

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: P882790

Luminaire Tested: **NAV-SB2D-827-U-T4FT-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P882790
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-25)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB2D-827-U-T4FT-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 80 CRI, 2700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV
FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12759 lumens
Efficiency: N/A
Efficacy: 86.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

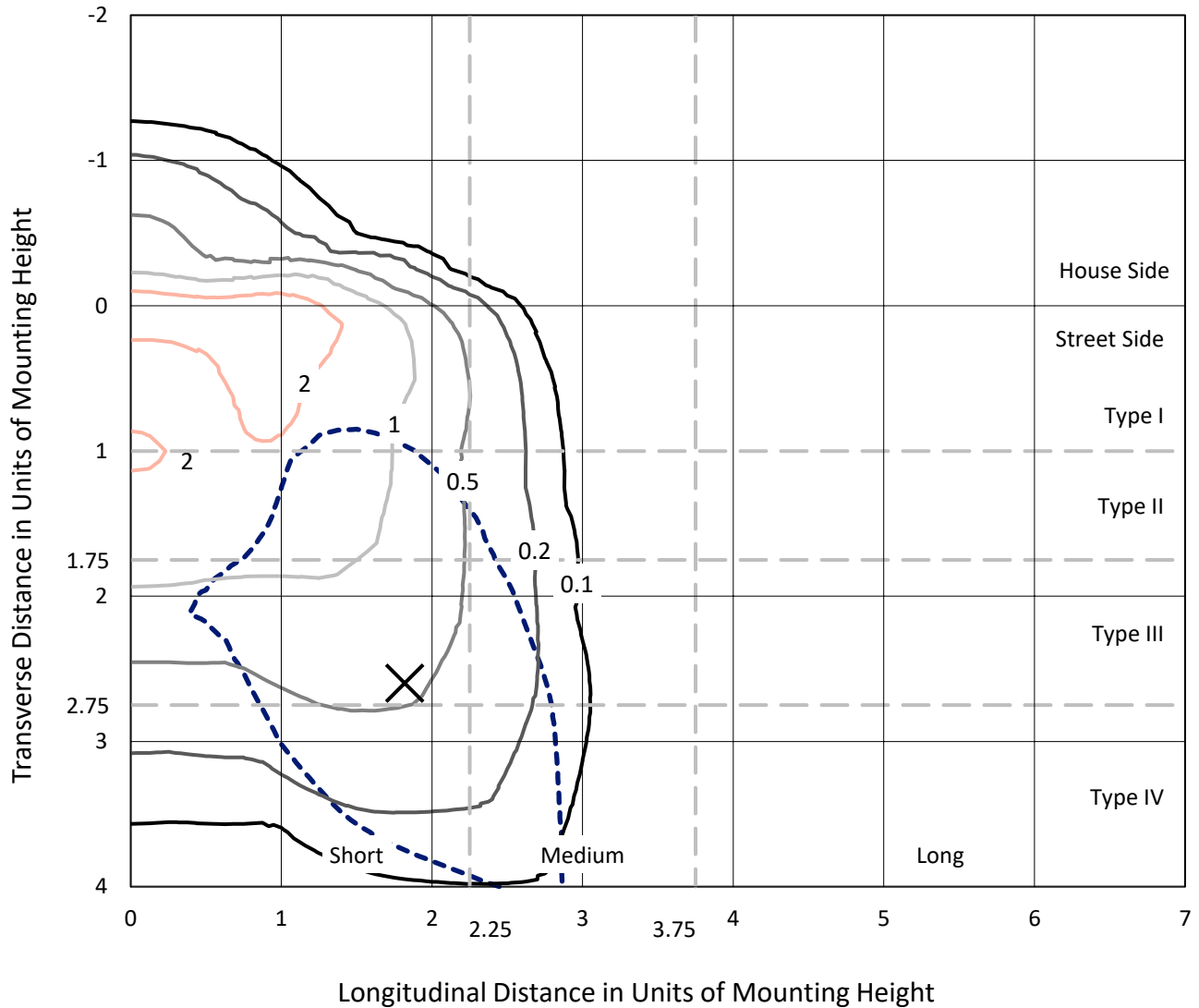
Input Watts (W): 147.6
Input Voltage (V): 120.0
Input Current (Ain): 1.234
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 3.108
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

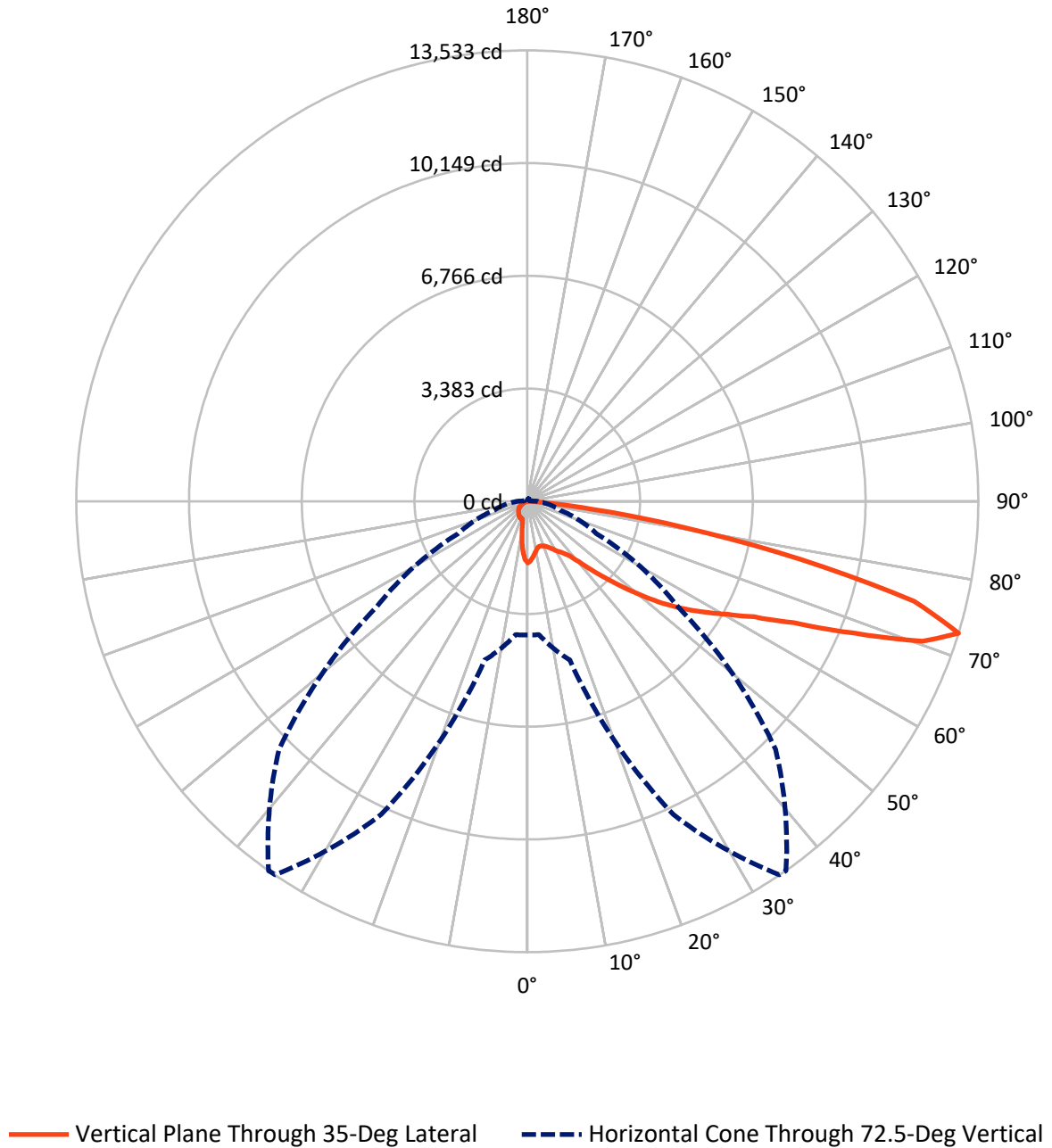
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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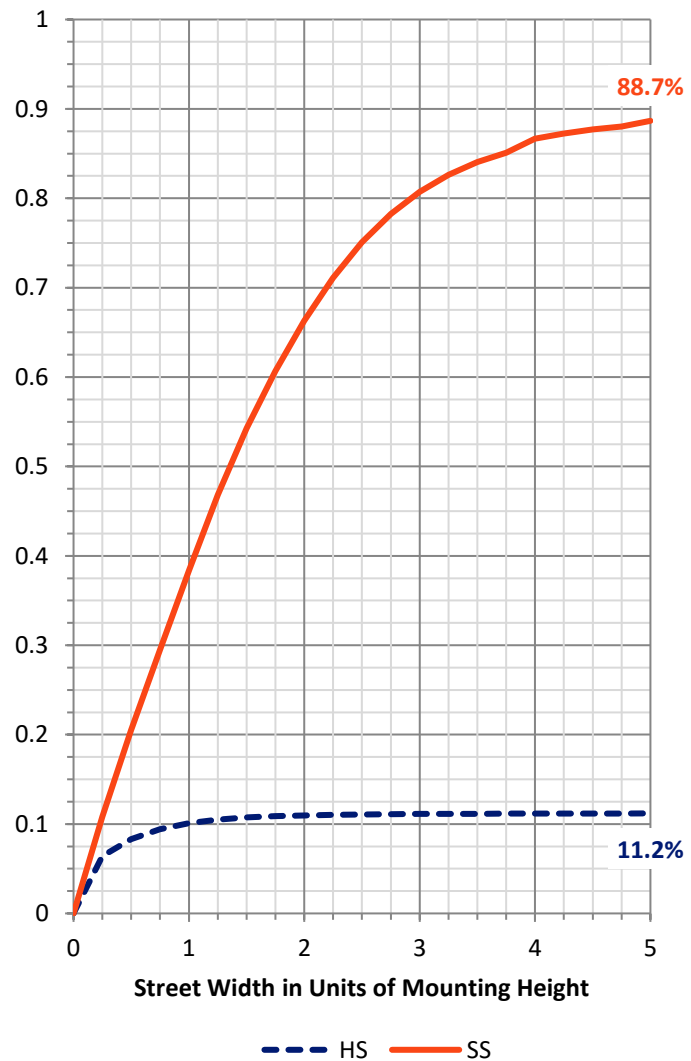
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1436.0	0.0	1436.0
	% Fixture	11.3	0.0	11.3
Street Side	Lumens	11323.0	0.0	11323.0
	% Fixture	88.7	0.0	88.7
Total	Lumens	12759.0	0.0	12759.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	152.0	1.2
10°-20°	355.5	2.8
