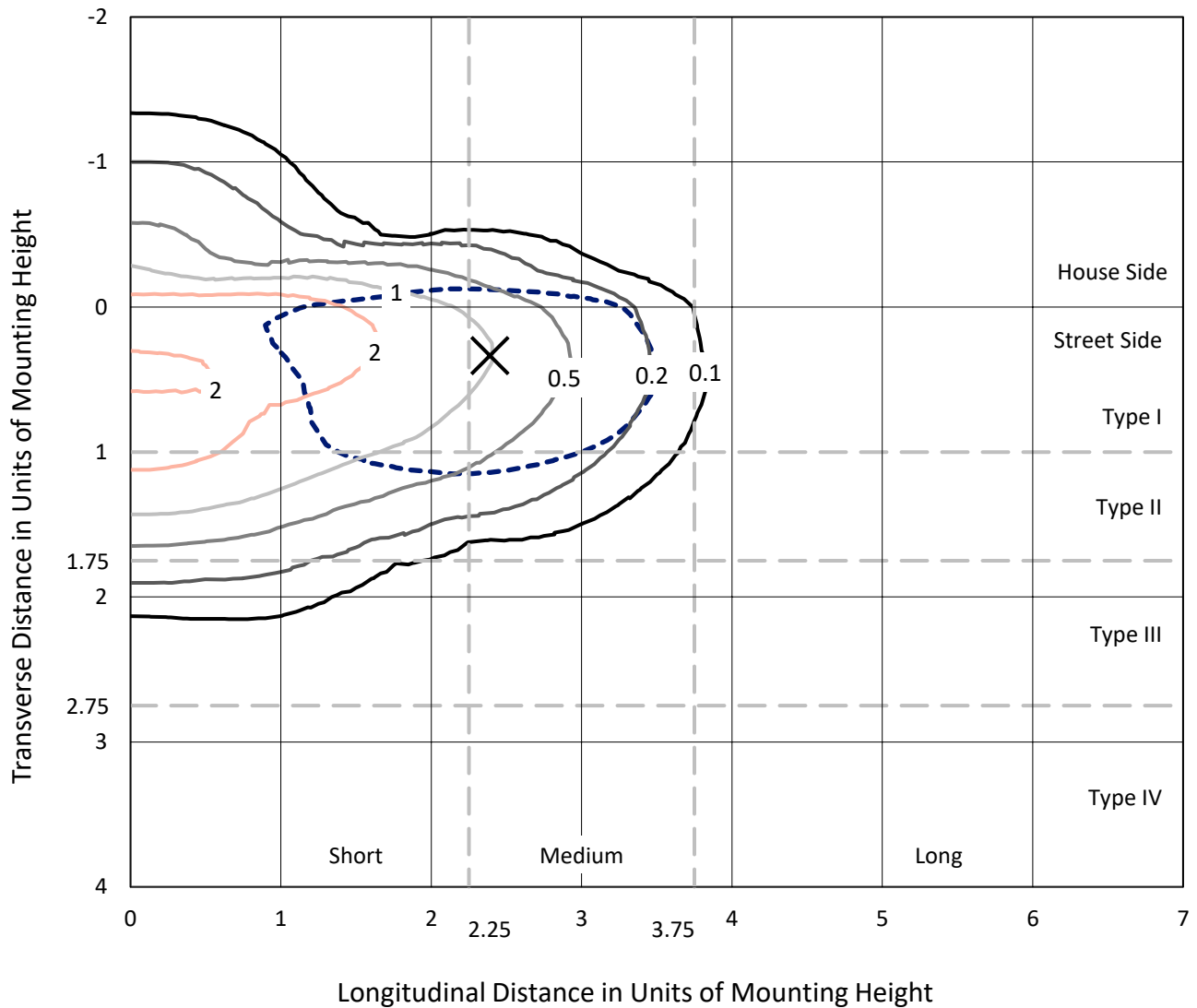
Input Watts (W): 114
Input Voltage (V): 120.0
Input Current (Ain): 0.952
Voltage Rise (V): NR
Power Factor: 0.995
Total Harmonic Distortion (THDi): 8.206
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

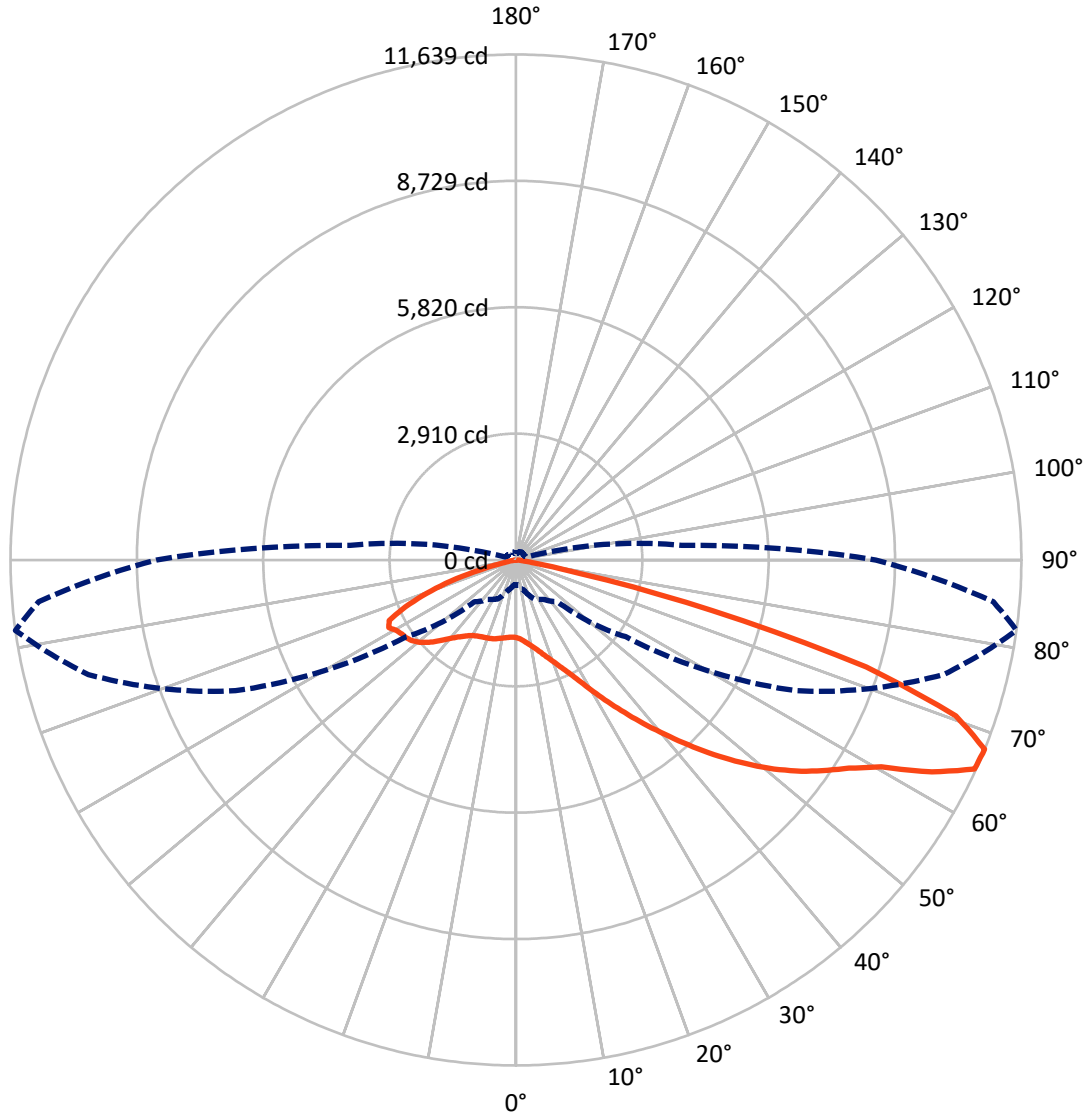
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.8 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



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

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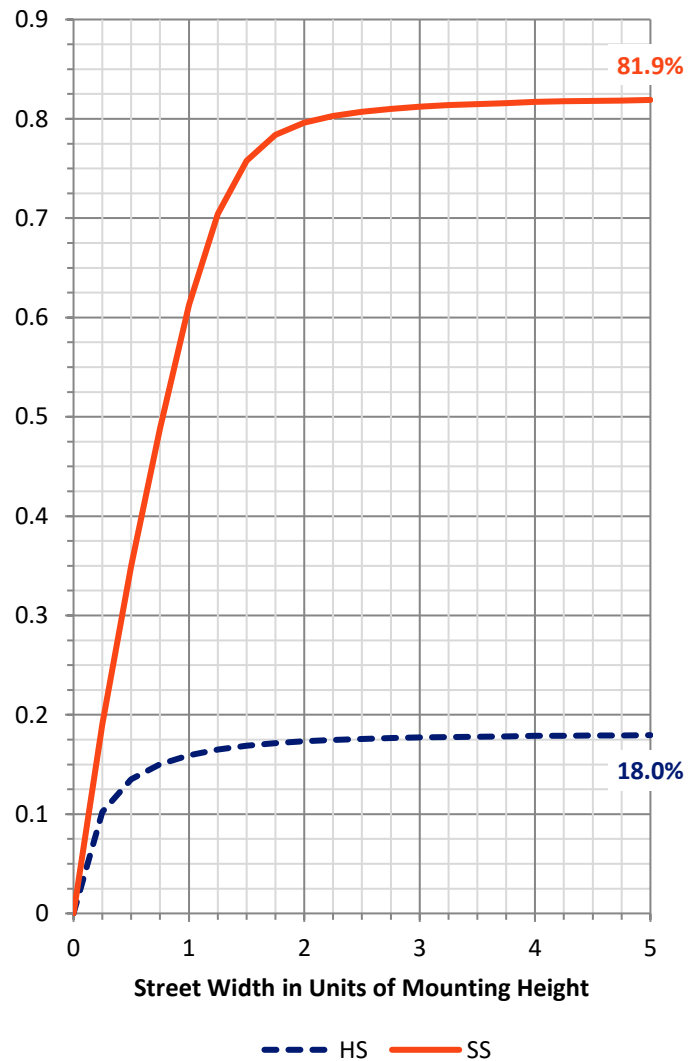
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1953.8	0.0	1953.8
	% Fixture	18.1	0.0	18.1
Street Side	Lumens	8832.2	0.0	8832.2
	% Fixture	81.9	0.0	81.9
Total	Lumens	10786.0	0.0	10786.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	159.2	1.5
10°-20°	413.7	3.8
20°-30°	662.6	6.1
30°-40°	1171.7	10.9
40°-50°	2052.9	19.0
50°-60°	2738.0	25.4
60°-70°	2548.9	23.6
70°-80°	978.3	9.1
80°-90°	60.8	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°	10786.0	100.0
0°-180°	10786.0	100.0

Coefficient of Utilization



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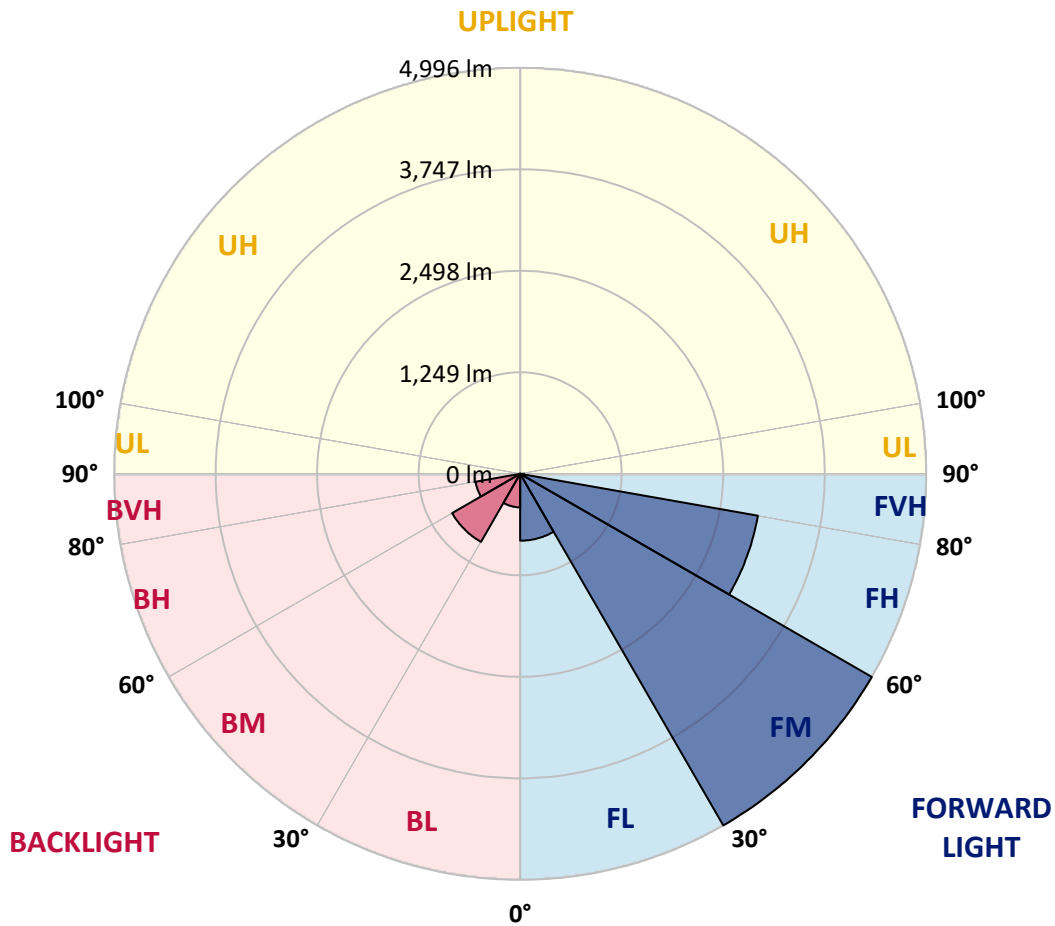
