

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: P883646

Luminaire Tested: **NAV-SB4A-830-U-T2-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P883646
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-830-U-T2-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3000K, 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: 11616 lumens
Efficiency: N/A
Efficacy: 101.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B2 - U0 - G2

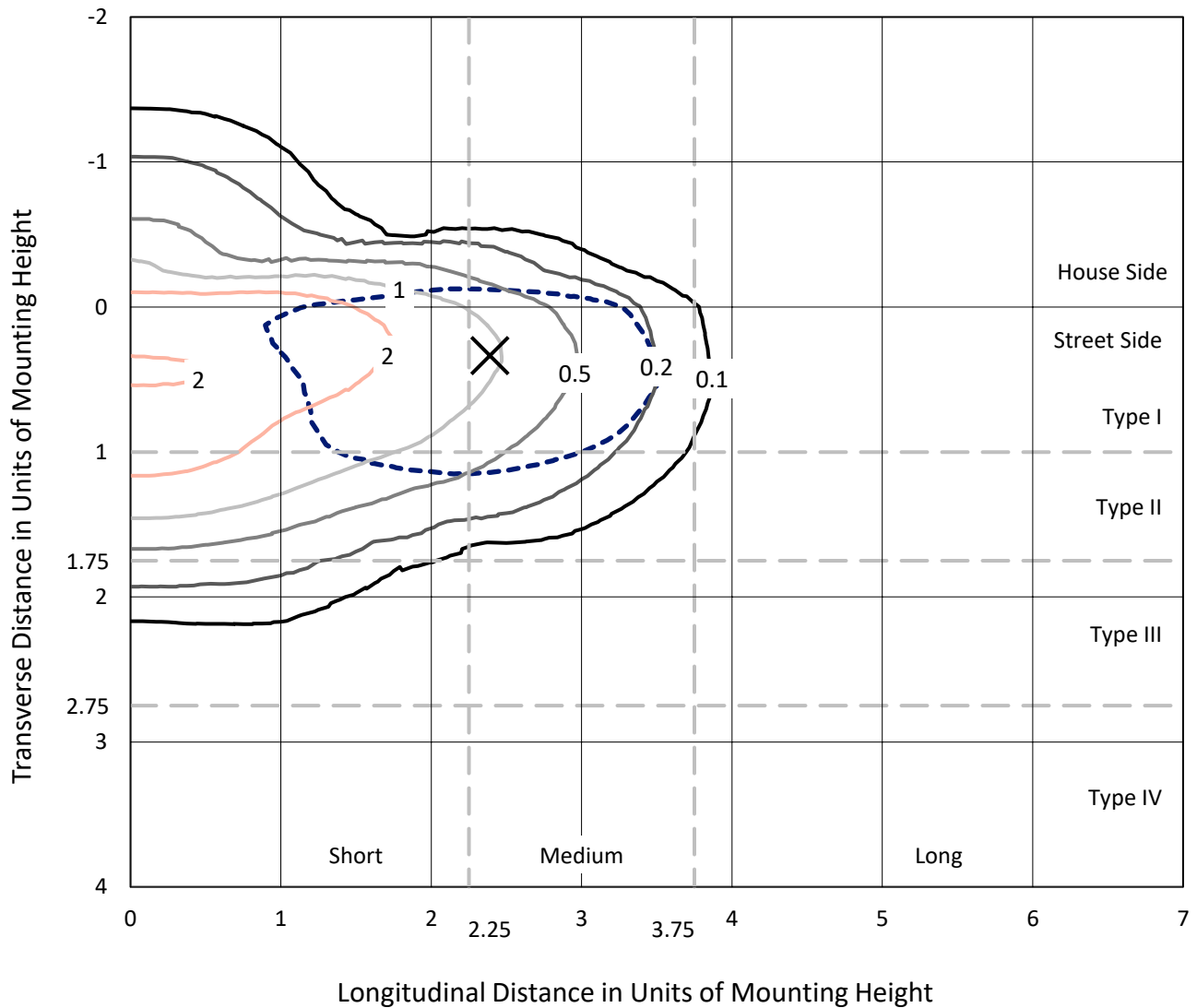
Input Watts (W): 114
Input Voltage (V): 120.0
Input Current (Ain): 0.952
Voltage Rise (V): NR
Power Factor: 0.995
Total Harmonic Distortion (THDi): 8.206
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

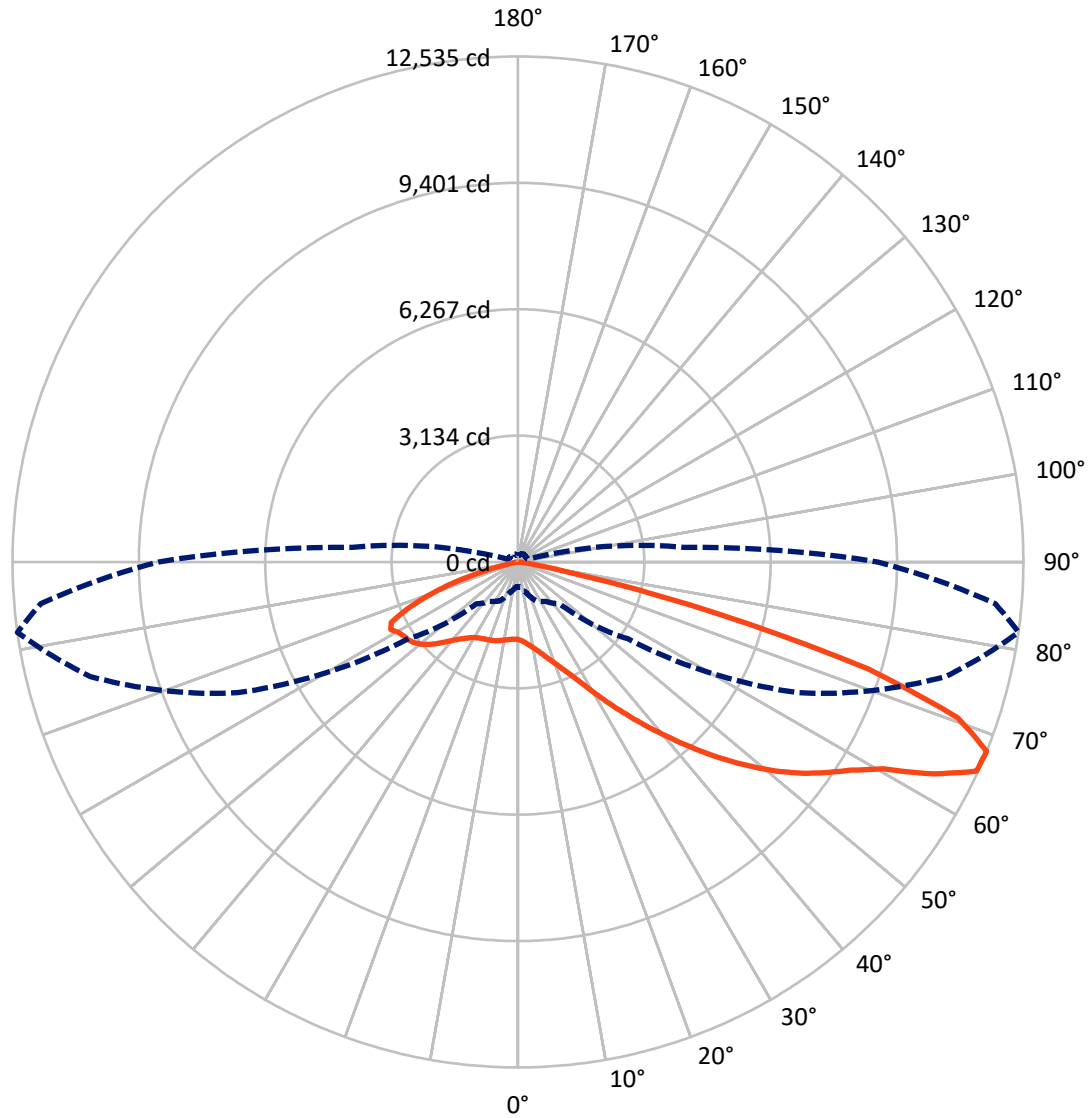
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.1 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	2104.1	0.0	2104.1
	% Fixture	18.1	0.0	18.1
Street Side	Lumens	9511.9	0.0	9511.9
	% Fixture	81.9	0.0	81.9
Total	Lumens	11616.0	0.0	11616.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	171.4	1.5
10°-20°	445.5	3.8
20°-30°	713.6	6.1
30°-40°	1261.8	10.9
40°-50°	2210.9	19.0
50°-60°	2948.7	25.4
60°-70°	2745.1	23.6
70°-80°	1053.6	9.1
80°-90°	65.4	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°	11616.0	100.0
0°-180°	11616.0	100.0

Coefficient of Utilization



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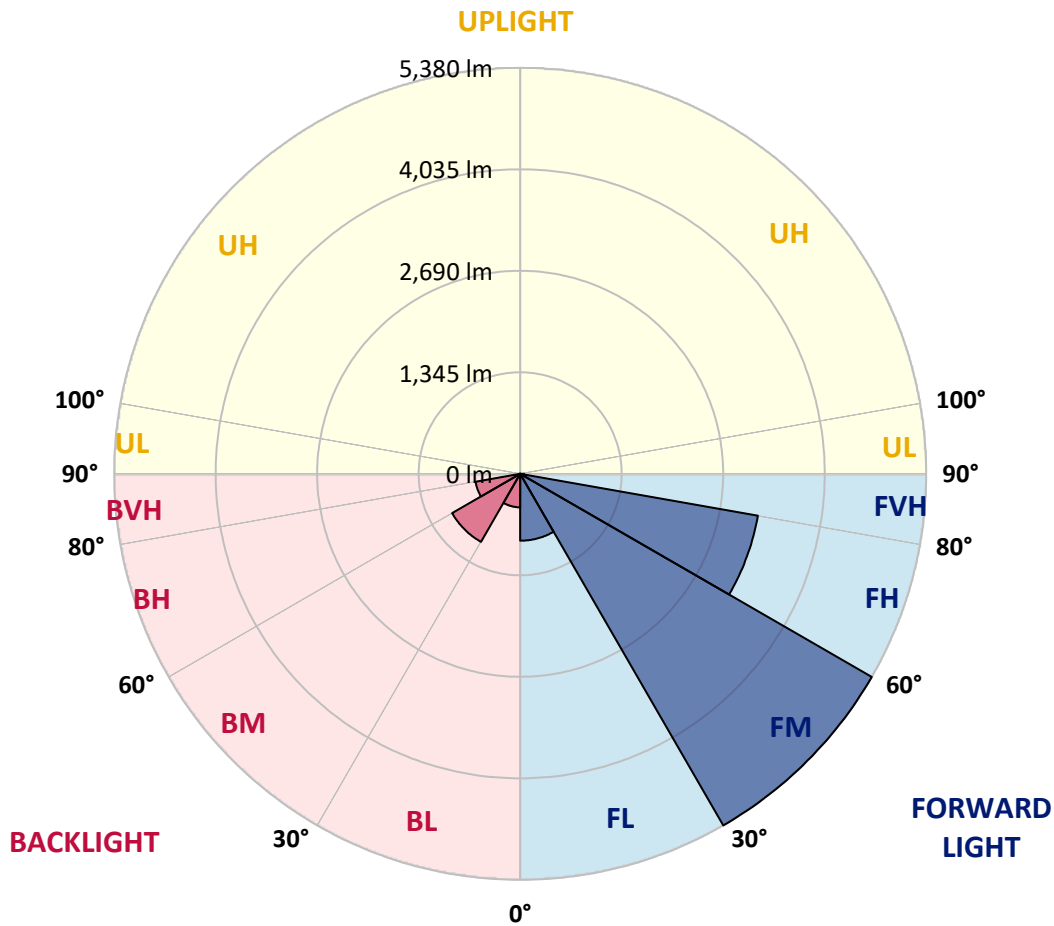
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	886.2	7.6			
