

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: P884167

Luminaire Tested: **NAV-SB4D-835-U-T2**

Issue Date: 10/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P884167  
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-SB4D-835-U-T2  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(4) 80 CRI, 3500K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

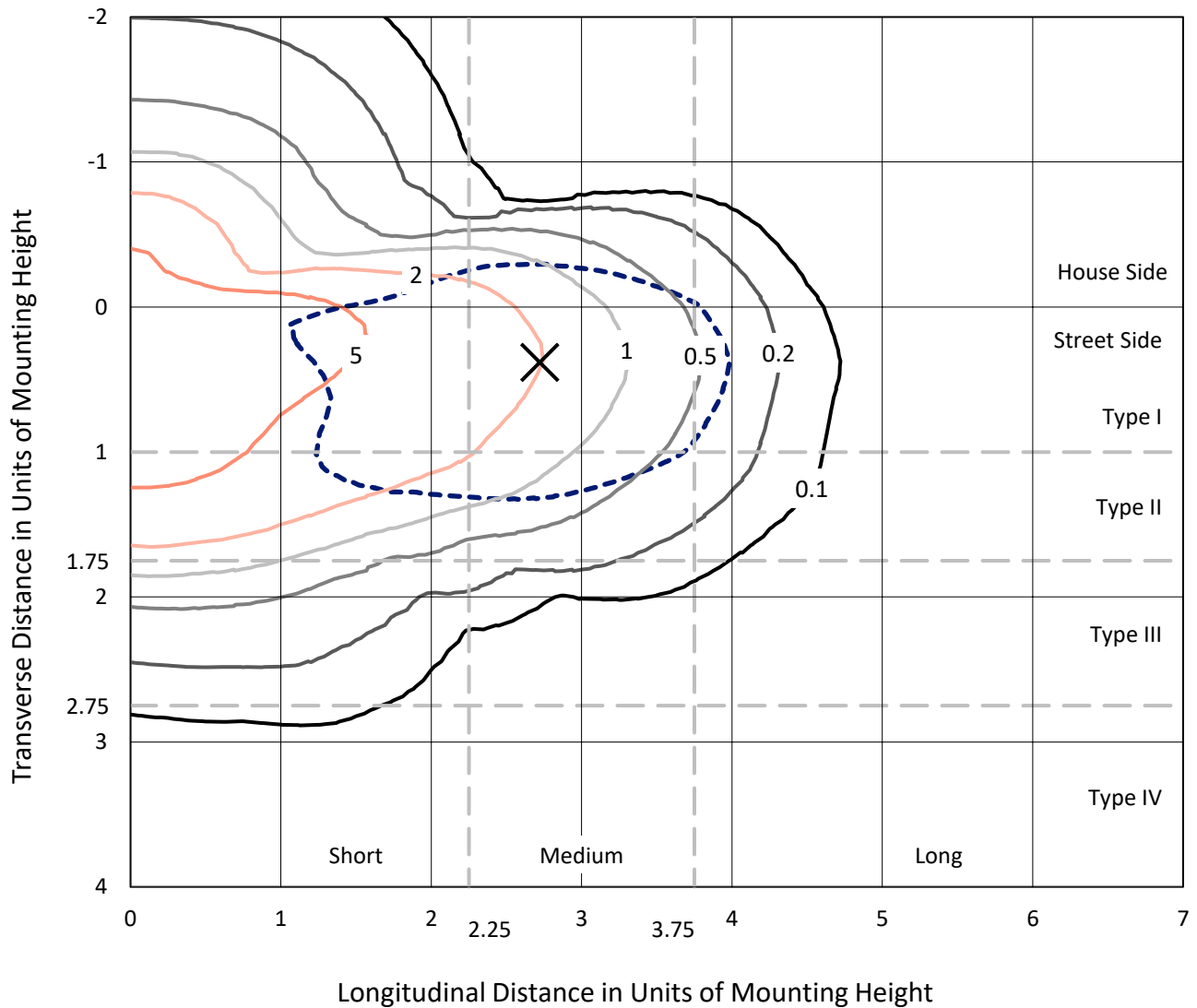
Lumens per Lamp: N/A  
Luminaire Lumens: 34478 lumens  
Efficiency: N/A  
Efficacy: 117.4 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B4 - U0 - G4  
  