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	822.9	7.6			
FM (30°-60°)	4995.6	46.3			
FH (60°-80°)	2969.5	27.5			G2/5000
FVH (80°-90°)	44.2	0.4			G1/100
BL (0°-30°)	412.6	3.8	B1/500		
BM (30°-60°)	966.9	9.0	B1/1000		
BH (60°-80°)	557.6	5.2	B2/1000		G2/1000
BVH (80°-90°)	16.6	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



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	82°	85°
0°	1786.9	1786.9	1786.9	1786.9	1786.9	1786.9	1786.9	1786.9	1786.9	1786.9	1786.9
2.5°	1888.6	1899.5	1893.3	1890.2	1884.7	1877.0	1870.7	1851.3	1831.1	1817.9	1813.3
5°	1926.7	1937.5	1936.8	1939.9	1943.7	1946.1	1944.5	1922.8	1894.0	1871.5	1858.3
7.5°	1894.0	1906.5	1916.6	1932.1	1959.3	1988.0	2002.0	1997.3	1967.8	1936.8	1920.4
10°	1801.6	1814.8	1838.9	1875.4	1932.9	1995.0	2047.0	2071.1	2052.5	2018.3	1995.8
12.5°	1632.3	1645.5	1692.9	1772.1	1868.4	1976.4	2075.8	2140.2	2144.9	2110.7	2084.3
15°	1442.1	1455.3	1505.8	1605.2	1751.9	1925.1	2091.3	2213.2	2254.4	2224.9	2193.0
17.5°	1324.0	1335.7	1373.7	1453.7	1606.7	1822.6	2085.9	2290.9	2384.8	2361.5	2323.5
20°	1288.3	1298.4	1316.3	1372.2	1499.5	1716.2	2050.1	2363.9	2525.4	2512.2	2469.5
22.5°	1326.4	1335.7	1341.1	1366.0	1446.0	1646.3	2005.1	2438.4	2688.5	2690.0	2638.0