20°-30°	577.5	4.5
30°-40°	963.5	7.6
40°-50°	1823.0	14.3
50°-60°	2896.7	22.7
60°-70°	3583.4	28.1
70°-80°	2227.5	17.5
80°-90°	180.0	1.4
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°	12759.0	100.0
0°-180°	12759.0	100.0

Coefficient of Utilization



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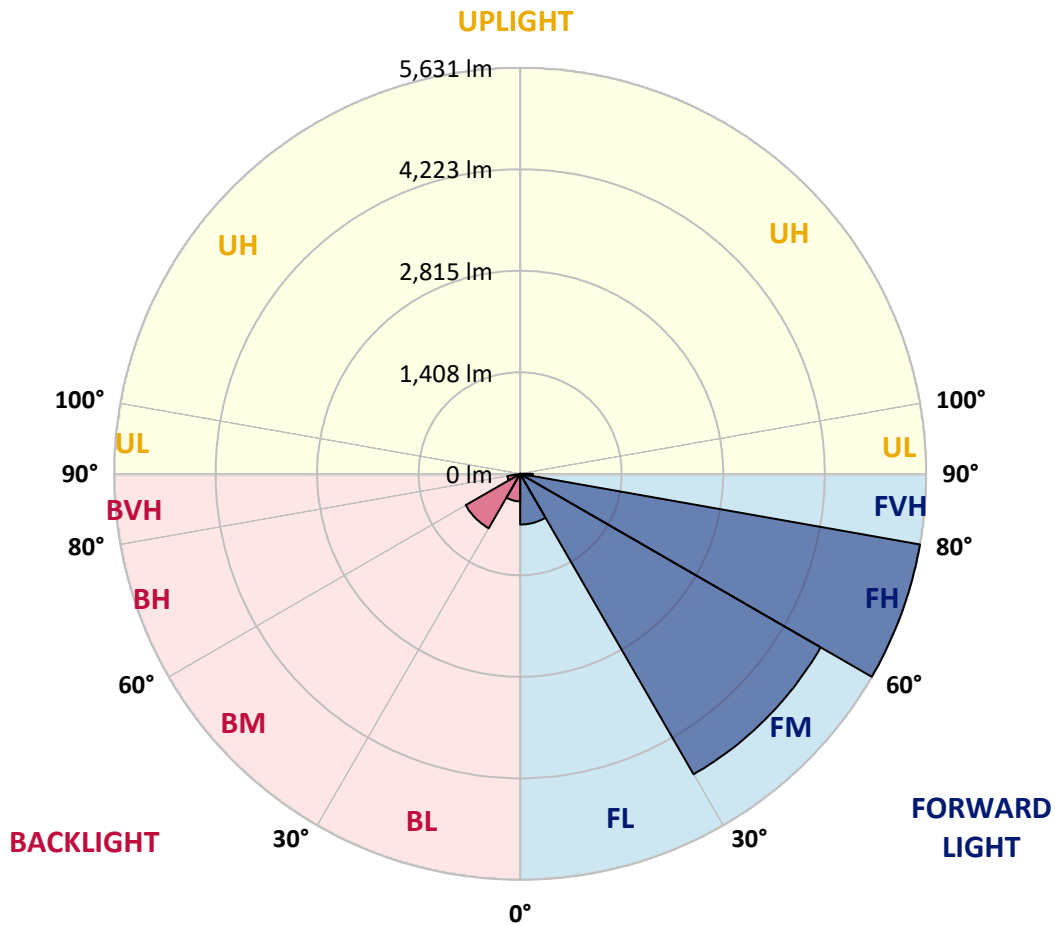
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	703.3	5.5			
FM (30°-60°)	4811.4	37.7			
FH (60°-80°)	5630.7	44.1			G3/7500
FVH (80°-90°)	177.6	1.4			G2/225
BL (0°-30°)	381.6	3.0	B1/500		
BM (30°-60°)	871.8	6.8	B1/1000		
BH (60°-80°)	180.2	1.4	B1/500		G1/500
BVH (80°-90°)	2.4	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G3

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	1849.2	1849.2	1849.2	1849.2	1849.2	1849.2	1849.2	1849.2	1849.2	1849.2	1849.2
2.5°	1766.9	1781.9	1784.7	1789.4	1789.4	1795.0	1804.3	1817.4	1838.9	1850.1	1857.6
5°	1628.6	1639.8	1653.8	1665.0	1686.5	1689.3	1725.8	1761.3	1810.9	1848.3	1874.4
7.5°	1489.3	1502.4	1521.1	1548.2	1576.2	1584.6	1639.8	1699.6	1778.2	1848.3	1892.2
10°	1391.1	1392.0	1408.9	1436.0	1480.9	1491.1	1558.5	1643.5	1741.7	1837.1	1909.0
12.5°	1336.0	1342.5	1350.0	1370.5	1413.5	1420.1	1492.1	1592.1	1705.2	1830.5	1928.7
