

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: P965746

Luminaire Tested: **NAV-SB4A-827-U-T2R-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P965746
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-4)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4A-827-U-T2R-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 2700K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II
ROADWAY OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13566.9 lumens
Efficiency: N/A
Efficacy: 119.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
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

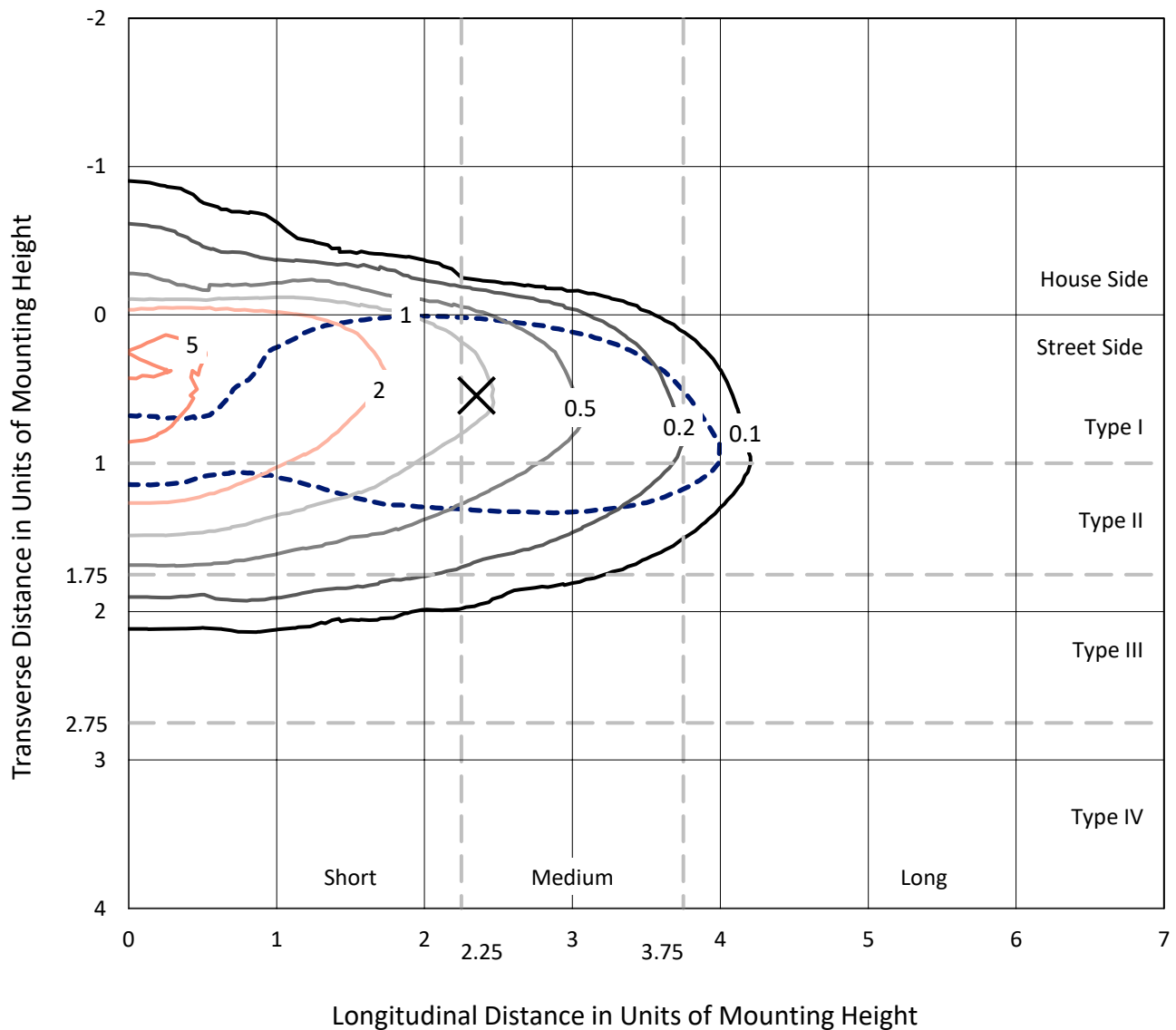


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Iso-Footcandle Lines of Horizontal Illumination

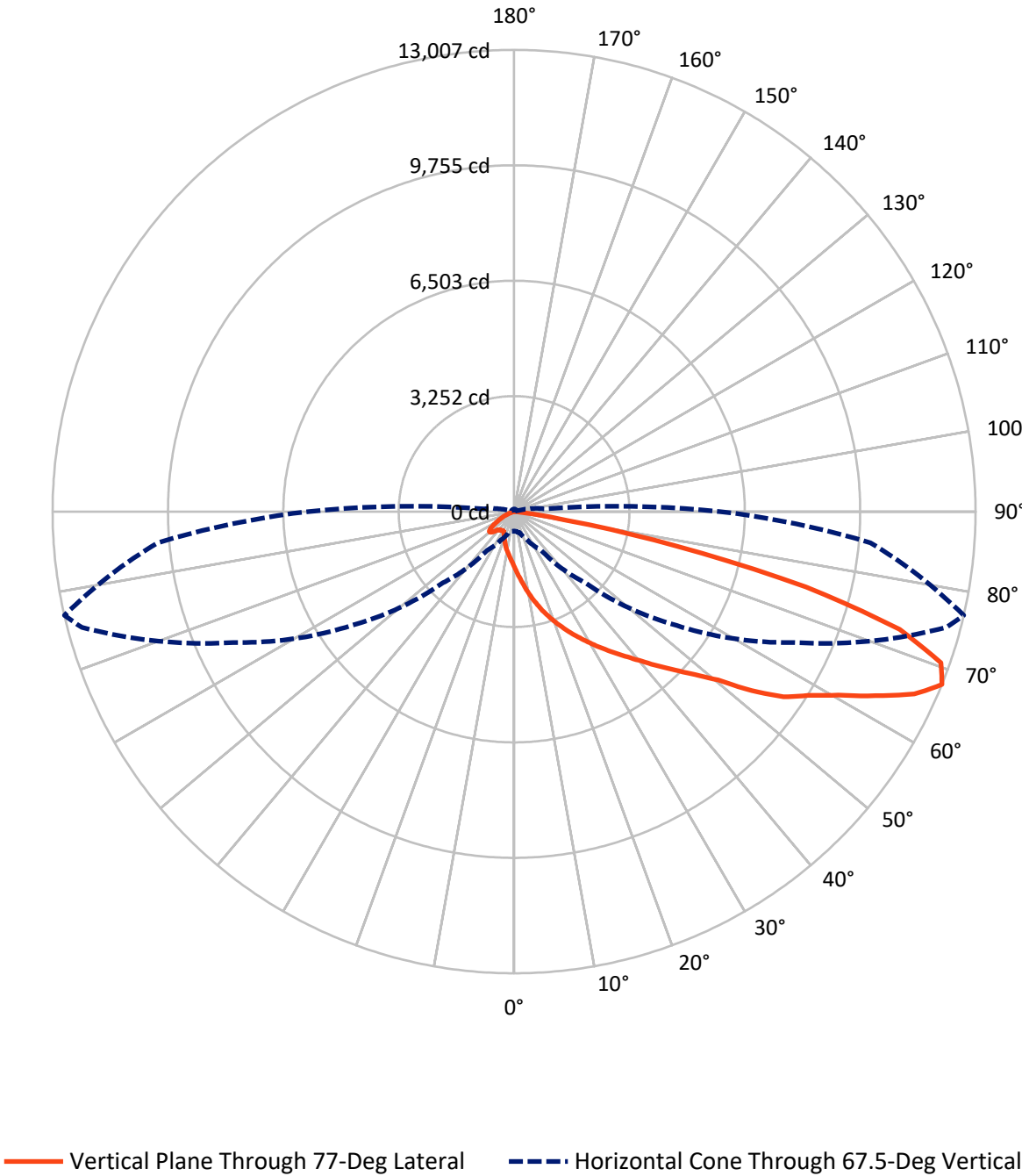
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.9 fc
Type II - Medium - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	998.1	0.0	998.1
	% Fixture	7.4	0.0	7.4
Street Side	Lumens	12568.8	0.0	12568.8
	% Fixture	92.6	0.0	92.6
Total	Lumens	13566.9	0.0	13566.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	159.7	1.2
10°-20°	559.2	4.1
20°-30°	1079.1	8.0
30°-40°	1873.3	13.8
40°-50°	2719.9	20.0
50°-60°	3123.5	23.0
60°-70°	2711.8	20.0
70°-80°	1277.3	9.4
80°-90°	63.2	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°	13566.9	100.0
0°-180°	13566.9	100.0

Coefficient of Utilization



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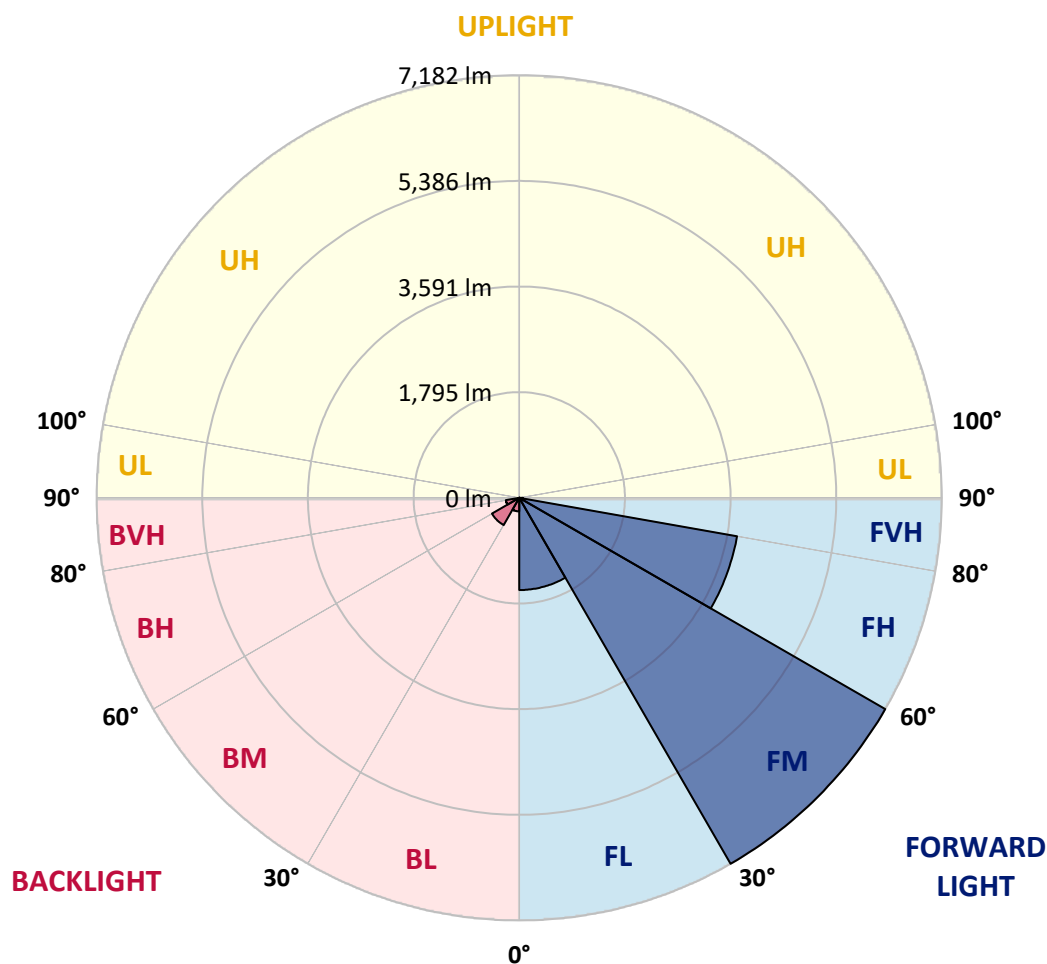