Input Watts (W): 293.6  
Input Voltage (V): 120.0  
Input Current (Ain): 2.469  
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



REPORT NUMBER: P884167  
 CATALOG NUMBER: NAV-SB4D-835-U-T2

### Iso-Footcandle Lines of Horizontal Illumination

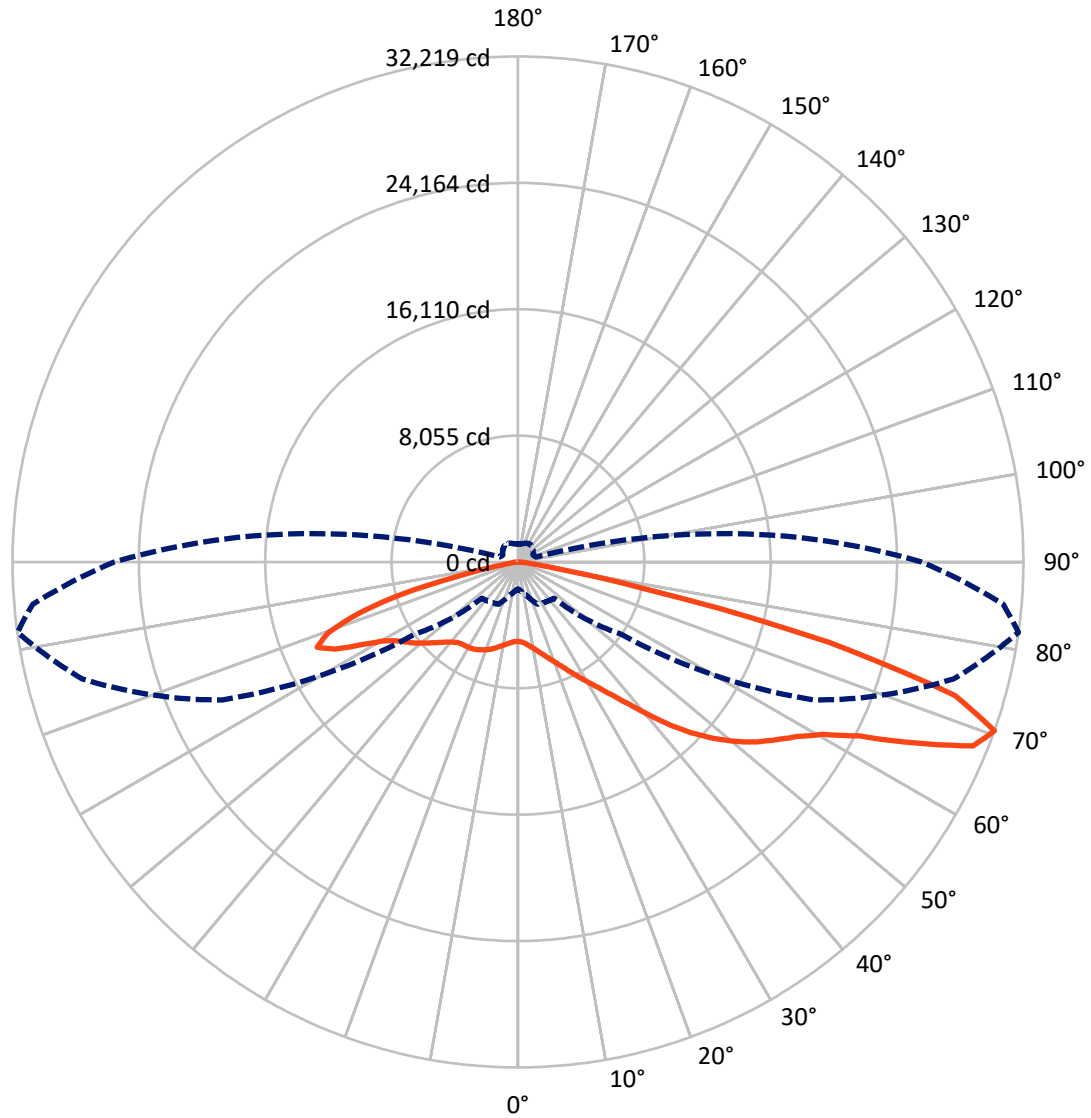
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.2 fc  
 Type II - Medium - N/A

