

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: P884168

Luminaire Tested: **NAV-SB4D-835-U-T3-HSS**

Issue Date: 10/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P884168  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB4D-835-U-T3-HSS  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(4) 80 CRI, 3500K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE III  
OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

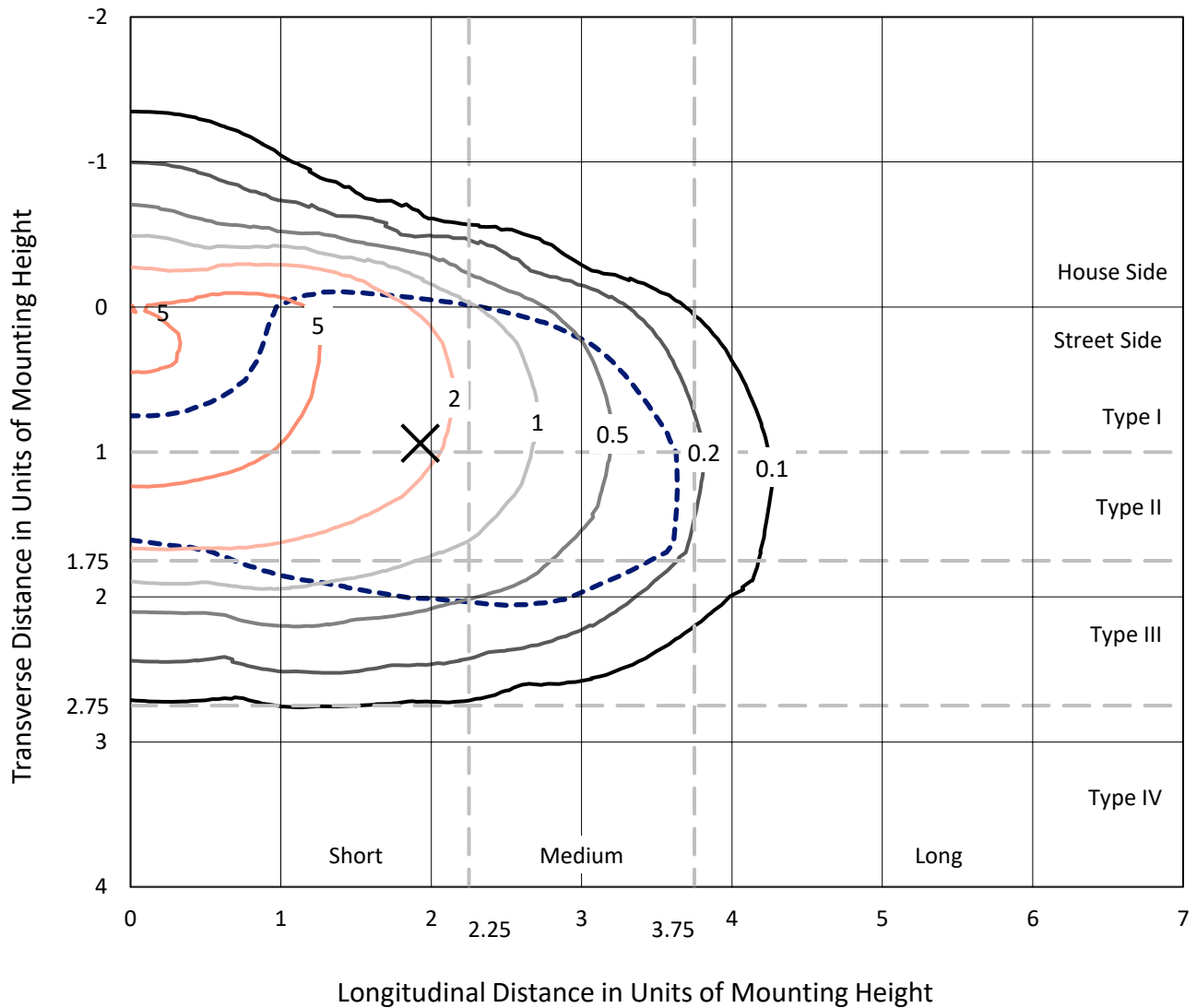
Lumens per Lamp: N/A  
Luminaire Lumens: 27290 lumens  
Efficiency: N/A  
Efficacy: 92.9 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B2 - U0 - G4  
  
Input Watts (W): 293.6  
Input Voltage (V): 120.0  
Input Current (Ain): 2.469  
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



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### Iso-Footcandle Lines of Horizontal Illumination

