

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: P883820

Luminaire Tested: **NAV-SB4B-830-U-T4FT-HSS**

Issue Date: 10/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P883820  
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-SB4B-830-U-T4FT-HSS  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(4) 80 CRI, 3000K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV  
FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

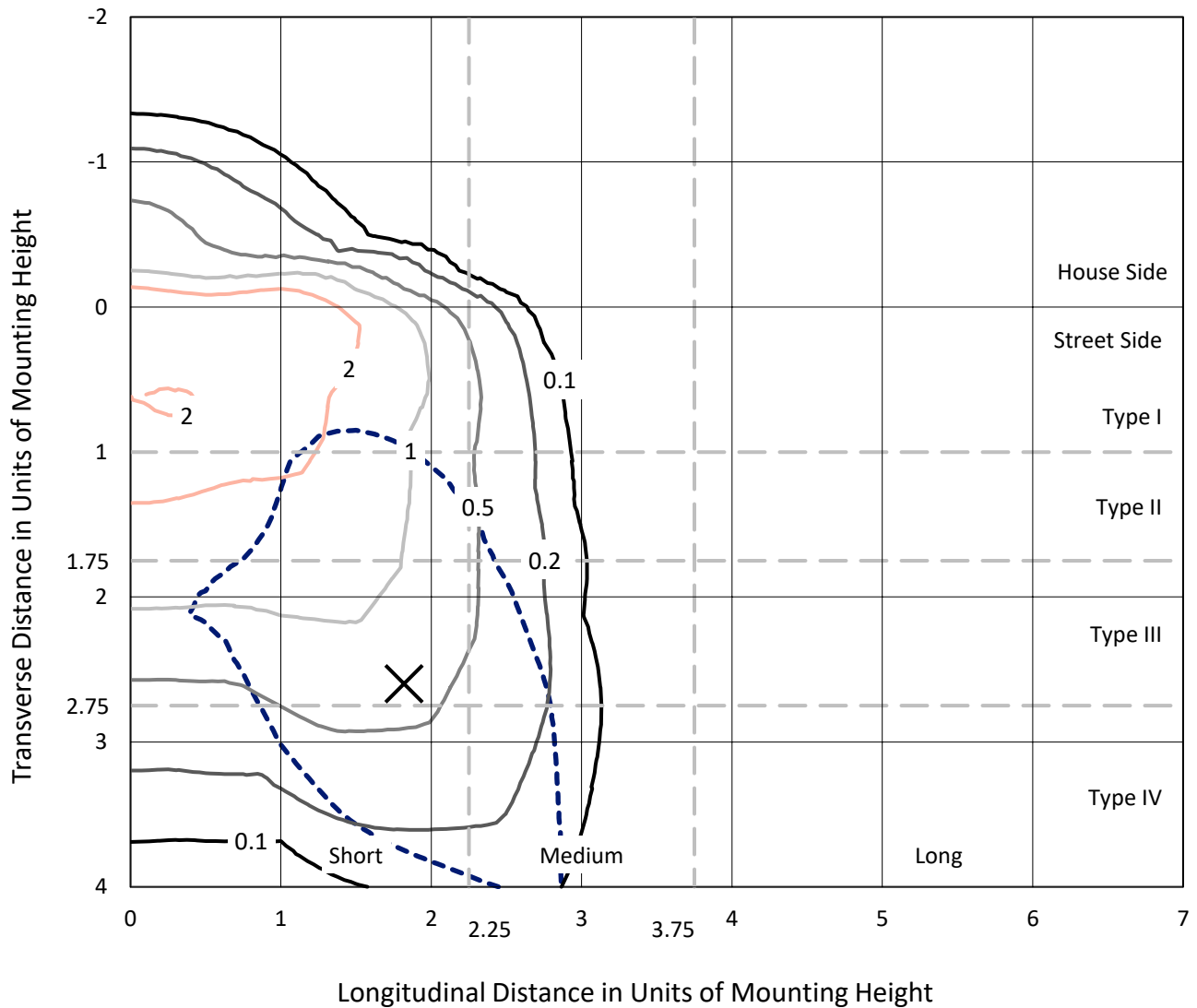
Lumens per Lamp: N/A  
Luminaire Lumens: 15119 lumens  
Efficiency: N/A  
Efficacy: 102.9 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U0 - G3  
  
Input Watts (W): 147  
Input Voltage (V): 120.0  
Input Current (Ain): 1.255  
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