15°	1336.0	1340.6	1345.3	1355.6	1390.2	1395.8	1459.4	1559.4	1686.5	1833.3	1960.5
17.5°	1350.0	1357.5	1353.7	1365.9	1402.3	1406.1	1462.2	1550.0	1685.6	1851.1	2009.1
20°	1383.6	1389.2	1381.8	1389.2	1425.7	1433.2	1491.1	1567.8	1701.5	1881.9	2069.8
22.5°	1436.9	1439.7	1422.0	1427.6	1465.0	1474.3	1541.6	1618.3	1739.8	1931.5	2151.2
25°	1504.2	1509.8	1482.7	1489.3	1524.8	1536.0	1613.6	1694.0	1800.6	1999.7	2254.9
27.5°	1581.8	1584.6	1561.3	1560.3	1606.1	1622.0	1700.6	1787.5	1881.9	2085.7	2385.8
30°	1670.6	1679.1	1656.6	1652.9	1710.8	1723.9	1801.5	1902.5	2001.6	2214.7	2571.9
32.5°	1740.8	1747.3	1734.2	1743.6	1802.5	1812.7	1924.0	2065.2	2189.5	2398.0	2825.2
35°	1841.7	1845.5	1815.6	1832.4	1899.7	1925.9	2091.3	2293.3	2426.0	2628.0	3156.2
37.5°	2207.3	2207.3	2080.1	1996.9	2061.4	2084.8	2320.4	2580.3	2717.7	2936.5	3573.1
40°	2713.0	2704.6	2518.6	2348.4	2340.0	2385.8	2646.7	2942.1	3094.5	3306.7	4042.5
42.5°	3252.5	3239.4	2986.0	2817.8	2789.7	2805.6	3023.4	3388.0	3543.2	3758.2	4547.3
45°	3731.1	3727.4	3495.5	3269.3	3218.8	3269.3	3493.7	3909.7	4020.9	4247.2	5051.2
47.5°	4132.2	4132.2	3963.0	3815.3	3789.1	3819.0	4130.3	4488.4	4478.1	4767.9	5542.0
50°	4594.0	4590.3	4429.5	4365.9	4393.0	4435.1	4863.3	5097.9	4951.2	5279.3	5980.5
52.5°	4917.5	4939.9	4884.8	4874.5	5012.9	5085.8	5607.5	5694.4	5374.7	5764.5	6308.6