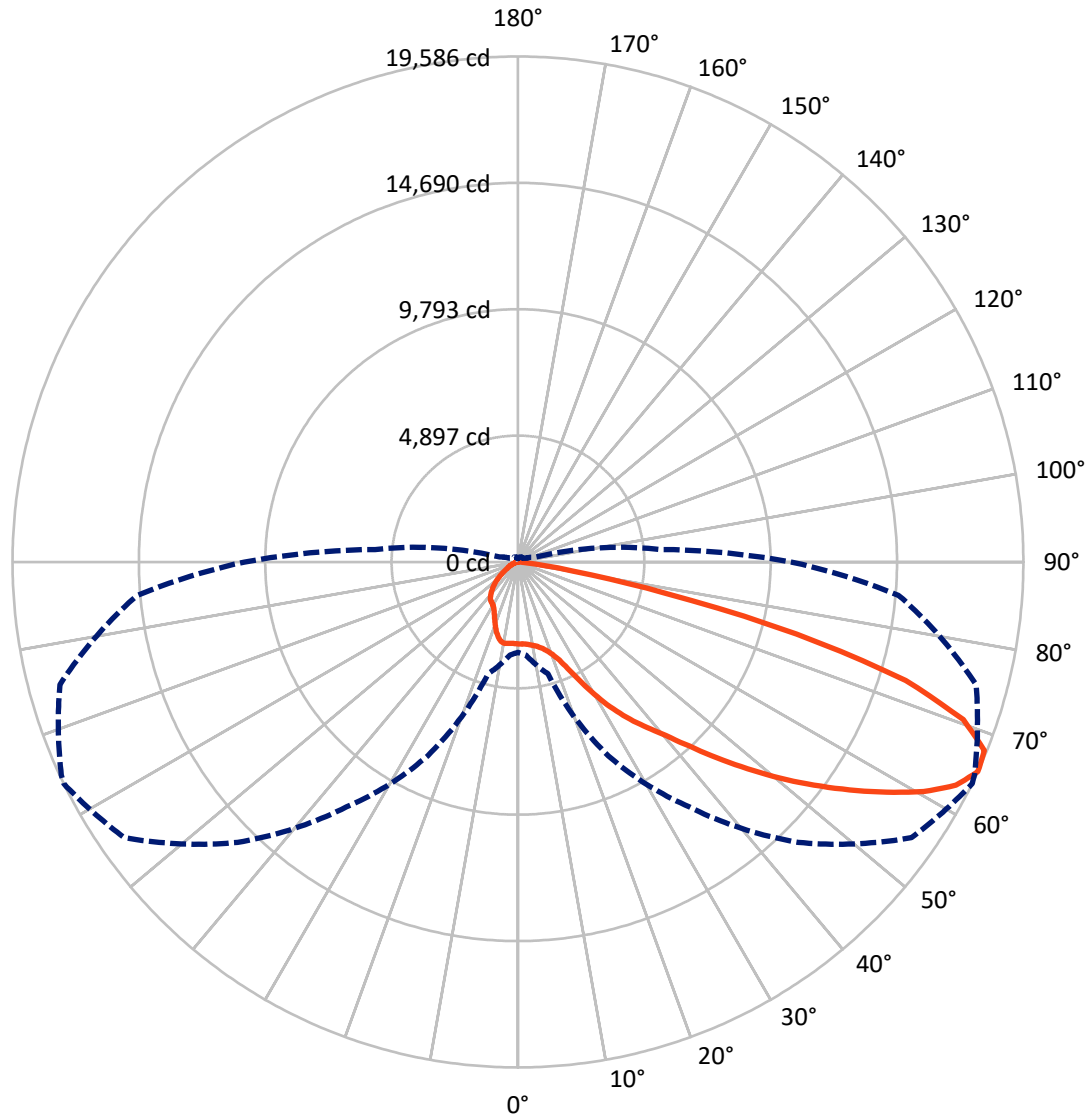
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 64-Deg Lateral    - - - Horizontal Cone Through 65-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3649.5	0.0	3649.5
	% Fixture	13.4	0.0	13.4
<b>Street Side</b>	Lumens	23640.5	0.0	23640.5
	% Fixture	86.6	0.0	86.6
<b>Total</b>	Lumens	27290.0	0.0	27290.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	292.8	1.1
10°-20°	794.3	2.9
20°-30°	1505.1	5.5
30°-40°	3045.6	11.2
40°-50°	5188.2	19.0
50°-60°	7055.5	25.9
60°-70°	6625.5	24.3
70°-80°	2654.4	9.7
80°-90°	128.6	0.5
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°	27290.0	100.0
0°-180°	27290.0	100.0