FM (30°-60°)	5380.1	46.3			
FH (60°-80°)	3198.1	27.5			G2/5000
FVH (80°-90°)	47.6	0.4			G1/100
BL (0°-30°)	444.4	3.8	B1/500		
BM (30°-60°)	1041.3	9.0	B2/2500		
BH (60°-80°)	600.6	5.2	B2/1000		G2/1000
BVH (80°-90°)	17.9	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°	1924.4	1924.4	1924.4	1924.4	1924.4	1924.4	1924.4	1924.4	1924.4	1924.4	1924.4
2.5°	2033.9	2045.6	2039.0	2035.6	2029.8	2021.4	2014.7	1993.8	1972.0	1957.8	1952.8
5°	2074.9	2086.6	2085.8	2089.1	2093.3	2095.8	2094.2	2070.7	2039.8	2015.5	2001.3
7.5°	2039.8	2053.2	2064.0	2080.8	2110.0	2141.0	2156.0	2151.0	2119.2	2085.8	2068.2
10°	1940.3	1954.5	1980.4	2019.7	2081.6	2148.5	2204.5	2230.5	2210.4	2173.6	2149.3
12.5°	1757.9	1772.2	1823.2	1908.5	2012.2	2128.4	2235.5	2304.9	2309.9	2273.1	2244.7
15°	1553.1	1567.3	1621.6	1728.7	1886.7	2073.2	2252.2	2383.5	2427.8	2396.1	2361.8
17.5°	1425.9	1438.5	1479.5	1565.6	1730.4	1962.8	2246.4	2467.2	2568.3	2543.3	2502.3
20°	1387.5	1398.3	1417.6	1477.8	1614.9	1848.3	2207.9	2545.8	2719.7	2705.5	2659.5
22.5°	1428.4	1438.5	1444.3	1471.1	1557.2	1773.0	2159.4	2626.1	2895.3	2897.0	2841.0
25°	1522.9	1533.0	1526.3	1543.0	1580.6	1749.6	2141.0	2720.6	3116.1	3134.5	3071.0
27.5°	1678.5	1679.3	1663.4	1662.6	1668.5	1784.7	2160.2	2821.8	3394.6	3428.9	3350.3
30°	1990.4	1977.9	1916.9	1850.8	1820.7	1890.1	2213.7	2941.3	3723.3	3784.4	3685.7
32.5°	2471.3	2452.9	2340.9	2182.8	2023.9	2059.9	2309.9	3077.7	4081.3	4191.6	4071.2
