

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: P882787

Luminaire Tested: **NAV-SB2D-827-U-T2**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P882787
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-3)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB2D-827-U-T2
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 80 CRI, 2700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16697 lumens
Efficiency: N/A
Efficacy: 113.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B3 - U0 - G3

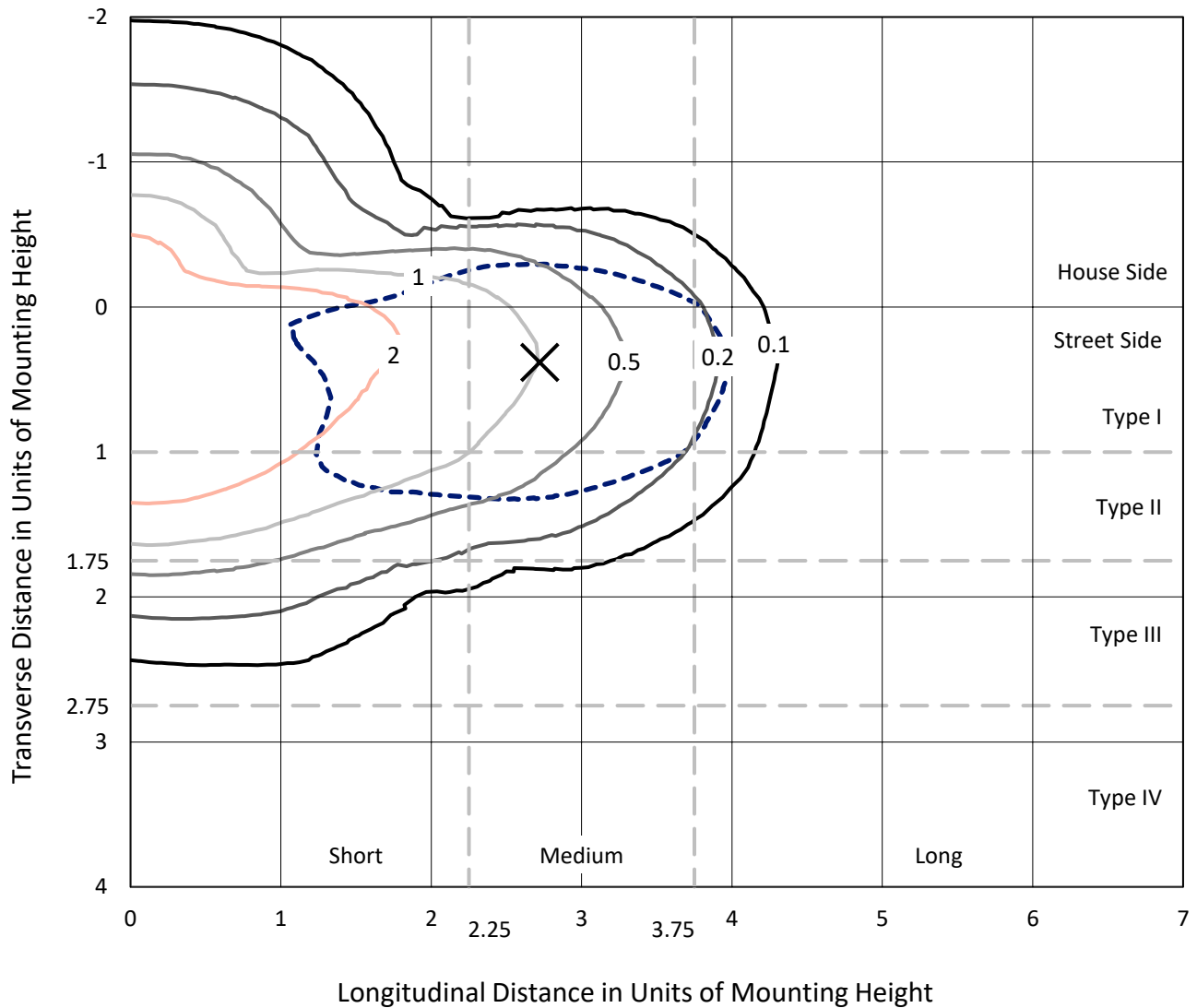
Input Watts (W): 147.6
Input Voltage (V): 120.0
Input Current (Ain): 1.234
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 3.108
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

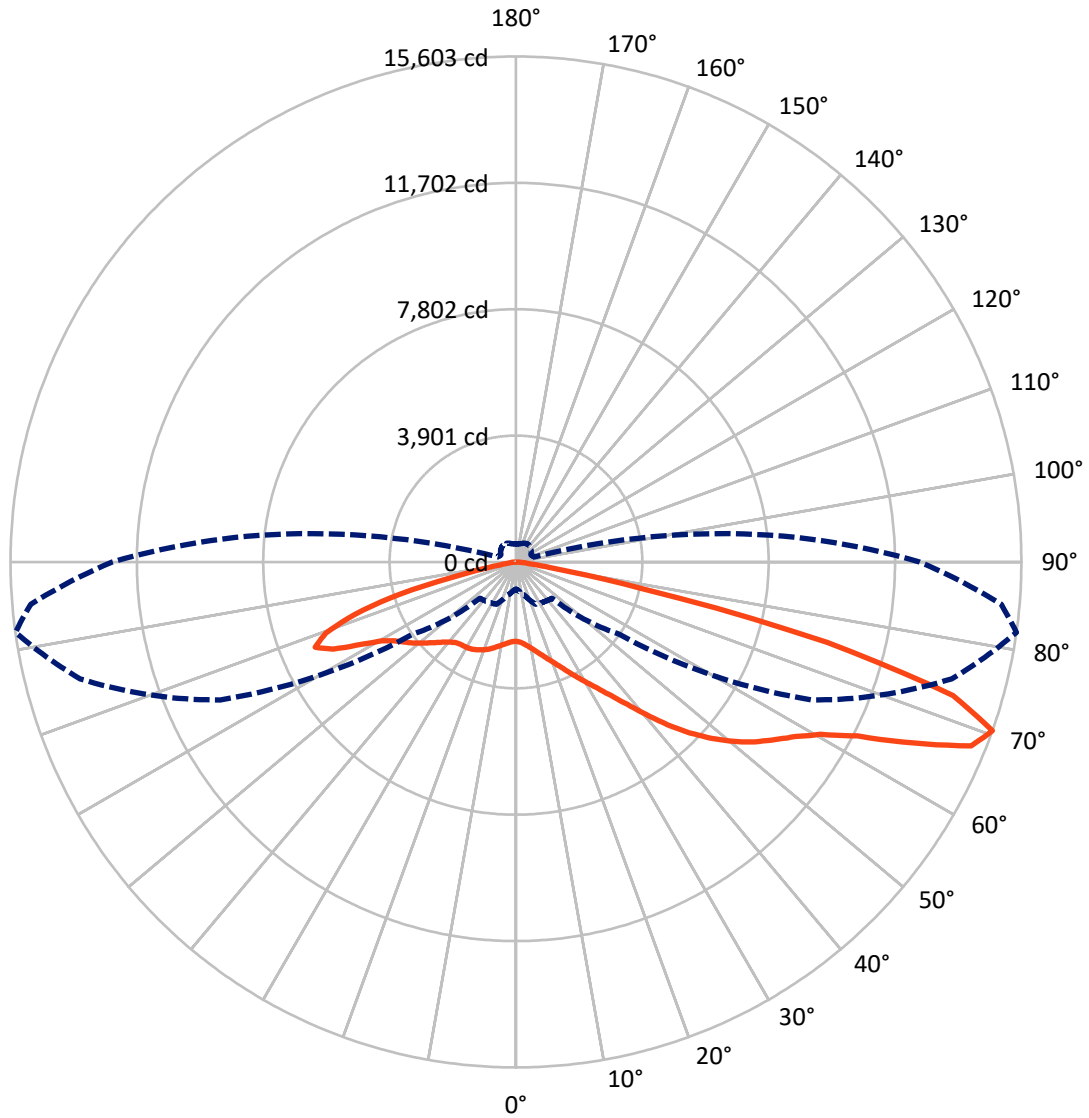
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.4 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 82-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4116.2	0.0	4116.2
	% Fixture	24.7	0.0	24.7
Street Side	Lumens	12580.8	0.0	12580.8
	% Fixture	75.3	0.0	75.3
Total	Lumens	16697.0	0.0	16697.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	231.1	1.4
10°-20°	664.1	4.0
20°-30°	1110.9	6.7
30°-40°	1735.5	10.4
40°-50°	2764.0	16.6
50°-60°	3846.5	23.0
60°-70°	4023.6	24.1
70°-80°	2102.9	12.6
80°-90°	218.4	1.3
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°	16697.0	100.0
0°-180°	16697.0	100.0

Coefficient of Utilization



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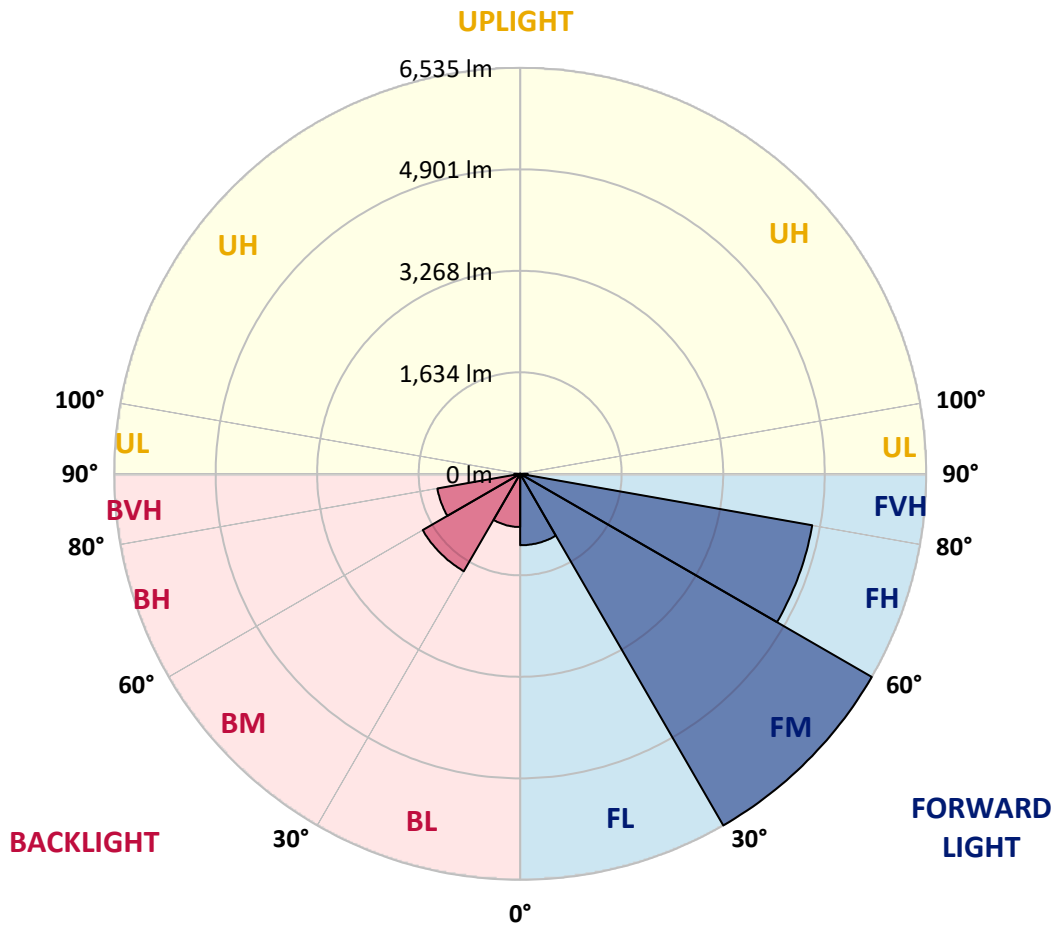