REPORT NUMBER: P884167  
CATALOG NUMBER: NAV-SB4D-835-U-T2

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P884167  
 CATALOG NUMBER: NAV-SB4D-835-U-T2

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	8499.7	0.0	8499.7
	% Fixture	24.7	0.0	24.7
<b>Street Side</b>	Lumens	25978.3	0.0	25978.3
	% Fixture	75.3	0.0	75.3
<b>Total</b>	Lumens	34478.0	0.0	34478.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	477.3	1.4
10°-20°	1371.2	4.0
20°-30°	2293.9	6.7
30°-40°	3583.7	10.4
40°-50°	5707.5	16.6
50°-60°	7942.7	23.0
60°-70°	8308.4	24.1
70°-80°	4342.4	12.6
80°-90°	450.9	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°	34478.0	100.0
0°-180°	34478.0	100.0

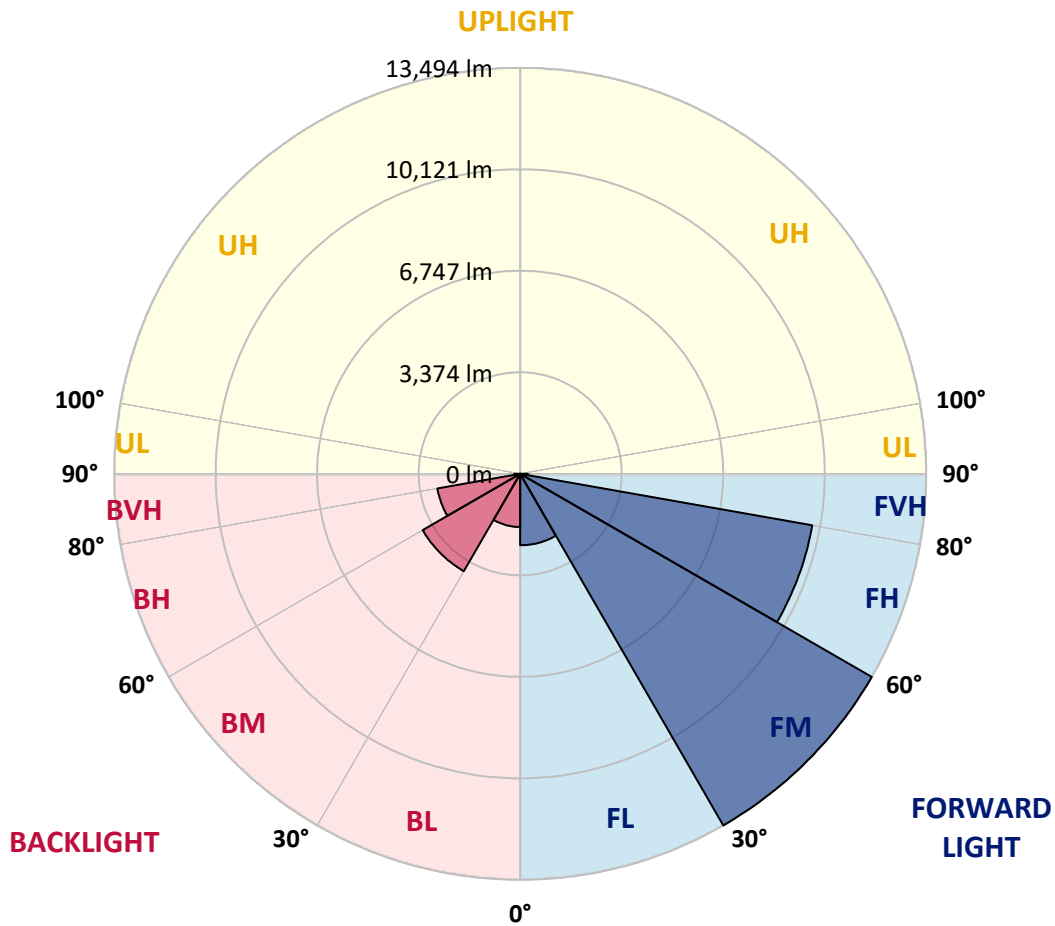


REPORT NUMBER: P884167  
 CATALOG NUMBER: NAV-SB4D-835-U-T2

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2374.2	6.9			
FM (30°-60°)	13494.3	39.1			
FH (60°-80°)	9857.4	28.6			G4/12000
FVH (80°-90°)	252.4	0.7			G3/500
BL (0°-30°)	1768.2	5.1	B3/2500		
BM (30°-60°)	3739.5	10.8	B3/5000		
BH (60°-80°)	2793.4	8.1	B4/5000		G4/5000
BVH (80°-90°)	198.5	0.6			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B4-U0-G4**  
 Type II Medium