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1566.8	11.5			
FM	(30°-60°)	7181.9	52.9			
FH	(60°-80°)	3758.0	27.7			G2/5000
FVH	(80°-90°)	62.0	0.5			G1/100
BL	(0°-30°)	231.1	1.7	B1/500		
BM	(30°-60°)	534.8	3.9	B1/1000		
BH	(60°-80°)	231.1	1.7	B1/500		G1/500
BVH	(80°-90°)	1.2	0.0			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 Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77°	85°
0°	1564.5	1564.5	1564.5	1564.5	1564.5	1564.5	1564.5	1564.5	1564.5	1564.5	1564.5
2.5°	2166.0	2179.5	2160.1	2123.0	2067.4	2031.1	1942.7	1859.4	1766.7	1737.2	1644.5
5°	2640.3	2652.1	2630.1	2589.8	2515.7	2444.8	2328.6	2154.1	1973.0	1914.9	1750.6
7.5°	2991.6	2998.3	2989.9	2952.8	2882.1	2802.0	2672.3	2465.9	2197.2	2133.1	1881.2
10°	3244.3	3266.3	3263.7	3249.4	3202.2	3137.3	2999.1	2764.1	2448.2	2365.7	2028.7
12.5°	3412.0	3436.4	3450.8	3482.7	3480.3	3439.0	3317.6	3069.2	2698.4	2601.6	2194.6
15°	3460.8	3486.9	3541.8	3615.9	3681.6	3702.6	3617.5	3368.2	2973.9	2850.1	2364.8
17.5°	3433.0	3473.5	3539.2	3656.3	3800.4	3895.6	3886.3	3657.2	3224.1	3082.6	2531.6
20°	3494.5	3533.3	3584.7	3683.2	3850.9	4023.6	4092.7	3933.4	3472.7	3324.4	2706.8
22.5°	3834.9	3828.2	3833.2	3849.3	3949.5	4120.5	4262.9	4184.6	3718.7	3567.0	2892.2
25°	4374.1	4343.7	4292.4	4205.6	4180.4	4262.9	4411.2	4407.0	3978.1	3815.6	3081.8
27.5°	4992.5	4987.4	4866.9	4658.0	4540.0	4508.1	4578.8	4623.5	4235.1	4061.6	3272.1
30°	5584.7	5598.2	5435.6	5203.1	4986.5	4861.1	4797.0	4829.0	4496.3	4326.9	3468.4