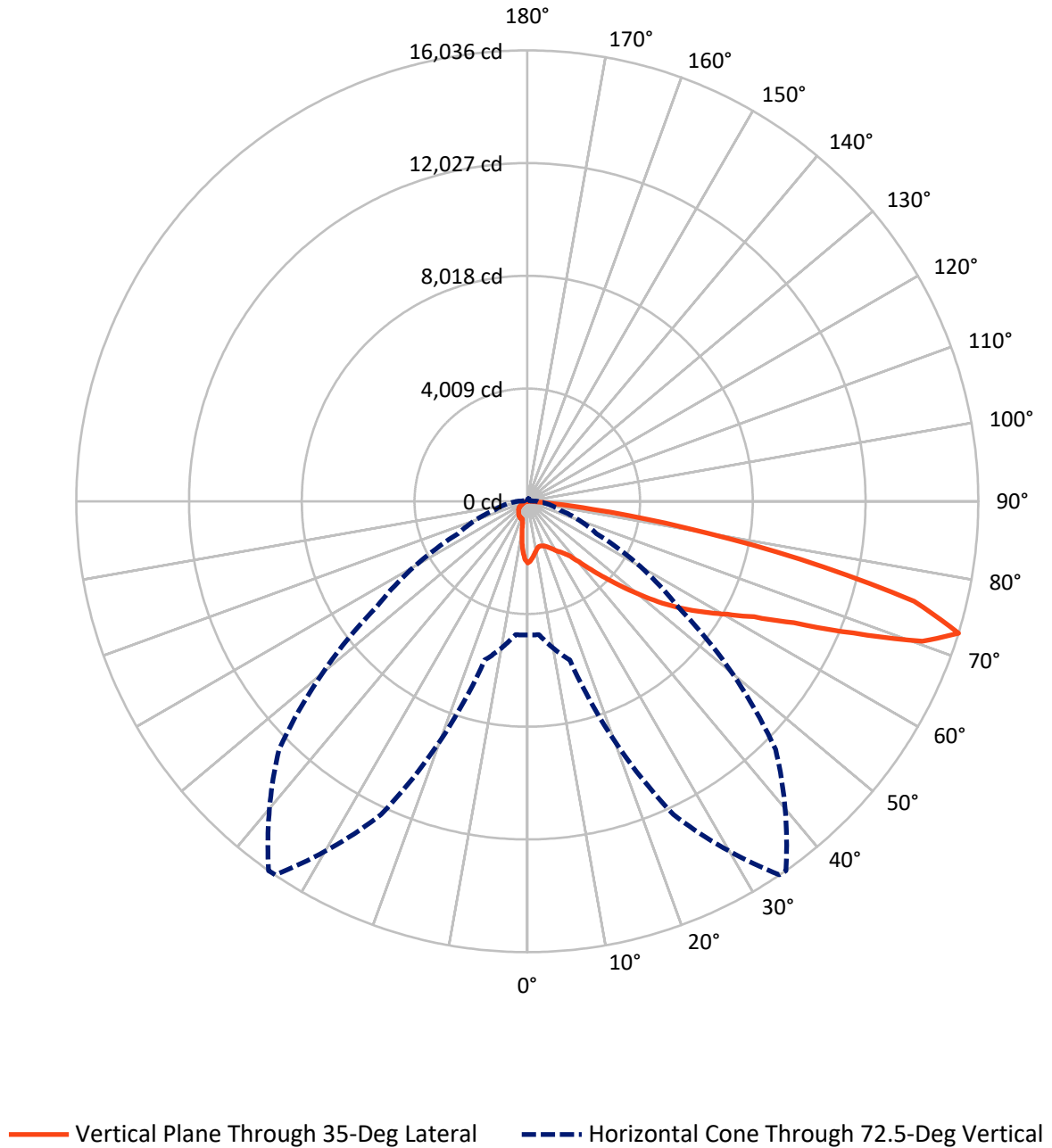
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.5 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1701.6	0.0	1701.6
	% Fixture	11.3	0.0	11.3
<b>Street Side</b>	Lumens	13417.4	0.0	13417.4
	% Fixture	88.7	0.0	88.7
<b>Total</b>	Lumens	15119.0	0.0	15119.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	180.1	1.2
10°-20°	421.2	2.8
20°-30°	684.3	4.5
30°-40°	1141.7	7.6
40°-50°	2160.2	14.3
50°-60°	3432.5	22.7
60°-70°	4246.2	28.1
70°-80°	2639.5	17.5
80°-90°	213.3	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°	15119.0	100.0
0°-180°	15119.0	100.0