REPORT NUMBER: P884167  
 CATALOG NUMBER: NAV-SB4D-835-U-T2

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	82°	85°
0°	5054.9	5054.9	5054.9	5054.9	5054.9	5054.9	5054.9	5054.9	5054.9	5054.9	5054.9
2.5°	5175.7	5204.9	5195.8	5186.6	5186.6	5173.8	5172.0	5153.7	5139.1	5115.3	5109.8
5°	5241.5	5272.6	5269.0	5276.3	5300.1	5305.5	5311.0	5300.1	5270.8	5241.5	5228.7
7.5°	5183.0	5217.7	5228.7	5272.6	5345.8	5411.7	5461.1	5481.2	5453.7	5411.7	5391.5
10°	4985.4	5023.8	5062.2	5166.5	5296.4	5451.9	5583.6	5662.3	5656.8	5616.6	5581.8
12.5°	4584.7	4625.0	4707.3	4910.4	5148.2	5422.6	5667.8	5832.4	5889.2	5859.9	5799.5
15°	4264.6	4299.3	4361.5	4570.1	4879.3	5296.4	5698.9	6019.1	6163.6	6147.1	6073.9
17.5°	4255.4	4270.1	4308.5	4407.3	4645.1	5098.8	5666.0	6202.0	6478.3	6476.4	6385.0
20°	4416.4	4421.9	4443.9	4464.0	4599.4	4948.8	5581.8	6353.9	6831.3	6831.3	6732.6
22.5°	4639.6	4636.0	4657.9	4639.6	4705.5	4936.0	5528.7	6487.4	7224.7	7254.0	7129.6
25°	4974.4	4956.1	4950.6	4908.5	4921.4	5054.9	5587.3	6639.3	7691.2	7751.6	7596.1
27.5°	5420.8	5391.5	5371.4	5274.4	5241.5	5300.1	5766.6	6822.2	8210.8	8315.1	8117.5
30°	6002.6	5949.5	5920.3	5751.9	5633.0	5642.2	6037.3	7065.5	8754.2	8922.5	8671.8
32.5°	6796.6	6714.3	6635.6	6359.3	6141.6	6070.3	6386.8	7402.2	9343.3	9612.2	9290.2
35°	7685.7	7619.9	7535.7	7109.4	6774.6	6610.0	6858.8	7872.3	10033.0	10459.2	10040.3
37.5°	8541.9	8485.2	8525.5	7951.0	7519.2	7279.6	7477.2	8503.5	10883.7	11513.0	10980.7
40°	9427.4	9383.5	9389.0	8840.1	8337.0	8068.1	8227.3	9295.7	11858.8	12766.2	12111.3
42.5°	10389.7	10356.8	10247.0	9760.4	9195.1	8944.4	9090.8	10210.4	12905.3	14193.3	13351.7