**Coefficient of Utilization**



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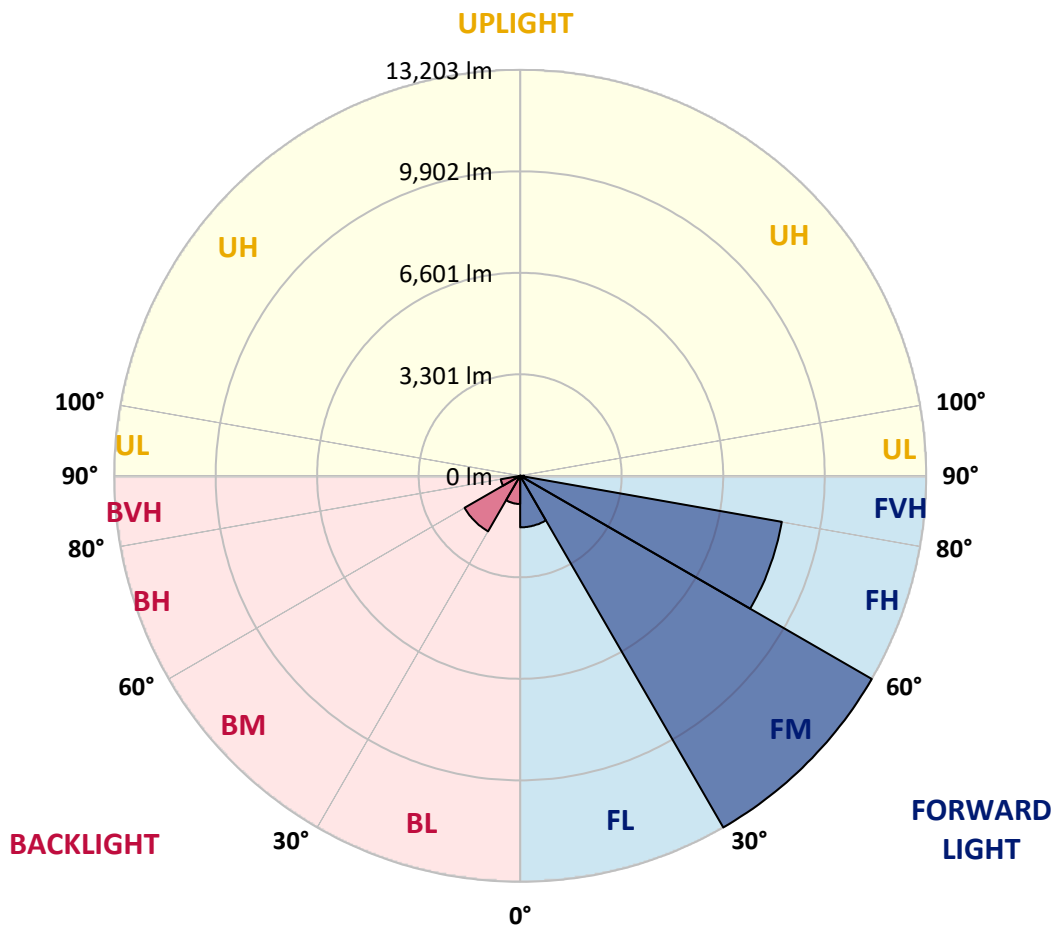
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1675.9	6.1			
FM (30°-60°)	13202.9	48.4			
FH (60°-80°)	8639.4	31.7			G4/12000
FVH (80°-90°)	122.3	0.4			G2/225
BL (0°-30°)	916.3	3.4	B2/1000		
BM (30°-60°)	2086.4	7.6	B2/2500		
BH (60°-80°)	640.5	2.3	B2/1000		G2/1000
BVH (80°-90°)	6.3	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G4**

