

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: P965810

Luminaire Tested: **NAV-SB4A-835-U-T2U-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P965810
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-17)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4A-835-U-T2U-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3500K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II U
OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13062.6 lumens
Efficiency: N/A
Efficacy: 114.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B2 - U0 - G2

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



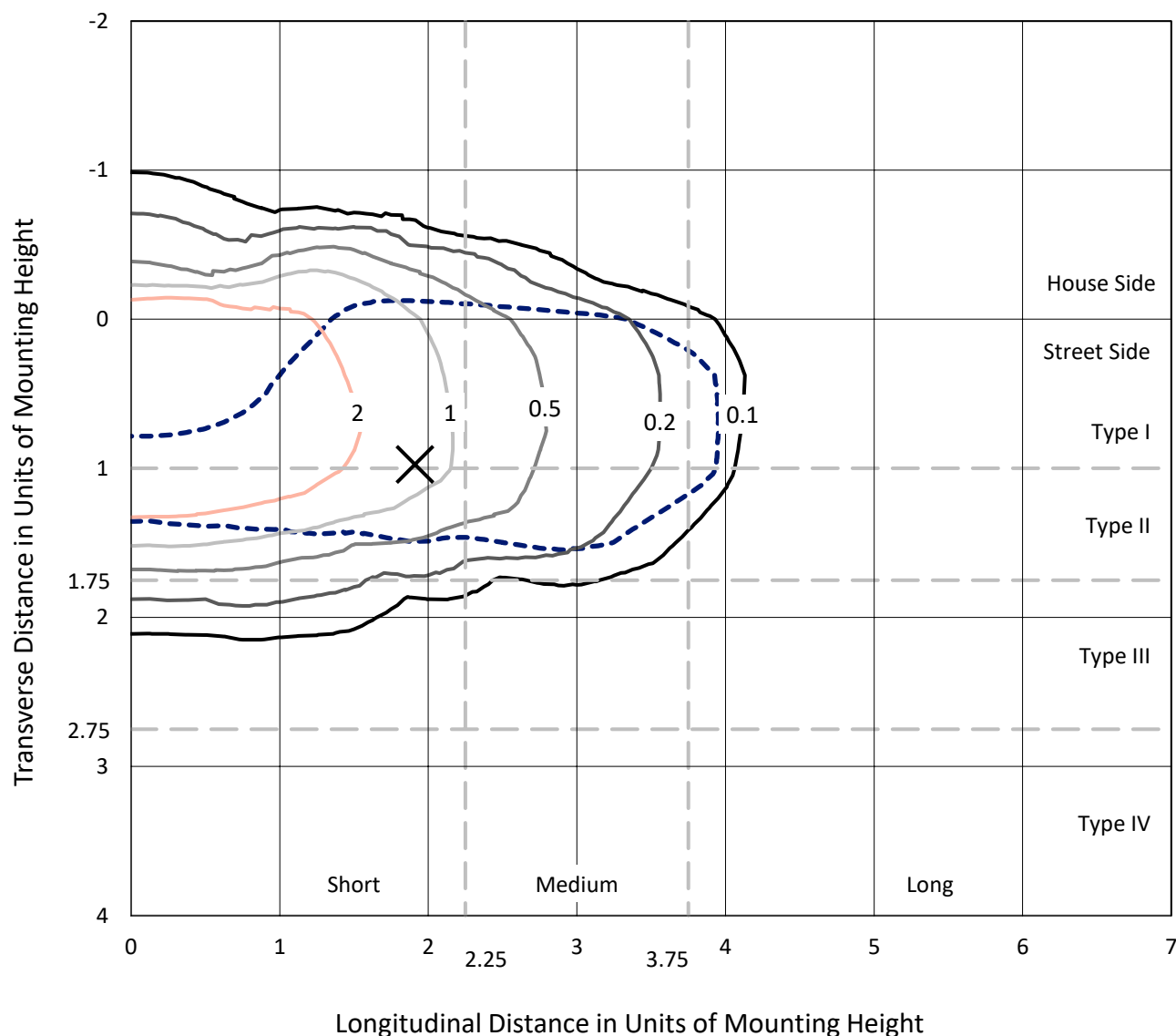
REPORT NUMBER: P965810

CATALOG NUMBER: NAV-SB4A-835-U-T2U-HSS

Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

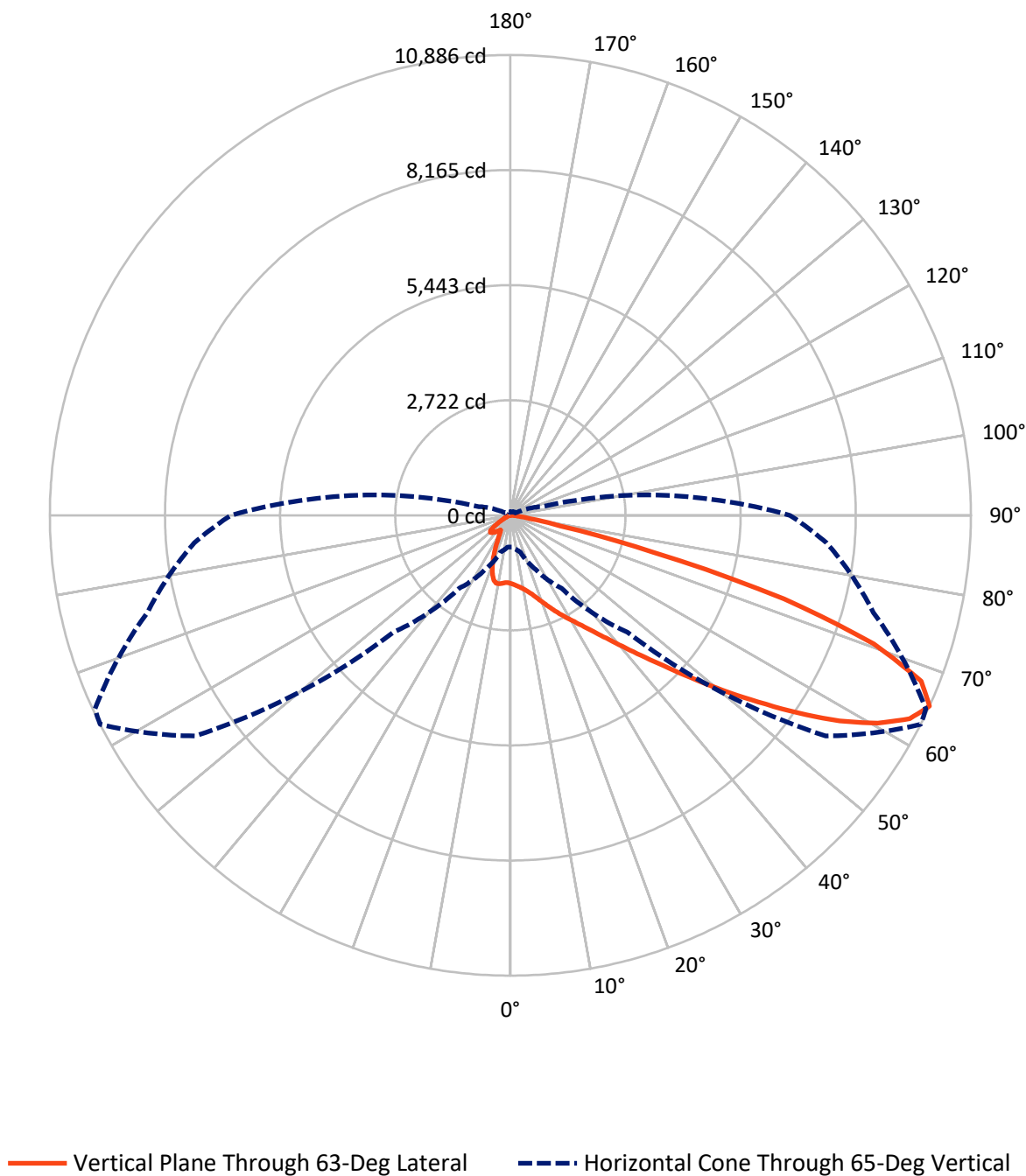


Based on 25 foot mounting height. Maximum calculated value = 4.4 fc

Type II - Short - N/A

REPORT NUMBER: P965810
CATALOG NUMBER: NAV-SB4A-835-U-T2U-HSS

Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1920.1	0.0	1920.1
	% Fixture	14.7	0.0	14.7
Street Side	Lumens	11142.5	0.0	11142.5
	% Fixture	85.3	0.0	85.3
Total	Lumens	13062.6	0.0	13062.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	151.9	1.2
10°-20°	421.5	3.2
20°-30°	733.9	5.6
30°-40°	1322.7	10.1
40°-50°	2623.4	20.1
50°-60°	3573.5	27.4
60°-70°	2852.3	21.8
70°-80°	1290.7	9.9
80°-90°	92.8	0.7
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°	13062.6	100.0
0°-180°	13062.6	100.0