45°	11467.3	11447.2	11344.7	10786.7	10139.1	9857.3	10054.9	11220.3	13957.2	15536.1	14597.6
47.5°	12398.5	12415.0	12402.2	11932.0	11260.6	10847.1	11083.1	12274.1	14936.0	16798.5	15792.2
50°	12846.7	12932.7	13059.0	12912.6	12495.5	12074.7	12120.4	13291.3	15869.1	17982.1	16937.5
52.5°	12612.6	12775.4	13119.3	13353.5	13514.5	13426.7	13304.1	14301.2	16747.2	19050.6	18020.6
55°	11739.9	11968.6	12539.4	13104.7	13926.1	14564.6	14725.6	15420.8	17603.4	19990.9	19045.1
57.5°	10150.1	10521.4	11033.7	12177.1	13560.2	15115.3	16383.2	16974.1	18510.9	20995.3	20117.2
60°	7424.1	7921.7	8558.4	10259.8	12279.6	14820.8	17793.7	19359.8	19800.7	22296.1	21513.1
62.5°	4751.2	5058.6	5644.0	7246.6	9568.3	13311.4	18225.5	22341.8	21986.9	24429.3	23606.0
65°	3252.8	3450.4	3986.5	4886.6	6185.5	9908.6	17069.2	24577.5	25459.3	27810.2	27184.5
67.5°	2363.7	2513.7	2971.1	3759.6	4030.4	5863.5	13245.6	24475.0	28834.7	31293.6	30320.3
70°	1723.4	1829.5	2213.7	2971.1	3101.0	3262.0	8024.2	20805.1	28761.6	32219.3	31053.9
72.5°	1277.0	1350.2	1608.1	2305.2	2510.1	2202.7	3971.8	15120.8	24714.7	29142.1	28207.2
75°	923.9	978.8	1169.0	1763.6	2008.8	1677.7	1981.3	8836.5	17239.4	20499.5	20664.2
77.5°	706.2	748.3	872.7	1291.6	1608.1	1258.7	1229.4	4065.1	8174.2	8214.5	8675.5
80°	567.1	594.6	662.3	909.3	1233.1	942.2	801.3	1641.1	2583.3	2186.3	2294.2
82.5°	417.1	462.9	559.8	638.5	881.8	649.5	488.5	828.8	982.4	845.2	852.5
85°	237.8	268.9	338.5	457.4	563.5	397.0	279.9	367.7	457.4	375.0	334.8
87.5°	84.2	109.8	118.9	179.3	245.2	164.7	107.9	106.1	150.0	111.6	93.3
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: P884167  
 CATALOG NUMBER: NAV-SB4D-835-U-T2