55°	5173.7	5199.8	5263.4	5335.4	5601.8	5697.2	6328.3	6260.0	5729.0	6185.2	6497.5
57.5°	5536.4	5499.0	5597.2	5739.3	6170.3	6285.2	7026.6	6793.8	6014.1	6526.4	6518.0
60°	5976.7	5982.3	5999.2	6178.7	6737.7	6885.4	7714.7	7298.7	6197.4	6735.9	6289.9
62.5°	6505.9	6514.3	6548.9	6824.7	7499.7	7639.0	8447.6	7711.9	6281.5	6677.0	5700.9
65°	6469.4	6504.9	6891.1	7834.4	8658.0	8795.4	9303.1	8001.7	6154.4	6138.5	4641.7
67.5°	5893.5	5951.5	6597.5	9040.4	10404.4	10557.7	10337.0	8058.7	5605.6	4773.5	3028.1
70°	5138.1	5158.7	5935.6	10124.8	12426.5	12581.7	11262.6	7431.4	4253.7	2662.6	1356.5
72.5°	4012.5	4017.2	4928.7	10376.3	13524.1	13532.5	10536.2	5516.8	2287.7	1022.8	471.2
75°	2866.4	2838.3	3301.1	8414.9	11898.3	11993.7	7898.9	2587.8	874.1	483.3	234.7
77.5°	1537.0	1567.8	1867.9	4990.4	8219.5	8382.2	4309.8	746.0	445.0	329.1	155.2
80°	474.9	501.1	765.7	2284.9	4655.7	4753.9	1597.7	331.9	310.4	234.7	101.9
82.5°	149.6	155.2	357.1	960.1	1932.4	1977.3	462.8	187.9	212.2	155.2	59.8
85°	43.0	43.9	158.9	358.1	477.7	487.1	129.9	72.9	121.5	96.3	30.9
87.5°	4.7	15.0	59.8	59.8	42.1	41.1	14.0	15.9	34.6	12.2	5.6
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°	1849.2	1849.2	1849.2	1849.2	1849.2	1849.2	1849.2	1849.2	1849.2	1849.2	1849.2