Coefficient of Utilization



REPORT NUMBER: P965810

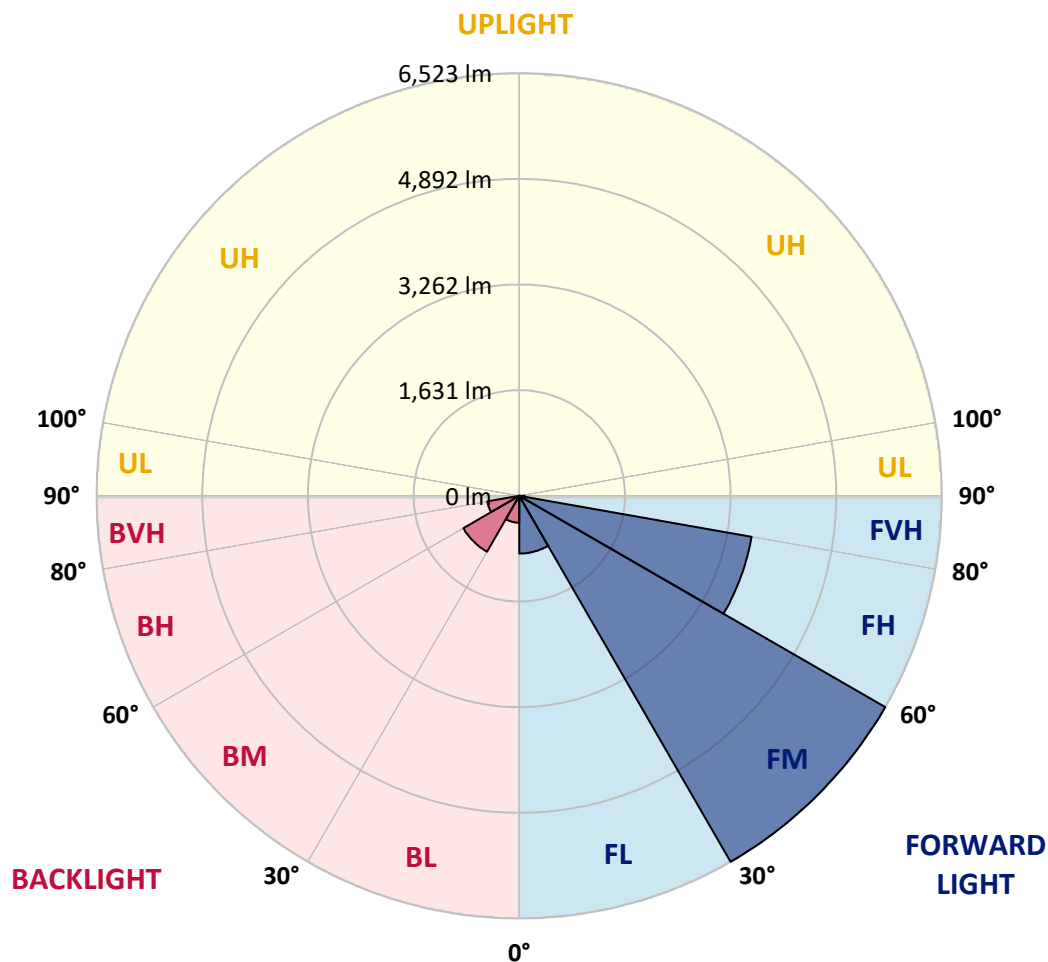
CATALOG NUMBER: NAV-SB4A-835-U-T2U-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	891.7	6.8			
FM	(30°-60°)	6523.1	49.9			
FH	(60°-80°)	3641.8	27.9			G2/5000
FVH	(80°-90°)	85.9	0.7			G1/100
BL	(0°-30°)	415.5	3.2	B1/500		
BM	(30°-60°)	996.4	7.6	B1/1000		
BH	(60°-80°)	501.3	3.8	B2/1000		G2/1000
BVH	(80°-90°)	6.9	0.1			G0/10
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 Short