Type III Short



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	64°	65°	75°	85°
0°	3174.1	3174.1	3174.1	3174.1	3174.1	3174.1	3174.1	3174.1	3174.1	3174.1	3174.1
2.5°	3163.1	3185.1	3179.6	3174.1	3172.3	3175.9	3177.8	3175.9	3175.9	3175.9	3177.8
5°	3102.8	3121.1	3121.1	3133.9	3152.2	3174.1	3190.6	3194.2	3197.9	3203.4	3201.6
7.5°	2987.5	3002.1	3013.1	3055.2	3100.9	3159.5	3208.9	3234.5	3238.1	3258.3	3265.6
10°	2908.8	2927.1	2945.4	2989.3	3055.2	3143.0	3227.2	3289.4	3298.5	3346.1	3368.0
12.5°	2905.2	2923.5	2947.3	2994.8	3071.7	3165.0	3267.4	3357.1	3373.5	3443.0	3488.8
15°	2943.6	2965.6	2987.5	3046.0	3128.4	3241.8	3351.6	3463.2	3479.6	3578.4	3627.8
17.5°	3022.3	3051.5	3068.0	3126.5	3214.4	3340.6	3485.1	3613.2	3627.8	3743.1	3805.3
20°	3177.8	3212.5	3218.0	3265.6	3351.6	3486.9	3658.9	3818.1	3836.4	3968.1	4037.6
22.5°	3499.8	3549.1	3505.2	3529.0	3605.9	3741.2	3927.8	4129.1	4154.7	4304.7	4366.9
25°	4066.9	4136.4	4023.0	3982.7	4015.7	4156.5	4390.7	4645.0	4674.3	4795.0	4826.1
27.5°	5181.0	5091.4	4919.4	4751.1	4652.3	4732.8	4996.3	5310.9	5347.5	5464.6	5428.0
30°	6404.9	6326.3	6093.9	5720.7	5486.5	5473.7	5717.1	6068.3	6110.4	6222.0	6110.4
32.5°	7630.7	7555.7	7303.2	6844.0	6437.9	6236.6	6404.9	6794.6	6816.6	6887.9	6723.3
35°	8836.3	8759.4	8507.0	8036.8	7537.4	7080.0	7047.1	7486.1	7493.5	7568.5	7323.3
37.5°	10049.2	9985.2	9716.3	9255.2	8763.1	8131.9	7826.4	8141.1	8150.2	8223.4	7969.1
40°	10914.5	10942.0	10757.2	10400.5	9977.9	9288.2	8700.9	8838.1	8783.2	8905.8	8754.0
42.5°	11657.3	11712.2	11551.2	11371.9	11126.8	10519.4	9783.9	9760.2	9672.3	9738.2	9580.9
45°	12299.4	12345.2	12200.7	12158.6	12153.1	11726.8	10967.6	10824.9	10702.3	10689.5	10501.1
47.5°	12535.4	12623.3	12685.5	12826.3	13100.8	12921.5	12191.5	11970.1	11832.9	11732.3	11434.1
50°	12625.1	12718.4	12930.6	13340.4	13989.9	14066.7	13409.9	13161.1	12992.8	12809.9	12370.8
52.5°	12504.3	12670.8	12956.2	13645.9	14588.1	14985.1	14579.0	14361.2	14169.2	13871.0	13219.7
55°	11792.7	11959.2	12542.8	13642.3	14886.3	15629.1	15683.9	15587.0	15371.1	14900.9	13905.7
57.5°	10292.5	10539.5	11463.4	13177.6	14880.8	16183.4	16767.0	16836.5	16595.0	15921.8	14445.4
60°	8214.3	8549.1	9676.0	12147.6	14421.6	16483.4	17716.5	18064.1	17807.9	16928.0	14882.6
62.5°	5731.7	6119.5	7186.1	10534.0	13371.5	16267.5	18409.8	19052.0	18858.1	17828.1	15051.0
65°	3496.1	3620.5	4480.3	8289.3	11586.0	15363.8	18623.9	19586.2	19522.2	18378.7	14802.1
67.5°	2328.9	2433.2	2680.2	5684.1	8993.6	13558.1	18111.6	19492.9	19511.2	18289.1	13891.1
70°	1403.2	1492.8	1653.8	3305.8	5828.7	10731.6	16525.5	18303.7	18409.8	17090.8	12164.1
72.5°	578.1	638.5	784.8	1498.3	3018.6	6811.1	13159.3	15715.0	15962.0	14370.4	9335.7
75°	327.5	358.6	461.0	751.9	1309.9	3174.1	7971.0	11156.0	11520.1	9904.7	5616.4
77.5°	217.7	232.3	298.2	486.6	737.3	1083.0	3406.5	5812.2	6507.4	5409.7	2431.4
80°	146.4	159.2	204.9	325.6	479.3	464.7	1084.9	2153.3	2649.1	1858.7	592.7