2.5°	1852.9	1853.9	1841.7	1821.2	1798.7	1780.0	1756.7	1738.0	1724.9	1721.1	1727.7
5°	1866.0	1859.5	1824.9	1762.3	1687.5	1623.0	1551.0	1493.9	1456.6	1440.7	1446.3
7.5°	1885.7	1867.0	1791.2	1667.8	1524.8	1397.7	1268.6	1168.6	1105.0	1073.3	1077.9
10°	1902.5	1865.1	1735.2	1531.3	1312.6	1120.0	946.1	825.5	758.2	726.4	727.3
12.5°	1918.4	1864.2	1662.2	1369.6	1073.3	837.7	675.9	616.1	597.4	590.8	589.0
15°	1948.3	1867.0	1570.6	1184.5	834.9	632.9	574.0	573.1	576.8	575.0	574.0
17.5°	1989.4	1869.8	1466.8	988.2	644.1	558.1	555.3	563.7	569.3	566.5	565.6
20°	2042.7	1881.0	1356.5	793.7	553.5	539.4	546.0	553.5	558.1	553.5	552.5
22.5°	2117.5	1900.6	1235.9	637.6	524.5	528.2	533.8	542.2	546.9	540.4	539.4
25°	2209.1	1931.5	1117.2	554.4	510.4	515.1	523.5	532.9	538.5	532.0	531.0
27.5°	2327.9	1981.0	1007.8	535.7	496.4	499.2	511.4	525.4	532.9	524.5	524.5
30°	2499.9	2062.4	913.4	544.1	488.0	481.5	498.3	517.9	526.3	518.9	517.9
32.5°	2728.0	2177.4	855.4	557.2	484.3	460.9	476.8	502.0	516.1	511.4	511.4
35°	3027.2	2352.2	833.0	572.2	481.5	439.4	450.6	477.7	502.0	506.7	506.7
37.5°	3389.9	2595.2	839.5	578.7	473.1	421.6	427.2	450.6	482.4	497.4	501.1
40°	3802.2	2878.5	876.9	572.2	463.7	406.7	407.6	425.4	453.4	475.9	483.3
42.5°	4227.6	3209.5	946.1	547.8	455.3	393.6	390.8	402.9	421.6	437.5	444.1