25°	1414.1	1423.4	1417.2	1432.8	1467.7	1624.6	1988.0	2526.2	2893.5	2910.6	2851.5
27.5°	1558.6	1559.3	1544.6	1543.8	1549.2	1657.2	2005.9	2620.1	3152.1	3183.9	3110.9
30°	1848.2	1836.6	1779.9	1718.5	1690.6	1755.0	2055.6	2731.2	3457.3	3514.0	3422.3
32.5°	2294.7	2277.7	2173.6	2026.8	1879.3	1912.7	2144.9	2857.8	3789.6	3892.1	3780.3
35°	2779.3	2774.7	2665.9	2447.7	2189.9	2137.1	2290.1	3023.9	4152.3	4315.4	4182.6
37.5°	3229.7	3227.4	3165.3	2908.2	2594.5	2450.1	2523.1	3241.4	4540.6	4776.6	4619.8
40°	3641.3	3648.3	3586.2	3356.3	3040.3	2851.5	2839.9	3510.1	4972.3	5279.1	5092.7
42.5°	3997.0	4004.7	3941.8	3771.8	3480.6	3295.7	3229.0	3839.3	5394.0	5818.8	5598.3
45°	4238.5	4286.6	4277.3	4141.4	3932.5	3740.7	3696.4	4252.5	5874.7	6391.1	6132.5
47.5°	4306.8	4351.1	4421.0	4439.6	4312.3	4123.6	4176.4	4750.2	6360.8	6964.2	6669.9
50°	4138.3	4179.5	4324.7	4518.1	4606.6	4548.3	4643.1	5283.7	6858.6	7535.8	7197.2
52.5°	3805.9	3847.9	4031.1	4337.1	4698.2	4881.5	5111.3	5809.5	7340.9	8077.0	7696.5
55°	3325.2	3369.5	3604.8	3951.2	4523.5	5018.9	5502.0	6334.4	7782.7	8564.0	8146.9
57.5°	2671.4	2704.0	2948.6	3433.2	4084.0	4882.3	5790.1	6907.5	8199.0	9042.3	8593.5
