

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: P965748

Luminaire Tested: **NAV-SB4A-827-U-T2U-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P965748
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-827-U-T2U-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 2700K, 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: 12245.7 lumens
Efficiency: N/A
Efficacy: 107.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B1 - 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



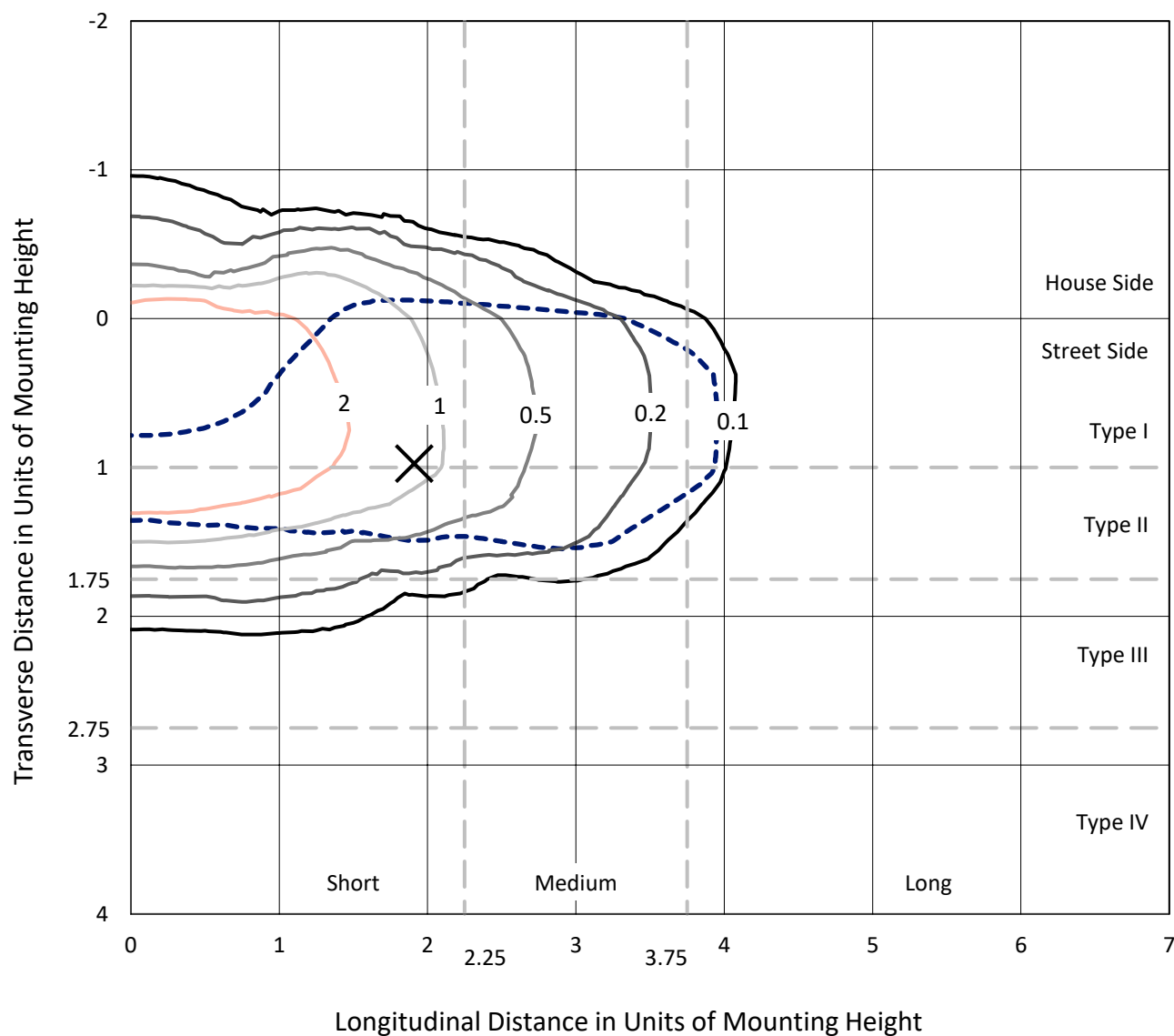
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

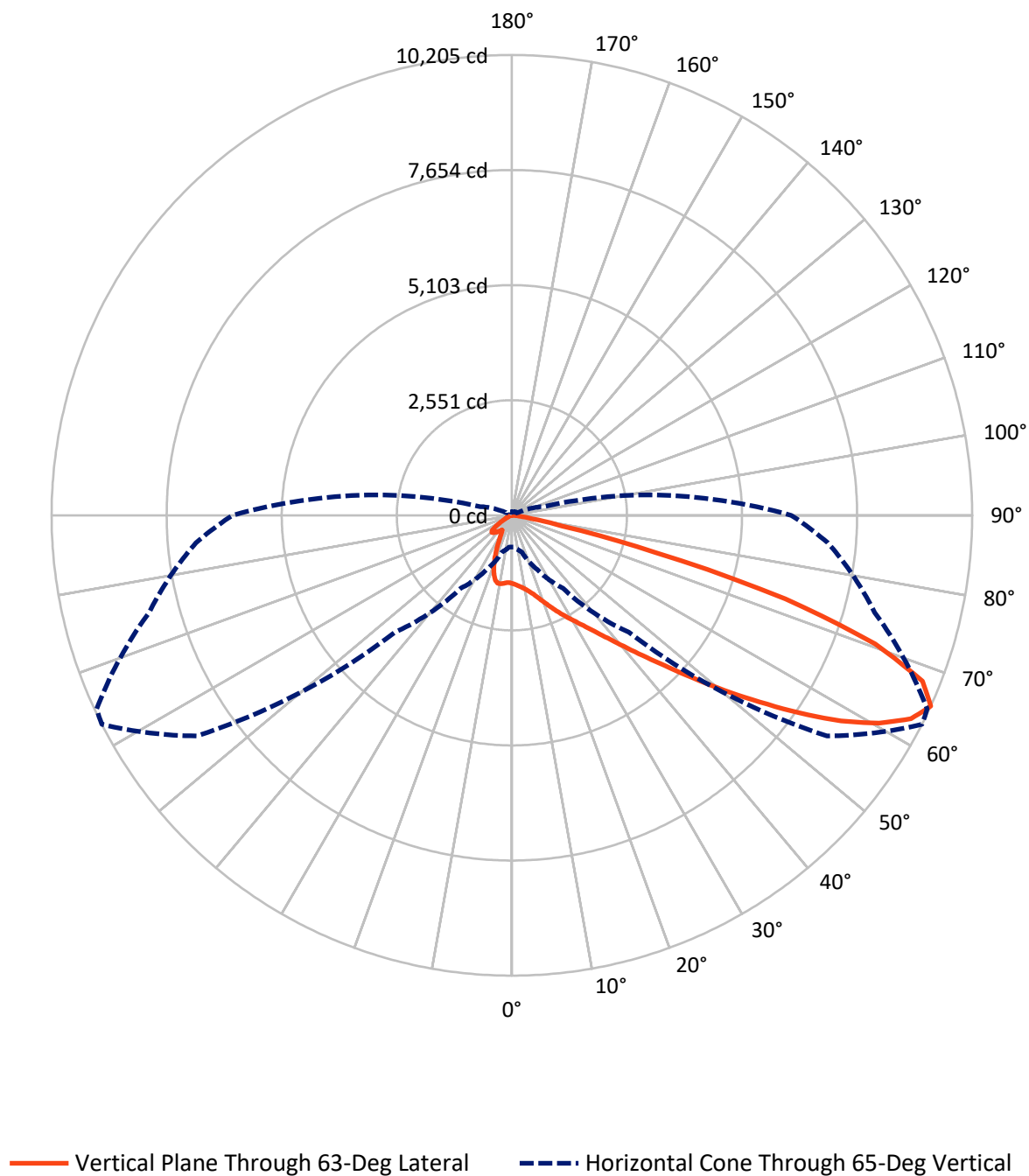


Based on 25 foot mounting height. Maximum calculated value = 4.1 fc

Type II - Short - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1800.0	0.0	1800.0
	% Fixture	14.7	0.0	14.7
Street Side	Lumens	10445.7	0.0	10445.7
	% Fixture	85.3	0.0	85.3
Total	Lumens	12245.7	0.0	12245.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.4	1.2
10°-20°	395.1	3.2
20°-30°	688.0	5.6
30°-40°	1240.0	10.1
40°-50°	2459.3	20.1
50°-60°	3350.0	27.4
60°-70°	2673.9	21.8
70°-80°	1210.0	9.9
80°-90°	87.0	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°	12245.7	100.0
0°-180°	12245.7	100.0

Coefficient of Utilization



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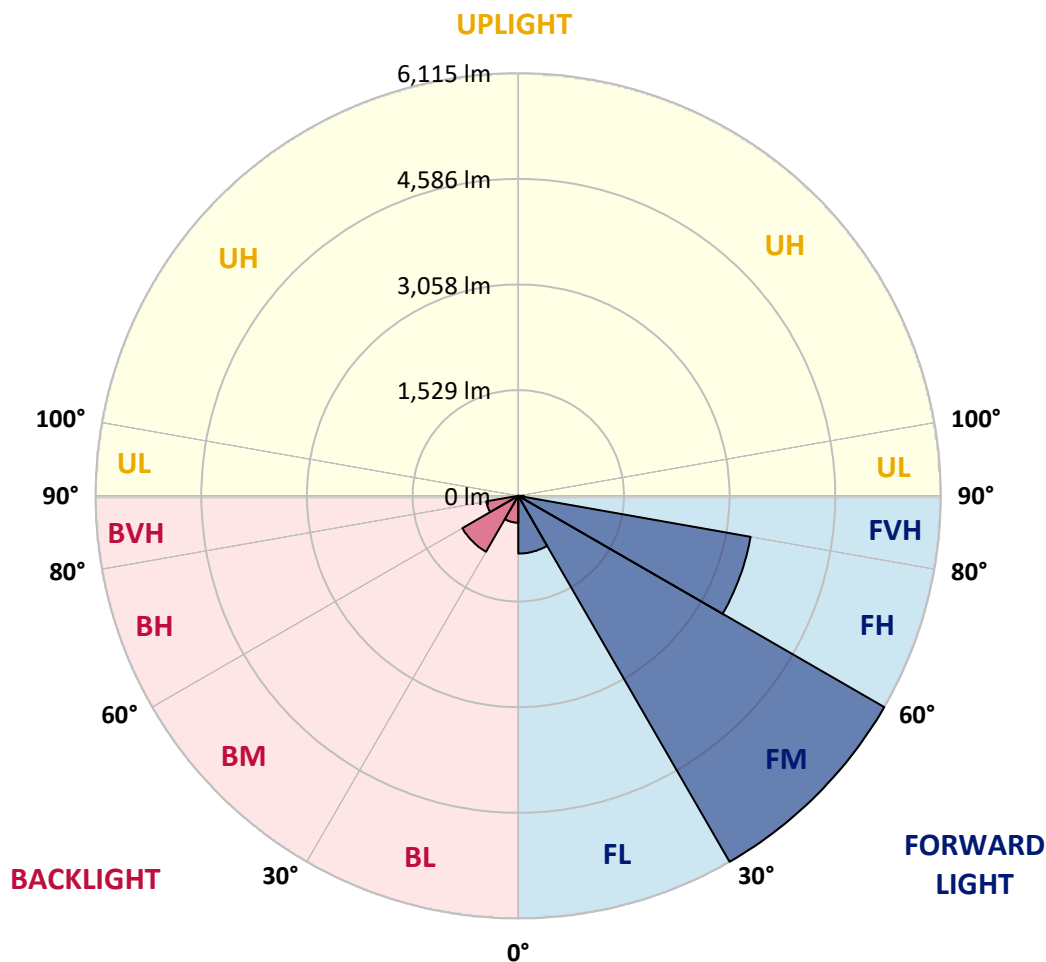
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	835.9	6.8			
FM	(30°-60°)	6115.2	49.9			