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1149.8	6.9			
FM (30°-60°)	6535.0	39.1			
FH (60°-80°)	4773.7	28.6			G2/5000
FVH (80°-90°)	122.2	0.7			G2/225
BL (0°-30°)	856.3	5.1	B2/1000		
BM (30°-60°)	1811.0	10.8	B2/2500		
BH (60°-80°)	1352.8	8.1	B3/2500		G3/2500
BVH (80°-90°)	96.1	0.6			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type II Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	82°	85°
0°	2448.0	2448.0	2448.0	2448.0	2448.0	2448.0	2448.0	2448.0	2448.0	2448.0	2448.0
2.5°	2506.5	2520.6	2516.2	2511.8	2511.8	2505.6	2504.7	2495.8	2488.7	2477.2	2474.6
5°	2538.4	2553.4	2551.6	2555.2	2566.7	2569.4	2572.0	2566.7	2552.5	2538.4	2532.2
7.5°	2510.0	2526.8	2532.2	2553.4	2588.9	2620.8	2644.7	2654.4	2641.1	2620.8	2611.0
10°	2414.3	2432.9	2451.5	2502.0	2564.9	2640.2	2704.0	2742.1	2739.5	2720.0	2703.2
12.5°	2220.3	2239.8	2279.7	2378.0	2493.2	2626.1	2744.8	2824.5	2852.0	2837.8	2808.6
15°	2065.2	2082.1	2112.2	2213.2	2362.9	2564.9	2759.9	2914.9	2984.9	2976.9	2941.5
17.5°	2060.8	2067.9	2086.5	2134.3	2249.5	2469.3	2743.9	3003.5	3137.3	3136.4	3092.1
20°	2138.8	2141.4	2152.1	2161.8	2227.4	2396.6	2703.2	3077.0	3308.3	3308.3	3260.4
22.5°	2246.9	2245.1	2255.7	2246.9	2278.8	2390.4	2677.5	3141.7	3498.8	3512.9	3452.7
25°	2409.0	2400.1	2397.5	2377.1	2383.3	2448.0	2705.8	3215.3	3724.7	3753.9	3678.6
27.5°	2625.2	2611.0	2601.3	2554.3	2538.4	2566.7	2792.6	3303.9	3976.3	4026.8	3931.1
30°	2906.9	2881.2	2867.1	2785.6	2728.0	2732.4	2923.8	3421.7	4239.5	4321.0	4199.6
32.5°	3291.5	3251.6	3213.5	3079.7	2974.3	2939.7	3093.0	3584.7	4524.7	4655.0	4499.1