**Coefficient of Utilization**



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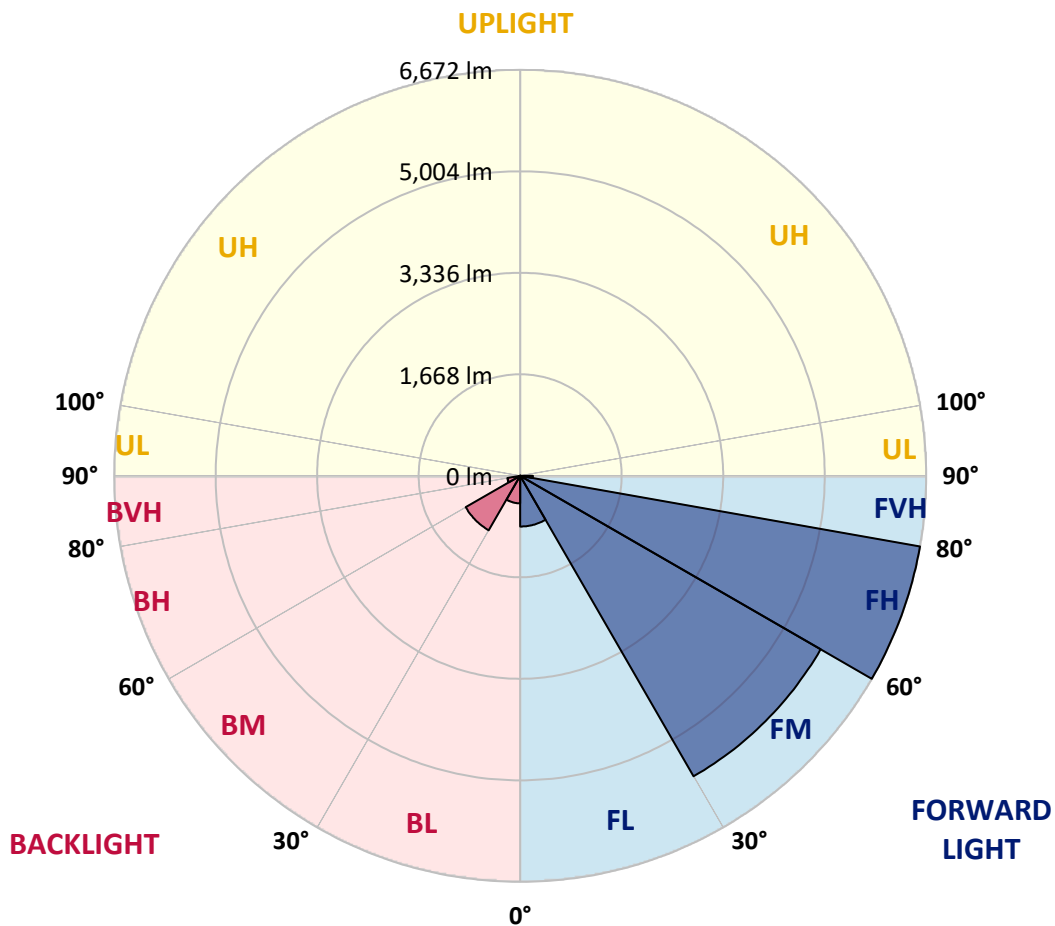
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	833.4	5.5			
FM (30°-60°)	5701.4	37.7			
FH (60°-80°)	6672.2	44.1			G3/7500
FVH (80°-90°)	210.4	1.4			G2/225
BL (0°-30°)	452.1	3.0	B1/500		
BM (30°-60°)	1033.0	6.8	B2/2500		
BH (60°-80°)	213.5	1.4	B1/500		G1/500
BVH (80°-90°)	2.9	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G3**