FH	(60°-80°)	3414.0	27.9			G2/5000
FVH	(80°-90°)	80.5	0.7			G1/100
BL	(0°-30°)	389.6	3.2	B1/500		
BM	(30°-60°)	934.1	7.6	B1/1000		
BH	(60°-80°)	469.9	3.8	B1/500		G1/500
BVH	(80°-90°)	6.4	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type II Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	63°	65°	75°	85°
0°	1511.4	1511.4	1511.4	1511.4	1511.4	1511.4	1511.4	1511.4	1511.4	1511.4	1511.4
2.5°	1546.7	1542.5	1548.4	1545.9	1544.2	1540.9	1539.1	1537.5	1534.1	1531.6	1521.4
5°	1550.9	1548.4	1554.3	1559.3	1564.5	1569.5	1572.0	1575.3	1572.0	1565.3	1555.1
7.5°	1515.6	1513.9	1526.5	1541.7	1564.5	1583.8	1604.8	1616.6	1617.4	1615.0	1604.0
10°	1513.0	1508.8	1521.4	1540.0	1569.5	1604.0	1641.1	1666.3	1669.7	1680.7	1668.9
12.5°	1552.7	1548.4	1566.1	1586.3	1616.6	1652.9	1698.3	1733.8	1738.8	1754.0	1745.6
15°	1619.2	1613.2	1633.5	1659.6	1698.3	1739.6	1787.7	1819.7	1823.9	1842.4	1827.3
17.5°	1696.7	1690.7	1714.4	1742.2	1784.3	1840.7	1896.4	1931.7	1936.7	1948.6	1920.7
20°	1796.1	1788.5	1807.1	1832.3	1877.0	1944.3	2010.9	2061.5	2060.7	2060.7	2015.2
22.5°	1911.5	1899.7	1915.7	1935.9	1978.0	2059.7	2148.2	2208.1	2208.1	2184.5	2109.4
25°	2035.3	2023.6	2041.3	2059.7	2096.8	2189.5	2293.1	2367.2	2370.6	2330.2	2210.6
27.5°	2190.3	2175.2	2188.7	2210.6	2232.4	2326.9	2449.9	2535.7	2537.5	2475.1	2306.7
30°	2488.6	2445.6	2403.5	2379.9	2390.0	2483.6	2615.0	2710.1	2718.6	2632.6	2411.1
32.5°	3034.5	3026.1	2877.8	2684.1	2582.9	2652.0	2799.5	2914.0	2919.1	2808.7	2546.7