35°	2993.2	2988.2	2871.1	2636.1	2358.4	2301.6	2466.3	3256.6	4471.8	4647.4	4504.4
37.5°	3478.3	3475.8	3408.9	3132.0	2794.2	2638.6	2717.2	3490.8	4890.0	5144.2	4975.3
40°	3921.5	3929.0	3862.1	3614.6	3274.2	3071.0	3058.4	3780.2	5355.0	5685.3	5484.6
42.5°	4304.6	4312.9	4245.2	4062.0	3748.4	3549.4	3477.4	4134.8	5809.1	6266.6	6029.0
45°	4564.6	4616.5	4606.5	4460.1	4235.1	4028.6	3980.9	4579.7	6326.8	6882.9	6604.4
47.5°	4638.2	4685.9	4761.2	4781.3	4644.1	4440.9	4497.7	5115.8	6850.3	7500.1	7183.2
50°	4456.8	4501.1	4657.5	4865.7	4961.1	4898.3	5000.4	5690.3	7386.4	8115.7	7751.0
52.5°	4098.8	4144.0	4341.4	4670.9	5059.8	5257.1	5504.7	6256.5	7905.8	8698.6	8288.8
55°	3581.1	3628.8	3882.2	4255.2	4871.6	5405.2	5925.3	6821.9	8381.6	9223.0	8773.9
57.5°	2876.9	2912.1	3175.5	3697.4	4398.2	5258.0	6235.6	7439.1	8829.9	9738.1	9254.7
60°	1875.0	1906.0	2212.1	2794.2	3613.7	4766.2	6297.5	8127.4	9425.4	10408.0	9902.9
62.5°	1247.0	1267.9	1449.3	1876.7	2544.9	3822.0	5935.4	8676.8	10298.5	11573.9	11014.4
65°	855.6	876.5	1057.9	1355.7	1644.2	2528.2	4894.2	8604.1	11089.6	12499.7	11838.1
67.5°	610.5	628.1	782.0	1063.0	1190.1	1468.6	3317.7	7674.1	10975.9	12534.8	11882.5
70°	437.4	447.4	574.6	828.0	945.9	882.3	1844.9	5869.3	9610.2	11574.7	10977.6
72.5°	306.1	309.4	398.9	630.6	761.9	644.0	878.1	3913.2	7268.5	9085.0	8510.4
75°	207.4	211.6	268.5	462.5	611.4	491.8	465.0	2098.3	4266.9	5028.8	4507.8
77.5°	127.1	128.8	173.1	316.1	457.5	374.7	299.4	889.0	1650.9	1620.8	1381.6
80°	71.9	71.9	110.4	196.5	311.9	241.7	209.9	378.0	522.7	459.1	404.8