32.5°	6100.3	6114.6	5937.7	5665.6	5397.6	5246.1	5111.3	5032.0	4781.0	4596.5	3684.2
35°	6535.9	6550.2	6347.1	6046.4	5760.8	5623.5	5470.9	5254.5	5067.4	4895.6	3924.2
37.5°	6925.1	6920.9	6648.8	6345.5	6064.9	5956.3	5876.2	5528.2	5362.3	5196.3	4190.4
40°	7155.1	7172.7	6940.3	6605.8	6333.7	6254.4	6249.4	5867.8	5702.7	5541.8	4481.9
42.5°	7222.5	7253.6	7085.1	6810.5	6563.7	6477.7	6610.0	6235.1	6098.6	5941.9	4811.3
45°	7101.2	7131.5	7054.9	6864.4	6720.4	6664.8	6920.1	6615.9	6521.6	6366.5	5182.9
47.5°	6747.4	6785.2	6803.7	6763.4	6761.6	6818.1	7198.1	7016.9	7023.6	6865.2	5613.4
50°	6062.4	6126.4	6296.6	6439.9	6661.4	6939.5	7468.5	7451.6	7589.8	7453.3	6174.5
52.5°	4817.2	4908.2	5494.6	5886.4	6384.2	6916.7	7765.9	8149.2	8583.0	8383.4	6965.5
55°	3871.1	3871.1	4347.9	5080.9	5843.3	6766.7	7895.6	8602.4	9259.5	9212.4	7522.4
57.5°	3155.9	3193.8	3497.9	4145.8	5060.7	6409.5	7975.6	8887.2	9804.6	9770.1	8066.6
60°	1947.8	2029.5	2604.1	3243.5	4170.2	5773.4	7925.1	9175.3	10466.0	10493.7	8722.0
62.5°	1096.9	1127.2	1383.3	2333.6	3242.7	4918.4	7538.4	9336.2	11311.8	11429.8	9397.7
65°	757.4	772.5	871.1	1452.4	2247.7	3915.8	6782.7	9236.0	12159.4	12397.8	9970.6
67.5°	550.1	557.7	619.2	887.1	1333.6	2839.1	5598.2	8730.5	12608.4	13006.8	10080.2
70°	422.9	427.9	472.6	583.0	787.7	1752.3	4065.8	7725.4	12283.2	12759.2	9519.1
72.5°	343.7	348.8	383.3	431.3	522.3	1036.3	2464.2	6273.8	10847.6	11361.5	8103.6
75°	289.8	296.5	327.7	358.9	409.5	665.5	1155.9	4369.1	8157.7	8494.6	5635.2