60°	1741.1	1769.8	2054.0	2594.5	3355.5	4425.6	5847.5	7546.7	8751.9	9664.3	9195.3
62.5°	1157.9	1177.3	1345.8	1742.6	2363.1	3548.9	5511.3	8056.9	9562.6	10746.9	10227.4
65°	794.4	813.8	982.4	1258.8	1526.7	2347.6	4544.5	7989.3	10297.2	11606.5	10992.3
67.5°	566.9	583.2	726.1	987.0	1105.1	1363.6	3080.6	7125.8	10191.6	11639.2	11033.4
70°	406.1	415.5	533.5	768.8	878.3	819.3	1713.1	5449.9	8923.5	10747.7	10193.2
72.5°	284.2	287.3	370.4	585.5	707.5	598.0	815.4	3633.5	6749.1	8435.8	7902.3
75°	192.6	196.5	249.3	429.4	567.7	456.6	431.8	1948.4	3962.0	4669.5	4185.7
77.5°	118.0	119.6	160.7	293.5	424.8	347.9	278.0	825.5	1532.9	1505.0	1282.9
80°	66.8	66.8	102.5	182.5	289.7	224.4	194.9	351.0	485.4	426.3	375.9
82.5°	37.3	38.1	74.6	113.4	191.8	132.8	107.2	162.3	209.7	185.6	161.5
85°	15.5	17.1	45.8	53.6	91.6	66.0	43.5	68.3	77.7	69.1	50.5
87.5°	1.6	2.3	14.0	10.1	10.9	13.2	6.2	13.2	10.9	10.9	7.8
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°	1786.9	1786.9	1786.9	1786.9	1786.9	1786.9	1786.9	1786.9	1786.9	1786.9	1786.9
2.5°	1798.5	1786.9	1757.4	1723.2	1678.2	1656.4	1626.9	1606.7	1589.6	1591.2	1575.6
5°	1833.5	1804.0	1738.0	1655.6	1553.1	1480.1	1402.5	1348.9	1305.4	1296.1	1275.1