45°	4632.4	3549.8	1014.4	514.2	445.0	380.5	374.0	378.6	382.4	388.9	392.7
47.5°	4985.8	3789.1	994.7	483.3	431.0	365.5	354.3	352.5	341.2	340.3	339.4
50°	5229.8	3841.5	883.5	452.5	410.4	348.7	331.0	319.7	300.1	290.7	291.7
52.5°	5307.4	3634.8	721.7	421.6	376.8	326.3	301.0	283.3	259.0	250.5	249.6
55°	5204.5	3230.0	576.8	384.2	330.0	296.4	268.3	244.9	225.3	215.0	215.0
57.5°	4953.0	2714.9	456.2	340.3	280.5	262.7	234.7	211.3	194.5	184.2	182.3
60°	4536.1	2155.8	360.9	287.9	239.3	226.2	197.3	182.3	167.3	155.2	152.4
62.5°	3903.2	1538.8	283.3	228.1	200.1	185.1	168.3	157.1	139.3	122.5	119.7
65°	3045.9	941.4	218.8	167.3	160.8	153.3	143.0	132.8	111.3	94.4	91.6
67.5°	1921.2	445.9	156.1	126.2	127.1	123.4	118.7	110.3	94.4	79.5	77.6
70°	846.1	216.0	102.8	96.3	94.4	94.4	98.2	95.4	80.4	66.4	63.6
72.5°	287.9	115.9	76.7	72.9	68.2	67.3	82.3	79.5	64.5	51.4	48.6
75°	150.5	77.6	56.1	52.4	41.1	49.5	65.4	61.7	45.8	33.7	30.9
77.5°	98.2	55.2	38.3	33.7	23.4	32.7	48.6	43.0	27.1	16.8	15.0
80°	61.7	36.5	22.4	15.9	11.2	17.8	26.2	18.7	10.3	3.7	2.8
82.5°	32.7	18.7	8.4	5.6	4.7	5.6	6.5	4.7	1.9	0.0	0.0
85°	13.1	6.5	2.8	1.9	0.9	0.0	1.9	0.9	0.0	0.0	0.0
87.5°	4.7	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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)