35°	3722.0	3690.1	3649.4	3443.0	3280.8	3201.1	3321.6	3812.4	4858.8	5065.2	4862.3
37.5°	4136.7	4109.2	4128.7	3850.5	3641.4	3525.4	3621.0	4118.1	5270.8	5575.5	5317.7
40°	4565.5	4544.2	4546.9	4281.1	4037.5	3907.2	3984.3	4501.7	5743.0	6182.4	5865.3
42.5°	5031.5	5015.6	4962.4	4726.8	4453.0	4331.6	4402.5	4944.7	6249.8	6873.5	6466.0
45°	5553.4	5543.6	5494.0	5223.8	4910.2	4773.7	4869.4	5433.8	6759.2	7523.8	7069.3
47.5°	6004.4	6012.3	6006.1	5778.4	5453.3	5253.0	5367.3	5944.1	7233.2	8135.2	7647.9
50°	6221.4	6263.1	6324.2	6253.3	6051.3	5847.5	5869.7	6436.7	7685.1	8708.4	8202.5
52.5°	6108.0	6186.9	6353.4	6466.8	6544.8	6502.3	6442.9	6925.8	8110.3	9225.8	8727.0
55°	5685.4	5796.1	6072.6	6346.3	6744.2	7053.4	7131.3	7468.0	8525.0	9681.2	9223.2
57.5°	4915.5	5095.3	5343.4	5897.1	6567.0	7320.0	7934.0	8220.2	8964.4	10167.6	9742.3
60°	3595.3	3836.3	4144.7	4968.6	5946.8	7177.4	8617.1	9375.5	9589.1	10797.6	10418.4
62.5°	2300.9	2449.8	2733.3	3509.4	4633.7	6446.5	8826.2	10819.7	10647.8	11830.6	11431.9
65°	1575.3	1671.0	1930.6	2366.5	2995.5	4798.5	8266.3	11902.4	12329.4	13467.9	13164.9
67.5°	1144.7	1217.3	1438.8	1820.7	1951.8	2839.6	6414.6	11852.8	13964.1	15154.9	14683.5
70°	834.6	886.0	1072.0	1438.8	1501.8	1579.7	3885.9	10075.5	13928.6	15603.2	15038.8
72.5°	618.4	653.9	778.8	1116.3	1215.6	1066.7	1923.5	7322.7	11968.8	14112.9	13660.2
75°	447.4	474.0	566.1	854.1	972.8	812.5	959.5	4279.3	8348.7	9927.5	10007.3
77.5°	342.0	362.4	422.6	625.5	778.8	609.6	595.4	1968.7	3958.6	3978.1	4201.4
80°	274.7	287.9	320.7	440.3	597.2	456.3	388.1	794.7	1251.0	1058.8	1111.0