Type IV Short



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	2191.3	2191.3	2191.3	2191.3	2191.3	2191.3	2191.3	2191.3	2191.3	2191.3	2191.3
2.5°	2093.8	2111.5	2114.8	2120.4	2120.4	2127.0	2138.1	2153.6	2179.1	2192.4	2201.2
5°	1929.8	1943.1	1959.7	1973.0	1998.5	2001.8	2045.0	2087.1	2145.8	2190.1	2221.2
7.5°	1764.7	1780.3	1802.4	1834.5	1867.8	1877.7	1943.1	2014.0	2107.1	2190.1	2242.2
10°	1648.4	1649.5	1669.5	1701.6	1754.8	1767.0	1846.7	1947.5	2063.9	2176.8	2262.1
12.5°	1583.1	1590.8	1599.7	1624.1	1675.0	1682.8	1768.1	1886.6	2020.6	2169.1	2285.4
15°	1583.1	1588.6	1594.1	1606.3	1647.3	1654.0	1729.3	1847.8	1998.5	2172.4	2323.1
17.5°	1599.7	1608.5	1604.1	1618.5	1661.7	1666.1	1732.6	1836.8	1997.4	2193.5	2380.7
20°	1639.6	1646.2	1637.3	1646.2	1689.4	1698.3	1767.0	1857.8	2016.2	2230.0	2452.7
22.5°	1702.7	1706.0	1685.0	1691.6	1735.9	1747.0	1826.8	1917.6	2061.6	2288.7	2549.1
25°	1782.5	1789.1	1757.0	1764.7	1806.8	1820.1	1912.1	2007.4	2133.6	2369.6	2672.0
27.5°	1874.4	1877.7	1850.0	1848.9	1903.2	1922.1	2015.1	2118.1	2230.0	2471.5	2827.1
30°	1979.7	1989.6	1963.0	1958.6	2027.3	2042.8	2134.8	2254.4	2371.8	2624.4	3047.6
32.5°	2062.7	2070.5	2055.0	2066.1	2135.9	2148.0	2279.9	2447.2	2594.5	2841.5	3347.8
35°	2182.4	2186.8	2151.4	2171.3	2251.1	2282.1	2478.2	2717.5	2874.8	3114.1	3740.0
37.5°	2615.5	2615.5	2464.9	2366.3	2442.7	2470.4	2749.6	3057.6	3220.4	3479.6	4234.1
40°	3214.9	3204.9	2984.4	2782.8	2772.9	2827.1	3136.2	3486.3	3666.9	3918.3	4790.2
42.5°	3854.1	3838.6	3538.3	3338.9	3305.7	3324.5	3582.7	4014.7	4198.6	4453.4	5388.4
45°	4421.3	4416.8	4142.1	3874.0	3814.2	3874.0	4139.9	4632.9	4764.7	5032.8	5985.5
47.5°	4896.5	4896.5	4696.0	4521.0	4490.0	4525.4	4894.3	5318.6	5306.4	5649.8	6567.1
50°	5443.8	5439.4	5248.8	5173.5	5205.6	5255.5	5762.8	6040.9	5867.0	6255.8	7086.7
52.5°	5827.1	5853.7	5788.3	5776.1	5940.1	6026.5	6644.6	6747.7	6368.8	6830.8	7475.5
55°	6130.6	6161.6	6237.0	6322.3	6638.0	6751.0	7498.8	7417.9	6788.7	7329.3	7699.3
57.5°	6560.5	6516.1	6632.5	6800.9	7311.6	7447.8	8326.3	8050.5	7126.5	7733.6	7723.7
60°	7082.2	7088.9	7108.8	7321.5	7984.0	8159.0	9141.7	8648.7	7343.7	7981.8	7453.4
62.5°	7709.3	7719.2	7760.2	8087.0	8886.9	9051.9	10010.2	9138.3	7443.4	7912.0	6755.4
65°	7666.1	7708.1	8165.7	9283.5	10259.4	10422.3	11023.8	9481.8	7292.7	7273.9	5500.3
67.5°	6983.6	7052.3	7817.8	10712.5	12328.8	12510.5	12249.1	9549.3	6642.4	5656.5	3588.2
70°	6088.5	6112.9	7033.5	11997.6	14725.0	14908.9	13345.8	8806.0	5040.5	3155.0	1607.4
72.5°	4754.7	4760.3	5840.4	12295.6	16025.6	16035.6	12485.0	6537.2	2710.8	1211.9	558.3
75°	3396.5	3363.3	3911.7	9971.4	14099.1	14212.1	9359.9	3066.4	1035.8	572.7	278.1
77.5°	1821.2	1857.8	2213.4	5913.5	9739.9	9932.6	5107.0	884.0	527.3	389.9	183.9
80°	562.8	593.8	907.3	2707.5	5516.9	5633.2	1893.2	393.3	367.8	278.1	120.8