7.5°	1881.6	1835.0	1719.3	1571.0	1397.8	1266.6	1149.3	1074.0	1020.4	1003.3	986.2
10°	1943.7	1876.2	1695.2	1464.6	1215.3	1048.4	922.6	863.5	827.0	814.6	805.3
12.5°	2016.0	1923.6	1663.4	1334.9	1027.4	866.6	786.7	757.2	745.5	741.6	739.3
15°	2106.8	1982.6	1615.3	1181.2	868.2	755.6	721.4	717.5	719.1	717.5	716.8
17.5°	2214.8	2047.0	1536.8	1022.7	761.0	698.9	686.5	689.6	693.5	692.7	691.1
20°	2332.8	2110.7	1436.6	882.2	688.0	658.5	651.5	654.6	657.8	656.2	655.4
22.5°	2467.1	2179.0	1325.6	772.7	639.1	621.3	613.5	614.3	614.3	611.2	609.6
25°	2627.9	2254.4	1209.1	695.0	601.8	587.9	578.5	575.4	570.8	561.5	559.9
27.5°	2819.7	2334.4	1097.3	640.7	572.3	559.1	548.3	540.5	528.8	513.3	511.8
30°	3035.6	2431.4	1002.5	606.5	549.0	535.8	523.4	511.8	494.7	475.3	473.7
32.5°	3289.5	2535.5	933.4	584.0	528.1	514.1	499.3	485.4	466.7	447.3	448.1
35°	3592.4	2661.3	893.0	568.4	511.8	493.1	476.8	461.3	447.3	430.2	428.7
37.5°	3920.9	2794.9	880.6	560.7	500.9	472.2	453.5	442.6	441.1	431.0	430.2
40°	4280.4	2953.3	889.9	556.0	489.2	452.0	431.8	429.4	433.3	415.5	416.2
42.5°	4660.9	3141.2	905.5	550.6	472.9	431.8	412.4	412.4	409.2	384.4	384.4
45°	5072.5	3357.9	921.0	537.4	453.5	411.6	396.8	391.4	378.2	354.1	353.3