82.5°	40.1	41.0	80.3	122.1	206.6	143.0	115.4	174.8	225.8	199.9	174.0
85°	16.7	18.4	49.3	57.7	98.7	71.1	46.8	73.6	83.6	74.4	54.4
87.5°	1.7	2.5	15.1	10.9	11.7	14.2	6.7	14.2	11.7	11.7	8.4
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°	1924.4	1924.4	1924.4	1924.4	1924.4	1924.4	1924.4	1924.4	1924.4	1924.4	1924.4
2.5°	1936.9	1924.4	1892.6	1855.8	1807.3	1783.9	1752.1	1730.4	1712.0	1713.6	1696.9
5°	1974.6	1942.8	1871.7	1783.0	1672.6	1594.0	1510.4	1452.7	1405.9	1395.8	1373.2
7.5°	2026.4	1976.2	1851.6	1691.9	1505.4	1364.0	1237.8	1156.6	1098.9	1080.5	1062.1
10°	2093.3	2020.6	1825.7	1577.3	1308.8	1129.0	993.6	930.0	890.7	877.3	867.3
12.5°	2171.1	2071.6	1791.4	1437.6	1106.5	933.3	847.2	815.4	802.9	798.7	796.2
15°	2268.9	2135.1	1739.6	1272.0	935.0	813.7	776.9	772.8	774.4	772.8	771.9
17.5°	2385.2	2204.5	1655.1	1101.4	819.6	752.7	739.3	742.7	746.8	746.0	744.3
20°	2512.3	2273.1	1547.2	950.1	741.0	709.2	701.7	705.0	708.4	706.7	705.9
22.5°	2657.0	2346.7	1427.6	832.1	688.3	669.1	660.7	661.5	661.5	658.2	656.5
25°	2830.1	2427.8	1302.2	748.5	648.1	633.1	623.1	619.7	614.7	604.7	603.0
27.5°	3036.7	2514.0	1181.7	690.0	616.4	602.2	590.4	582.1	569.5	552.8	551.1
30°	3269.2	2618.5	1079.7	653.2	591.3	577.1	563.7	551.1	532.7	511.8	510.2
32.5°	3542.7	2730.6	1005.3	628.9	568.7	553.6	537.8	522.7	502.6	481.7	482.6
35°	3868.8	2866.1	961.8	612.2	551.1	531.1	513.5	496.8	481.7	463.3	461.7
37.5°	4222.6	3009.9	948.4	603.8	539.4	508.5	488.4	476.7	475.0	464.2	463.3