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5054.9	5054.9	5054.9	5054.9	5054.9	5054.9	5054.9	5054.9	5054.9	5054.9	5054.9
2.5°	5091.5	5082.3	5045.8	4996.4	4945.1	4895.7	4879.3	4844.5	4820.7	4807.9	4822.6
5°	5193.9	5164.7	5078.7	4968.9	4853.7	4729.3	4641.4	4560.9	4502.4	4447.5	4469.5
7.5°	5340.3	5289.1	5140.9	4948.8	4743.9	4537.2	4383.5	4266.4	4187.7	4136.5	4147.5
10°	5510.5	5431.8	5204.9	4917.7	4601.2	4304.8	4123.7	4023.1	3973.7	3946.2	3953.5
12.5°	5706.2	5594.6	5270.8	4846.3	4383.5	4045.0	3920.6	3891.3	3893.2	3895.0	3898.7
15°	5947.7	5792.2	5323.8	4690.8	4099.9	3845.6	3823.7	3871.2	3920.6	3944.4	3942.6
17.5°	6220.3	6000.8	5333.0	4434.7	3821.8	3717.5	3787.1	3889.5	3964.5	3997.5	4004.8
20°	6513.0	6213.0	5267.1	4072.5	3593.1	3613.3	3737.7	3869.4	3951.7	3993.8	4004.8
22.5°	6847.8	6439.8	5109.8	3691.9	3406.5	3499.8	3646.2	3774.3	3860.2	3902.3	3913.3
25°	7230.2	6694.1	4862.8	3371.8	3245.5	3371.8	3518.1	3624.2	3693.8	3732.2	3743.2
27.5°	7654.6	6959.4	4533.5	3117.5	3104.7	3240.0	3360.8	3443.1	3479.7	3509.0	3520.0
30°	8080.9	7200.9	4134.7	2925.4	2982.1	3110.1	3196.1	3232.7	3243.7	3249.2	3262.0
32.5°	8541.9	7409.5	3715.7	2766.2	2865.0	2983.9	3035.1	3051.6	3000.4	2965.6	2976.6
35°	9099.9	7632.7	3305.9	2640.0	2749.7	2852.2	2868.7	2854.0	2793.6	2722.3	2726.0
37.5°	9789.6	7910.8	2978.4	2550.3	2641.8	2709.5	2689.4	2685.7	2691.2	2607.0	2612.5
40°	10634.9	8273.0	2738.8	2480.8	2554.0	2568.6	2511.9	2543.0	2570.4	2442.4	2446.0
42.5°	11573.4	8710.2	2586.9	2433.2	2480.8	2446.0	2358.2	2393.0	2389.3	2221.0	2219.2
45°	12530.2	9185.9	2533.9	2398.5	2413.1	2343.6	2246.6	2255.8	2178.9	2027.1	2032.6
47.5°	13481.6	9696.3	2566.8	2369.2	2329.0	2250.3	2175.3	2135.0	2021.6	1908.2	1908.2
50°	14414.6	10232.4	2687.5	2310.7	2213.7	2168.0	2113.1	2041.7	1921.0	1824.0	1816.7
52.5°	15280.0	10772.1	2822.9	2213.7	2069.2	2096.6	2061.8	1979.5	1860.6	1761.8	1763.6
55°	16099.6	11311.8	2876.0	2080.1	1933.8	2034.4	2014.3	1862.4	1719.7	1639.2	1631.9
57.5°	16992.4	11961.3	2817.4	1910.0	1824.0	1963.1	1886.2	1717.9	1635.6	1575.2	1569.7
60°	18229.1	12980.3	2691.2	1699.6	1719.7	1856.9	1725.2	1655.7	1566.1	1498.4	1494.7
62.5°	20283.7	14881.1	2488.1	1491.0	1597.2	1699.6	1648.4	1578.9	1487.4	1421.5	1421.5
65°	23320.6	17522.9	2105.8	1328.2	1459.9	1545.9	1566.1	1496.5	1401.4	1331.9	1335.5
67.5°	25881.9	19180.5	1593.5	1192.8	1319.1	1421.5	1478.2	1410.5	1309.9	1242.2	1244.1
70°	25741.1	17976.7	1216.6	1059.3	1194.7	1298.9	1372.1	1319.1	1211.1	1147.1	1152.6
72.5°	22863.2	15038.5	984.3	923.9	1068.4	1170.9	1258.7	1218.4	1108.7	1046.5	1046.5
75°	16796.6	10675.1	786.7	786.7	911.1	1037.3	1134.3	1108.7	1008.1	964.1	951.3
77.5°	7080.2	4478.6	616.5	653.1	757.4	891.0	1011.7	1020.9	933.0	987.9	896.5
80°	1882.6	1234.9	470.2	514.1	594.6	735.5	880.0	876.3	781.2	730.0	678.7
82.5°	717.2	486.6	334.8	362.2	429.9	563.5	697.0	719.0	623.9	539.7	539.7
85°	276.3	208.6	206.7	217.7	250.6	373.2	526.9	545.2	470.2	398.8	411.6
87.5°	71.4	62.2	76.8	73.2	115.3	199.4	301.9	312.8	287.2	166.5	237.8
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)