REPORT NUMBER: P965810

CATALOG NUMBER: NAV-SB4A-835-U-T2U-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	63°	65°	75°	85°
0°	1612.2	1612.2	1612.2	1612.2	1612.2	1612.2	1612.2	1612.2	1612.2	1612.2	1612.2
2.5°	1649.9	1645.4	1651.7	1649.0	1647.2	1643.6	1641.8	1640.0	1636.4	1633.7	1623.0
5°	1654.5	1651.7	1658.0	1663.4	1668.8	1674.1	1676.9	1680.5	1676.9	1669.7	1658.9
7.5°	1616.6	1614.9	1628.3	1644.5	1668.8	1689.4	1712.0	1724.5	1725.4	1722.7	1711.0
10°	1614.0	1609.5	1623.0	1642.8	1674.1	1711.0	1750.6	1777.6	1781.1	1792.8	1780.2
12.5°	1656.2	1651.7	1670.5	1692.2	1724.5	1763.1	1811.7	1849.4	1854.8	1870.9	1862.0
15°	1727.2	1720.9	1742.5	1770.4	1811.7	1855.7	1906.9	1941.0	1945.6	1965.3	1949.1
17.5°	1809.8	1803.6	1828.7	1858.4	1903.3	1963.6	2022.8	2060.6	2066.0	2078.6	2048.9
20°	1915.9	1907.8	1927.6	1954.6	2002.2	2074.1	2145.1	2199.0	2198.1	2198.1	2149.5
22.5°	2039.0	2026.4	2043.5	2065.1	2110.1	2197.2	2291.6	2355.3	2355.3	2330.2	2250.2
25°	2171.2	2158.5	2177.4	2197.2	2236.8	2335.6	2446.2	2525.2	2528.8	2485.6	2358.0
27.5°	2336.5	2320.3	2334.6	2358.0	2381.4	2482.0	2613.2	2705.0	2706.7	2640.2	2460.5
30°	2654.6	2608.7	2563.8	2538.7	2549.5	2649.2	2789.4	2890.9	2899.9	2808.3	2571.9
32.5°	3237.0	3227.9	3069.8	2863.1	2755.2	2828.9	2986.2	3108.4	3113.8	2996.1	2716.6
35°	4141.8	4131.1	3876.8	3483.2	3131.8	3069.8	3225.3	3369.9	3366.3	3233.4	2904.4
37.5°	5222.1	5212.1	4877.0	4350.3	3781.5	3433.7	3533.5	3685.4	3707.8	3533.5	3147.1
40°	6145.0	6108.1	5896.0	5388.3	4644.2	4037.6	3972.0	4072.6	4096.0	3889.4	3455.3
42.5°	6844.1	6812.7	6704.8	6387.6	5688.4	4930.9	4488.8	4527.4	4553.5	4305.4	3809.4
45°	7206.3	7199.1	7242.2	7212.5	6752.4	6027.2	5227.4	5066.6	5076.4	4766.5	4211.0
47.5°	7257.5	7253.9	7450.7	7729.2	7667.2	7263.8	6175.5	5738.8	5703.7	5286.7	4647.8
50°	6955.5	6948.4	7325.8	7847.9	8278.3	8302.6	7252.1	6496.3	6419.1	5825.1	5103.4
52.5°	5991.2	5989.5	6609.5	7478.5	8493.2	9212.0	8316.0	7328.4	7199.1	6394.8	5585.1
55°	4610.0	4643.4	5354.1	6381.2	8101.3	9649.7	9271.3	8252.3	8053.6	6968.2	6029.0
57.5°	3265.6	3314.2	4017.0	4931.8	6886.4	9390.8	9917.5	9177.8	8964.0	7539.6	6479.2
60°	1754.2	1797.3	2500.9	3592.8	5123.2	8425.7	10258.1	9981.2	9779.1	8082.4	6885.4
62.5°	1045.1	1059.5	1350.6	2319.4	3465.2	6437.0	10113.4	10593.3	10427.0	8538.0	7238.6
65°	750.4	753.1	899.5	1416.2	2103.7	3910.9	9098.8	10886.2	10835.0	8881.3	7500.1
67.5°	631.7	630.0	691.1	940.8	1433.4	1959.1	6973.5	10471.9	10689.4	9098.8	7648.3
70°	541.9	544.6	616.4	689.3	1077.5	1108.9	3467.0	9117.7	9581.4	9156.3	7639.4
72.5°	403.5	412.5	479.0	628.1	813.2	762.9	1197.0	6760.5	7598.9	8627.0	7243.1
75°	284.8	289.4	337.0	528.4	606.6	555.3	611.1	3494.8	4569.7	6614.0	5928.4
77.5°	219.2	227.3	255.2	369.3	597.6	390.0	373.8	1209.6	1858.4	3995.3	4064.5
80°	118.6	133.0	184.2	266.9	419.6	275.9	185.1	481.6	630.0	1868.3	1567.2
82.5°	61.1	68.3	128.5	192.3	239.0	240.9	91.6	200.4	259.7	577.0	214.7
85°	24.3	29.6	86.3	106.1	123.1	118.6	41.3	80.9	93.5	160.0	65.6
87.5°	5.4	9.0	31.5	24.3	23.4	25.1	9.8	18.9	17.9	18.9	11.7
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: P965810