35°	3882.8	3872.8	3634.3	3265.3	2935.9	2877.8	3023.5	3159.2	3155.8	3031.1	2722.8
37.5°	4895.5	4886.2	4571.9	4078.3	3545.0	3219.0	3312.5	3454.9	3476.0	3312.5	2950.3
40°	5760.6	5726.1	5527.3	5051.3	4353.8	3785.1	3723.6	3817.9	3839.9	3646.1	3239.2
42.5°	6416.1	6386.6	6285.5	5988.2	5332.7	4622.5	4208.0	4244.2	4268.7	4036.1	3571.1
45°	6755.6	6748.8	6789.3	6761.5	6330.1	5650.3	4900.5	4749.7	4759.0	4468.3	3947.7
47.5°	6803.6	6800.3	6984.8	7245.8	7187.7	6809.5	5789.3	5379.8	5347.0	4956.1	4357.2
50°	6520.5	6513.8	6867.6	7357.0	7760.6	7783.3	6798.5	6090.0	6017.6	5460.7	4784.3
52.5°	5616.6	5615.0	6196.2	7010.8	7962.0	8635.9	7795.9	6870.2	6748.8	5994.8	5235.8
55°	4321.7	4352.9	5019.3	5982.2	7594.6	9046.1	8691.5	7736.2	7550.0	6532.3	5652.0
57.5°	3061.5	3107.0	3765.7	4623.4	6455.7	8803.5	9297.3	8603.8	8403.4	7068.1	6074.0
60°	1644.4	1684.9	2344.5	3368.0	4802.7	7898.8	9616.6	9357.0	9167.5	7577.0	6454.8
62.5°	979.8	993.2	1266.2	2174.3	3248.4	6034.5	9480.8	9930.7	9774.9	8004.1	6785.9
65°	703.5	706.0	843.3	1327.7	1972.2	3666.3	8529.7	10205.4	10157.3	8325.9	7031.1
67.5°	592.2	590.6	647.8	882.0	1343.7	1836.5	6537.3	9817.0	10020.9	8529.7	7170.1
70°	508.0	510.6	577.9	646.2	1010.1	1039.6	3250.2	8547.5	8982.2	8583.7	7161.7
72.5°	378.2	386.7	449.1	588.9	762.4	715.2	1122.2	6337.7	7123.7	8087.5	6790.1
75°	267.0	271.3	315.9	495.4	568.7	520.6	572.9	3276.3	4283.9	6200.4	5557.7
77.5°	205.5	213.1	239.2	346.2	560.3	365.6	350.4	1134.0	1742.2	3745.6	3810.3