82.5°	177.2	183.9	423.2	1137.7	2289.8	2343.0	548.4	222.7	251.5	183.9	70.9
85°	51.0	52.1	188.3	424.3	566.1	577.2	154.0	86.4	144.0	114.1	36.6
87.5°	5.5	17.7	70.9	70.9	49.9	48.7	16.6	18.8	41.0	14.4	6.6
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°	2191.3	2191.3	2191.3	2191.3	2191.3	2191.3	2191.3	2191.3	2191.3	2191.3	2191.3
2.5°	2195.7	2196.8	2182.4	2158.0	2131.4	2109.3	2081.6	2059.4	2043.9	2039.5	2047.2
5°	2211.2	2203.4	2162.4	2088.2	1999.6	1923.2	1837.9	1770.3	1726.0	1707.1	1713.8
7.5°	2234.5	2212.3	2122.6	1976.3	1806.8	1656.2	1503.3	1384.8	1309.4	1271.8	1277.3
10°	2254.4	2210.1	2056.1	1814.6	1555.4	1327.2	1121.1	978.2	898.4	860.8	861.9
12.5°	2273.2	2209.0	1969.7	1622.9	1271.8	992.6	800.9	730.0	707.9	700.1	697.9
15°	2308.7	2212.3	1861.1	1403.6	989.3	750.0	680.2	679.1	683.5	681.3	680.2
17.5°	2357.4	2215.6	1738.2	1171.0	763.3	661.4	658.0	668.0	674.7	671.3	670.2
20°	2420.6	2228.9	1607.4	940.5	655.8	639.2	647.0	655.8	661.4	655.8	654.7
22.5°	2509.2	2252.2	1464.5	755.5	621.5	625.9	632.6	642.5	648.1	640.3	639.2
25°	2617.8	2288.7	1323.8	656.9	604.9	610.4	620.4	631.5	638.1	630.3	629.2
27.5°	2758.4	2347.5	1194.2	634.8	588.2	591.6	606.0	622.6	631.5	621.5	621.5
30°	2962.3	2443.8	1082.3	644.7	578.3	570.5	590.5	613.7	623.7	614.8	613.7
32.5°	3232.6	2580.1	1013.6	660.3	573.8	546.2	565.0	594.9	611.5	606.0	606.0
35°	3587.1	2787.3	987.1	678.0	570.5	520.7	534.0	566.1	594.9	600.4	600.4
37.5°	4016.9	3075.3	994.8	685.7	560.6	499.6	506.3	534.0	571.6	589.4	593.8
40°	4505.5	3410.9	1039.1	678.0	549.5	481.9	483.0	504.1	537.3	563.9	572.7
42.5°	5009.5	3803.1	1121.1	649.2	539.5	466.4	463.1	477.5	499.6	518.5	526.2
45°	5489.2	4206.4	1202.0	609.3	527.3	450.9	443.1	448.7	453.1	460.8	465.3
47.5°	5908.0	4490.0	1178.7	572.7	510.7	433.2	419.9	417.6	404.4	403.2	402.1
50°	6197.1	4552.0	1046.9	536.2	486.3	413.2	392.2	378.9	355.6	344.5	345.6
52.5°	6289.0	4307.2	855.2	499.6	446.4	386.6	356.7	335.7	306.9	296.9	295.8
55°	6167.2	3827.5	683.5	455.3	391.1	351.2	317.9	290.2	267.0	254.8	254.8
57.5°	5869.2	3217.1	540.6	403.2	332.3	311.3	278.1	250.4	230.4	218.2	216.0
60°	5375.1	2554.6	427.6	341.2	283.6	268.1	233.7	216.0	198.3	183.9	180.6
62.5°	4625.1	1823.5	335.7	270.3	237.1	219.3	199.4	186.1	165.1	145.1	141.8
65°	3609.2	1115.6	259.2	198.3	190.5	181.7	169.5	157.3	131.8	111.9	108.6
67.5°	2276.6	528.4	185.0	149.6	150.7	146.2	140.7	130.7	111.9	94.2	91.9
70°	1002.6	255.9	121.9	114.1	111.9	111.9	116.3	113.0	95.3	78.7	75.3
72.5°	341.2	137.4	90.8	86.4	80.9	79.8	97.5	94.2	76.4	60.9	57.6
75°	178.4	91.9	66.5	62.0	48.7	58.7	77.5	73.1	54.3	39.9	36.6
77.5°	116.3	65.4	45.4	39.9	27.7	38.8	57.6	51.0	32.1	19.9	17.7
80°	73.1	43.2	26.6	18.8	13.3	21.0	31.0	22.2	12.2	4.4	3.3
82.5°	38.8	22.2	10.0	6.6	5.5	6.6	7.8	5.5	2.2	0.0	0.0
85°	15.5	7.8	3.3	2.2	1.1	0.0	2.2	1.1	0.0	0.0	0.0
87.5°	5.5	1.1	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)