CATALOG NUMBER: NAV-SB4A-835-U-T2U-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1612.2	1612.2	1612.2	1612.2	1612.2	1612.2	1612.2	1612.2	1612.2	1612.2	1612.2
2.5°	1622.1	1618.5	1608.5	1597.8	1585.2	1578.0	1573.6	1572.7	1566.3	1561.9	1566.3
5°	1649.0	1645.4	1626.6	1604.1	1579.8	1561.0	1542.9	1526.8	1503.5	1499.0	1497.1
7.5°	1702.9	1693.1	1662.4	1631.9	1586.1	1531.2	1464.8	1388.4	1320.1	1299.4	1289.6
10°	1769.5	1755.9	1717.3	1663.4	1561.9	1412.7	1251.8	1102.6	984.0	950.8	938.2
12.5°	1844.9	1833.2	1782.1	1682.2	1460.3	1189.8	943.6	758.5	643.4	614.7	606.6
15°	1934.8	1917.7	1846.7	1653.5	1278.8	904.0	647.9	538.3	496.9	491.6	486.2
17.5°	2030.0	2002.2	1904.2	1550.2	1034.3	642.6	500.5	469.1	451.1	445.8	443.0
20°	2117.2	2081.3	1938.4	1393.8	772.8	500.5	448.4	427.7	411.5	405.3	401.7
22.5°	2204.4	2153.1	1938.4	1180.8	579.6	443.9	411.5	392.7	373.8	365.7	361.2
25°	2295.2	2226.8	1904.2	943.6	466.4	407.1	376.5	355.9	339.7	329.8	326.3
27.5°	2383.2	2288.8	1826.0	718.9	415.1	374.7	344.2	324.4	309.1	302.0	302.0
30°	2466.8	2349.9	1716.5	545.5	381.9	343.3	314.6	297.5	282.2	275.0	275.9
32.5°	2580.0	2427.2	1599.6	447.5	353.2	313.6	287.6	271.4	257.9	252.6	252.6
35°	2737.3	2541.4	1499.0	439.4	328.9	289.4	263.3	248.0	234.5	230.0	230.0
37.5°	2960.1	2725.6	1446.0	493.3	309.1	267.8	243.5	227.3	214.7	211.2	210.3
40°	3235.1	2975.4	1474.7	547.2	295.6	249.0	225.6	209.4	198.6	194.1	193.2
42.5°	3561.4	3283.7	1633.7	588.7	286.7	232.8	208.5	190.5	183.4	181.5	181.5
45°	3936.1	3622.5	1877.3	632.6	272.2	217.5	191.4	177.9	172.5	171.7	170.8
47.5°	4362.0	3994.5	2159.5	687.5	257.9	203.1	177.9	168.9	164.4	162.7	162.7
50°	4784.4	4369.3	2449.8	718.0	246.2	189.6	167.2	160.0	156.4	155.5	155.5
52.5°	5226.6	4754.8	2684.3	689.3	236.4	178.9	158.2	152.7	149.1	148.3	148.3
55°	5648.0	5066.6	2724.7	585.1	216.6	168.0	148.3	145.5	141.0	141.0	140.2
57.5°	6011.0	5222.9	2438.9	429.6	196.8	151.9	138.4	135.7	132.1	131.2	130.3
60°	6344.4	5178.0	1882.6	289.4	175.3	135.7	125.8	124.0	120.4	115.9	115.0
62.5°	6532.2	4980.3	1287.8	188.7	153.6	118.6	111.4	110.5	102.4	93.5	91.6
65°	6603.3	4574.1	803.4	137.5	128.5	101.6	96.1	94.4	82.7	72.8	71.9
67.5°	6541.2	3905.6	405.3	108.8	101.6	84.5	79.1	79.1	71.0	62.0	61.1
70°	6293.2	2927.8	170.8	87.1	78.2	64.7	64.7	68.3	60.2	50.3	49.4
72.5°	5755.0	1969.8	90.7	66.5	58.4	45.8	53.0	55.8	47.7	37.7	37.7
75°	4575.0	1201.5	62.9	49.4	36.8	32.4	40.5	42.2	32.4	25.1	24.3
77.5°	3129.1	690.1	42.2	31.5	23.4	18.9	27.9	26.0	17.1	11.7	12.6
80°	1374.0	287.6	24.3	14.3	9.0	7.2	9.8	7.2	5.4	3.6	3.6
82.5°	160.8	67.4	9.0	5.4	3.6	1.8	0.9	0.0	0.0	0.0	0.0
85°	33.2	8.1	4.5	1.8	0.9	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	6.3	1.8	0.9	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)