47.5°	5487.2	3578.4	932.7	513.3	430.2	394.5	381.3	368.9	349.5	327.7	326.9
50°	5880.9	3776.4	920.2	477.6	403.8	378.2	364.2	347.1	326.2	311.4	309.1
52.5°	6232.7	3948.1	867.4	435.7	375.9	361.1	348.7	330.8	313.7	298.2	296.6
55°	6538.7	4087.1	774.2	396.0	351.0	346.3	333.9	311.4	288.1	274.9	273.4
57.5°	6832.2	4192.7	657.8	363.4	328.5	330.0	311.4	291.2	269.5	255.5	253.9
60°	7222.8	4334.0	539.7	333.1	304.4	309.1	288.9	274.1	246.9	229.1	226.8
62.5°	7847.2	4553.8	428.7	295.9	276.5	278.0	269.5	251.6	219.0	198.0	196.5
65°	8342.6	4473.0	337.8	255.5	244.6	246.9	246.9	227.5	192.6	168.5	166.2
67.5°	8286.7	3830.0	269.5	215.9	214.3	215.9	221.3	205.0	170.8	151.4	148.3
70°	7633.6	3046.5	215.9	179.4	186.4	182.5	198.0	187.2	153.8	134.3	132.0
72.5°	6228.8	2194.6	164.6	148.3	142.9	149.1	178.6	168.5	128.1	106.4	104.1
75°	3639.8	1171.1	122.7	117.3	103.3	124.3	158.4	143.7	97.8	78.4	76.1
77.5°	1185.0	408.5	90.1	86.2	76.9	100.2	135.1	121.1	80.0	62.1	59.8
80°	317.6	123.5	61.3	56.7	49.7	74.6	107.2	96.3	57.5	40.4	39.6
82.5°	127.4	52.0	35.7	31.8	27.2	51.3	84.6	77.7	42.7	25.6	25.6
85°	41.2	17.1	13.2	10.1	12.4	31.8	50.5	52.8	30.3	13.2	10.1
87.5°	5.4	2.3	2.3	3.1	2.3	5.4	15.5	14.8	8.5	1.6	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)