77.5°	160.9	148.3	266.2	297.4	345.4	421.3	540.9	2571.2	4568.7	4662.2	2500.5
80°	100.2	103.6	211.5	239.2	265.4	212.3	247.6	989.9	1583.8	1504.6	484.4
82.5°	5.9	13.5	162.6	172.7	181.9	91.0	93.5	336.1	381.6	350.4	85.9
85°	0.0	0.0	74.1	59.9	63.1	26.1	27.0	78.3	51.4	55.6	16.8
87.5°	0.0	0.0	0.0	1.6	0.0	2.6	5.0	6.8	2.6	3.4	5.9
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°	1564.5	1564.5	1564.5	1564.5	1564.5	1564.5	1564.5	1564.5	1564.5	1564.5	1564.5
2.5°	1585.6	1526.5	1406.9	1289.9	1194.6	1106.2	1042.9	983.2	952.8	951.1	949.5
5°	1633.5	1509.7	1270.5	1059.0	888.8	752.3	663.9	600.6	568.7	557.7	556.1
7.5°	1701.0	1514.7	1150.8	856.8	656.3	539.2	488.6	468.4	461.7	454.1	452.4
10°	1786.1	1526.5	1043.9	690.0	517.3	458.3	438.1	429.7	424.6	419.5	417.9
12.5°	1881.2	1537.5	937.7	572.9	454.9	424.6	410.3	400.2	393.4	387.6	385.8
15°	1973.9	1544.3	827.3	491.2	422.9	398.5	383.3	372.4	363.1	356.4	355.6
17.5°	2065.7	1553.5	723.6	442.3	396.8	372.4	357.2	343.7	336.1	328.5	327.7
20°	2167.7	1551.8	626.0	407.7	370.6	346.2	330.3	317.6	310.1	301.6	300.7
22.5°	2262.1	1543.4	540.1	378.2	343.7	320.1	302.5	289.8	282.2	275.5	274.6
25°	2370.7	1536.7	468.4	351.3	318.5	294.9	275.5	263.7	255.2	249.4	248.6
27.5°	2475.2	1526.5	416.2	326.9	294.1	271.3	252.8	239.2	231.6	227.4	227.4
30°	2578.0	1524.1	396.8	303.3	272.1	249.4	230.8	218.2	212.3	210.6	209.8
32.5°	2701.8	1530.7	405.2	294.9	251.9	229.2	211.5	202.2	196.3	196.3	196.3