82.5°	202.0	224.2	271.1	309.2	427.0	314.5	236.6	401.4	475.8	409.3	412.9
85°	115.2	130.2	163.9	221.5	272.9	192.3	135.6	178.1	221.5	181.6	162.1
87.5°	40.8	53.2	57.6	86.8	118.7	79.7	52.3	51.4	72.7	54.0	45.2
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°	2448.0	2448.0	2448.0	2448.0	2448.0	2448.0	2448.0	2448.0	2448.0	2448.0	2448.0
2.5°	2465.7	2461.3	2443.6	2419.6	2394.8	2370.9	2362.9	2346.1	2334.6	2328.4	2335.5
5°	2515.3	2501.1	2459.5	2406.3	2350.5	2290.3	2247.8	2208.8	2180.4	2153.8	2164.5
7.5°	2586.2	2561.4	2489.6	2396.6	2297.4	2197.3	2122.8	2066.1	2028.0	2003.2	2008.5
10°	2668.6	2630.5	2520.6	2381.5	2228.3	2084.7	1997.0	1948.3	1924.4	1911.1	1914.6
12.5°	2763.4	2709.4	2552.5	2347.0	2122.8	1958.9	1898.7	1884.5	1885.4	1886.3	1888.0
15°	2880.4	2805.0	2578.2	2271.7	1985.5	1862.3	1851.7	1874.8	1898.7	1910.2	1909.3
17.5°	3012.4	2906.0	2582.7	2147.6	1850.8	1800.3	1834.0	1883.6	1919.9	1935.9	1939.4
20°	3154.1	3008.8	2550.8	1972.2	1740.1	1749.8	1810.1	1873.9	1913.7	1934.1	1939.4
22.5°	3316.3	3118.7	2474.6	1787.9	1649.7	1694.9	1765.8	1827.8	1869.4	1889.8	1895.1
25°	3501.4	3241.8	2355.0	1632.9	1571.7	1632.9	1703.8	1755.1	1788.8	1807.4	1812.7
27.5°	3707.0	3370.3	2195.5	1509.7	1503.5	1569.1	1627.6	1667.4	1685.2	1699.3	1704.6
30°	3913.4	3487.3	2002.3	1416.7	1444.2	1506.2	1547.8	1565.5	1570.9	1573.5	1579.7
32.5°	4136.7	3588.3	1799.4	1339.6	1387.5	1445.0	1469.9	1477.8	1453.0	1436.2	1441.5
35°	4406.9	3696.3	1601.0	1278.5	1331.6	1381.3	1389.2	1382.1	1352.9	1318.4	1320.1
37.5°	4740.9	3831.0	1442.4	1235.1	1279.4	1312.2	1302.4	1300.6	1303.3	1262.5	1265.2