80°	111.2	124.6	172.7	250.2	393.4	258.6	173.5	451.5	590.6	1751.4	1469.2
82.5°	57.3	64.1	120.4	180.3	224.1	225.8	85.9	187.9	243.4	540.9	201.3
85°	22.8	27.8	80.9	99.4	115.4	111.2	38.7	75.8	87.6	150.0	61.5
87.5°	5.0	8.4	29.5	22.8	21.9	23.6	9.2	17.7	16.8	17.7	11.0
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°	1511.4	1511.4	1511.4	1511.4	1511.4	1511.4	1511.4	1511.4	1511.4	1511.4	1511.4
2.5°	1520.6	1517.2	1508.0	1497.8	1486.0	1479.4	1475.1	1474.3	1468.4	1464.2	1468.4
5°	1545.9	1542.5	1524.8	1503.8	1481.0	1463.3	1446.5	1431.3	1409.4	1405.2	1403.5
7.5°	1596.4	1587.2	1558.5	1529.9	1487.0	1435.5	1373.2	1301.5	1237.6	1218.2	1208.9
10°	1658.8	1646.2	1609.9	1559.3	1464.2	1324.3	1173.5	1033.7	922.5	891.3	879.6
12.5°	1729.6	1718.6	1670.5	1577.1	1369.0	1115.4	884.6	711.0	603.2	576.3	568.7
15°	1813.7	1797.7	1731.2	1550.1	1198.8	847.5	607.4	504.6	465.9	460.8	455.7
17.5°	1903.1	1877.0	1785.1	1453.2	969.6	602.4	469.2	439.7	422.9	417.9	415.3
20°	1984.8	1951.1	1817.1	1306.7	724.5	469.2	420.4	401.0	385.8	380.0	376.6
22.5°	2066.5	2018.5	1817.1	1107.0	543.4	416.2	385.8	368.2	350.4	342.9	338.7
25°	2151.6	2087.6	1785.1	884.6	437.3	381.6	353.0	333.6	318.5	309.1	305.8
27.5°	2234.2	2145.7	1711.9	673.9	389.2	351.3	322.7	304.1	289.8	283.1	283.1
30°	2312.5	2203.0	1609.0	511.4	358.0	321.8	294.9	278.8	264.6	257.8	258.6
32.5°	2418.7	2275.4	1499.6	419.5	331.1	294.0	269.6	254.4	241.8	236.8	236.8
35°	2566.1	2382.4	1405.2	411.9	308.3	271.3	246.8	232.5	219.9	215.7	215.7