35°	2834.0	1529.1	417.9	302.5	238.4	208.9	195.5	189.5	183.7	183.7	183.7
37.5°	3000.1	1531.7	427.9	315.1	233.4	192.1	184.5	176.9	173.5	173.5	173.5
40°	3247.7	1615.0	422.9	326.1	231.6	180.3	165.1	162.6	160.1	160.1	160.1
42.5°	3551.0	1796.1	429.7	326.9	230.8	171.9	151.6	156.7	150.8	150.0	149.1
45°	3882.9	1994.1	472.6	309.1	230.0	167.7	144.9	150.8	141.6	141.6	141.6
47.5°	4212.3	2190.4	516.4	283.9	227.4	166.8	139.0	135.6	133.1	134.0	134.0
50°	4666.4	2350.5	533.3	249.4	221.6	165.1	128.0	128.9	127.2	128.9	128.9
52.5°	5161.0	2384.1	513.0	210.6	204.7	160.1	120.4	123.8	123.0	124.6	124.6
55°	5469.3	2348.0	423.7	175.3	178.6	139.8	112.9	119.6	119.6	119.6	119.6
57.5°	5787.8	2193.8	300.7	142.4	148.3	114.6	106.2	115.4	114.6	113.8	113.8
60°	6017.0	1944.4	198.0	117.1	118.0	94.4	98.6	108.6	107.8	103.6	103.6
62.5°	6187.9	1668.9	127.2	99.4	90.1	85.1	90.1	98.6	95.2	85.9	84.3
65°	6168.6	1287.3	97.7	85.1	74.1	74.1	78.3	85.9	75.8	60.7	58.9
67.5°	5808.8	871.1	80.9	71.6	62.3	61.5	64.9	71.6	64.9	51.4	49.7
70°	5166.0	569.5	64.9	55.6	49.7	45.5	52.3	61.5	54.7	41.3	39.6
72.5°	4193.0	347.1	48.9	40.5	36.2	29.5	41.3	50.5	43.8	30.3	28.6
75°	2712.8	176.9	33.7	26.1	19.4	17.7	30.3	37.9	30.3	18.6	16.0
77.5°	1037.9	74.1	18.6	11.8	10.1	8.4	16.8	22.8	12.6	4.2	3.4
80°	199.7	31.2	9.2	5.9	5.0	3.4	2.6	1.6	0.0	0.0	0.0
82.5°	34.5	10.1	3.4	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	11.8	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	4.2	0.0	0.0	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)