40°	5150.3	4006.4	1326.3	1201.4	1236.8	1243.9	1216.5	1231.5	1244.8	1182.8	1184.6
42.5°	5604.8	4218.2	1252.8	1178.4	1201.4	1184.6	1142.0	1158.9	1157.1	1075.6	1074.7
45°	6068.1	4448.6	1227.1	1161.5	1168.6	1135.0	1088.0	1092.4	1055.2	981.7	984.3
47.5°	6528.9	4695.7	1243.0	1147.4	1127.9	1089.8	1053.4	1033.9	979.0	924.1	924.1
50°	6980.7	4955.3	1301.5	1119.0	1072.0	1049.9	1023.3	988.8	930.3	883.3	879.8
52.5°	7399.8	5216.7	1367.1	1072.0	1002.1	1015.3	998.5	958.6	901.1	853.2	854.1
55°	7796.7	5478.1	1392.8	1007.4	936.5	985.2	975.5	901.9	832.8	793.8	790.3
57.5°	8229.1	5792.6	1364.4	925.0	883.3	950.7	913.5	831.9	792.1	762.8	760.2
60°	8828.0	6286.1	1303.3	823.1	832.8	899.3	835.5	801.8	758.4	725.6	723.9
62.5°	9823.0	7206.6	1204.9	722.1	773.5	823.1	798.3	764.6	720.3	688.4	688.4
65°	11293.7	8486.0	1019.8	643.2	707.0	748.7	758.4	724.7	678.7	645.0	646.8
67.5°	12534.1	9288.7	771.7	577.7	638.8	688.4	715.9	683.1	634.4	601.6	602.5
70°	12465.9	8705.7	589.2	513.0	578.6	629.1	664.5	638.8	586.5	555.5	558.2
72.5°	11072.2	7282.8	476.7	447.4	517.4	567.0	609.6	590.1	536.9	506.8	506.8
75°	8134.3	5169.7	381.0	381.0	441.2	502.4	549.3	536.9	488.2	466.9	460.7
77.5°	3428.8	2168.9	298.6	316.3	366.8	431.5	490.0	494.4	451.9	478.4	434.1
80°	911.7	598.0	227.7	249.0	287.9	356.2	426.2	424.4	378.3	353.5	328.7
82.5°	347.3	235.7	162.1	175.4	208.2	272.9	337.6	348.2	302.1	261.4	261.4
85°	133.8	101.0	100.1	105.4	121.4	180.7	255.2	264.0	227.7	193.1	199.3
87.5°	34.6	30.1	37.2	35.4	55.8	96.6	146.2	151.5	139.1	80.6	115.2
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)