37.5°	2775.0	2555.1	1355.5	462.5	289.8	251.0	228.3	213.1	201.3	197.9	197.1
40°	3032.8	2789.3	1382.4	513.0	277.2	233.4	211.5	196.3	186.1	181.9	181.1
42.5°	3338.6	3078.3	1531.6	551.8	268.8	218.2	195.5	178.6	171.9	170.1	170.1
45°	3689.9	3395.9	1759.8	593.1	255.2	203.9	179.5	166.8	161.7	160.9	160.1
47.5°	4089.2	3744.6	2024.4	644.5	241.8	190.3	166.8	158.4	154.2	152.5	152.5
50°	4485.2	4096.0	2296.5	673.1	230.8	177.7	156.7	150.0	146.6	145.8	145.8
52.5°	4899.7	4457.4	2516.4	646.2	221.6	167.7	148.3	143.2	139.8	139.0	139.0
55°	5294.7	4749.7	2554.3	548.5	203.1	157.5	139.0	136.4	132.2	132.2	131.4
57.5°	5635.1	4896.3	2286.4	402.7	184.5	142.4	129.8	127.2	123.8	123.0	122.2
60°	5947.7	4854.2	1764.9	271.3	164.3	127.2	118.0	116.2	112.9	108.6	107.8
62.5°	6123.8	4668.9	1207.2	176.9	144.0	111.2	104.4	103.6	96.0	87.6	85.9
65°	6190.3	4288.1	753.2	128.9	120.4	95.2	90.1	88.5	77.5	68.3	67.4
67.5°	6132.2	3661.3	380.0	101.9	95.2	79.2	74.1	74.1	66.5	58.1	57.3
70°	5899.7	2744.6	160.1	81.7	73.3	60.7	60.7	64.1	56.5	47.2	46.3
72.5°	5395.0	1846.6	85.1	62.3	54.7	42.9	49.7	52.3	44.7	35.4	35.4
75°	4288.9	1126.4	58.9	46.3	34.5	30.3	37.9	39.6	30.3	23.6	22.8
77.5°	2933.3	647.0	39.6	29.5	21.9	17.7	26.1	24.4	16.0	11.0	11.8
80°	1288.1	269.6	22.8	13.5	8.4	6.8	9.2	6.8	5.0	3.4	3.4
82.5°	150.8	63.1	8.4	5.0	3.4	1.6	0.8	0.0	0.0	0.0	0.0
85°	31.2	7.6	4.2	1.6	0.8	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	5.9	1.6	0.8	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)