40°	4609.8	3180.5	958.4	598.8	526.9	486.7	465.0	462.5	466.7	447.4	448.3
42.5°	5019.6	3382.9	975.2	593.0	509.3	465.0	444.1	444.1	440.7	414.0	414.0
45°	5462.9	3616.3	991.9	578.7	488.4	443.3	427.4	421.5	407.3	381.4	380.5
47.5°	5909.5	3853.8	1004.4	552.8	463.3	424.9	410.6	397.3	376.3	352.9	352.1
50°	6333.5	4067.0	991.0	514.3	434.9	407.3	392.2	373.8	351.3	335.4	332.9
52.5°	6712.3	4251.9	934.2	469.2	404.8	388.9	375.5	356.3	337.9	321.1	319.5
55°	7041.8	4401.6	833.8	426.5	378.0	373.0	359.6	335.4	310.3	296.1	294.4
57.5°	7358.0	4515.3	708.4	391.4	353.8	355.4	335.4	313.6	290.2	275.2	273.5
60°	7778.6	4667.5	581.2	358.8	327.8	332.9	311.1	295.2	266.0	246.7	244.2
62.5°	8451.0	4904.2	461.7	318.6	297.7	299.4	290.2	271.0	235.8	213.3	211.6
65°	8984.6	4817.2	363.8	275.2	263.4	266.0	266.0	245.0	207.4	181.5	179.0
67.5°	8924.4	4124.7	290.2	232.5	230.8	232.5	238.4	220.8	184.0	163.1	159.7
70°	8221.1	3280.9	232.5	193.2	200.7	196.5	213.3	201.6	165.6	144.7	142.2
72.5°	6708.1	2363.4	177.3	159.7	153.9	160.6	192.4	181.5	138.0	114.6	112.1
75°	3919.8	1261.2	132.1	126.3	111.2	133.8	170.6	154.7	105.4	84.5	82.0
77.5°	1276.2	439.9	97.0	92.8	82.8	107.9	145.5	130.5	86.1	66.9	64.4
80°	342.1	133.0	66.1	61.1	53.5	80.3	115.4	103.7	61.9	43.5	42.7
82.5°	137.2	56.0	38.5	34.3	29.3	55.2	91.2	83.6	46.0	27.6	27.6
85°	44.3	18.4	14.2	10.9	13.4	34.3	54.4	56.9	32.6	14.2	10.9
87.5°	5.9	2.5	2.5	3.3	2.5	5.9	16.7	15.9	9.2	1.7	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)