82.5°	98.8	100.6	146.4	214.0	303.7	225.0	320.2	669.6	841.6	537.9	225.0
85°	56.7	54.9	107.9	124.4	135.4	93.3	97.0	201.2	263.4	226.9	128.1
87.5°	7.3	11.0	42.1	32.9	18.3	20.1	20.1	34.8	51.2	54.9	27.4
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°	3174.1	3174.1	3174.1	3174.1	3174.1	3174.1	3174.1	3174.1	3174.1	3174.1	3174.1
2.5°	3177.8	3175.9	3170.5	3165.0	3152.2	3144.8	3148.5	3144.8	3143.0	3144.8	3152.2
5°	3201.6	3196.1	3181.4	3163.1	3137.5	3106.4	3086.3	3057.0	3029.6	3013.1	3016.8
7.5°	3265.6	3260.1	3240.0	3188.7	3106.4	2976.5	2857.6	2753.3	2674.7	2628.9	2630.8
10°	3368.0	3358.9	3327.8	3214.4	2998.5	2714.9	2478.9	2283.2	2155.1	2094.7	2089.2
12.5°	3488.8	3477.8	3422.9	3190.6	2793.6	2350.9	2025.2	1807.5	1688.6	1635.5	1630.0
15°	3631.5	3616.8	3508.9	3077.1	2495.4	1948.4	1650.2	1487.3	1410.5	1362.9	1364.8
17.5°	3808.9	3783.3	3572.9	2907.0	2171.6	1641.0	1419.7	1297.1	1229.4	1183.7	1180.0
20°	4039.4	3997.4	3624.2	2703.9	1873.4	1447.1	1264.2	1161.7	1110.5	1070.2	1062.9
22.5°	4361.4	4301.1	3686.4	2484.4	1663.0	1313.6	1148.9	1073.9	1031.8	986.1	978.8
25°	4760.3	4688.9	3763.2	2281.3	1518.5	1198.3	1064.7	1002.5	953.1	900.1	894.6
27.5°	5318.2	5190.2	3854.7	2114.9	1394.0	1099.5	987.9	918.4	861.7	817.8	808.6
30°	5940.3	5729.9	3935.2	2014.2	1280.6	1008.0	887.3	817.8	764.7	733.6	728.1
32.5°	6529.3	6243.9	3988.2	1970.3	1178.2	903.8	777.5	702.5	662.3	653.1	658.6
35°	7085.5	6708.6	3982.7	1928.2	1086.7	799.5	669.6	592.7	561.6	567.1	567.1
37.5°	7725.8	7204.4	3944.3	1862.4	1011.7	704.3	576.3	508.6	481.1	483.0	490.3
40°	8470.4	7777.0	3920.5	1738.0	929.4	616.5	499.4	444.6	424.4	417.1	415.3
42.5°	9264.4	8331.4	3924.2	1597.1	826.9	537.9	446.4	400.7	382.4	376.9	375.0
45°	10062.0	8860.1	3929.7	1450.8	719.0	477.5	408.0	369.6	358.6	351.3	351.3
47.5°	10812.1	9310.1	3827.2	1293.4	612.9	431.8	376.9	351.3	342.1	333.0	333.0
50°	11511.0	9610.1	3580.3	1110.5	528.7	395.2	353.1	334.8	325.6	316.5	316.5
52.5°	12054.3	9657.7	3172.3	922.0	470.2	367.7	338.4	322.0	311.0	301.9	300.0
55°	12295.8	9359.5	2592.3	746.4	424.4	343.9	323.8	307.3	294.5	285.4	283.6
57.5°	12233.6	8732.0	2021.6	600.1	380.5	320.2	305.5	294.5	279.9	265.3	263.4
60°	11928.1	7892.3	1523.9	499.4	340.3	294.5	285.4	276.2	256.1	234.2	230.5
62.5°	11399.4	6836.7	1086.7	413.5	296.4	265.3	261.6	254.3	225.0	184.8	181.1
65°	10590.7	5554.2	731.8	343.9	254.3	232.3	234.2	221.4	182.9	137.2	133.6
67.5°	9408.9	4061.4	468.3	281.7	212.2	193.9	195.8	188.4	155.5	117.1	111.6
70°	7903.3	2689.3	305.5	214.0	170.1	150.0	161.0	162.8	131.7	95.1	91.5
72.5°	5793.9	1588.0	214.0	159.2	124.4	104.3	131.7	135.4	106.1	71.3	67.7
75°	3302.2	753.7	161.0	115.3	76.8	73.2	102.4	102.4	73.2	47.6	43.9
77.5°	1386.7	314.7	113.4	75.0	43.9	42.1	69.5	64.0	36.6	22.0	22.0
80°	400.7	140.9	60.4	36.6	18.3	16.5	27.4	20.1	9.1	3.7	3.7
82.5°	157.3	62.2	23.8	14.6	7.3	7.3	3.7	0.0	0.0	0.0	0.0
85°	93.3	25.6	11.0	5.5	1.8	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	23.8	5.5	3.7	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)