

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: P884170

Luminaire Tested: **NAV-SB4D-835-U-T4FT-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884170
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-25)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4D-835-U-T4FT-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3500K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV
FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 26346 lumens
Efficiency: N/A
Efficacy: 89.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G4

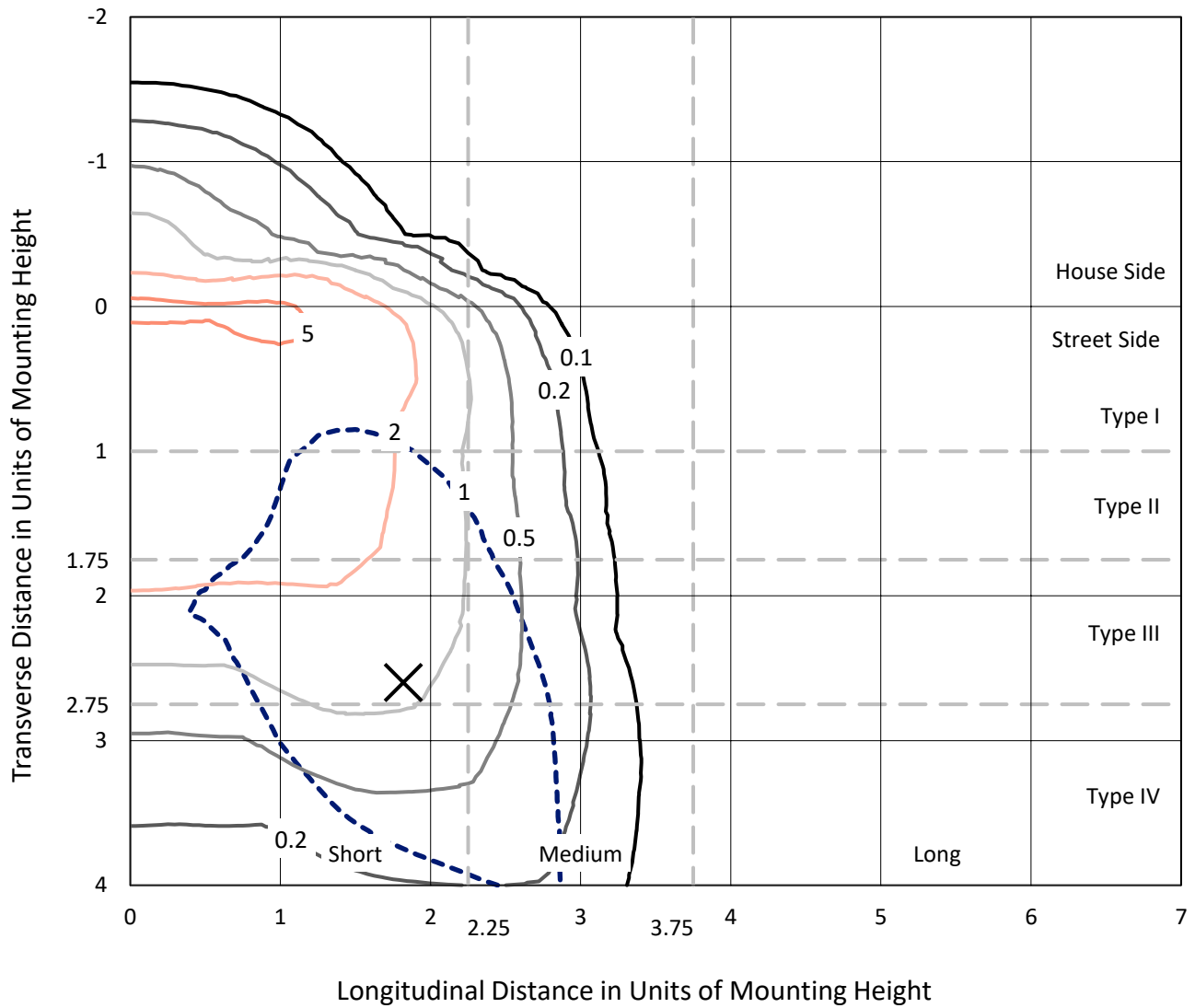
Input Watts (W): 293.6
Input Voltage (V): 120.0
Input Current (Ain): 2.469
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 3.108
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

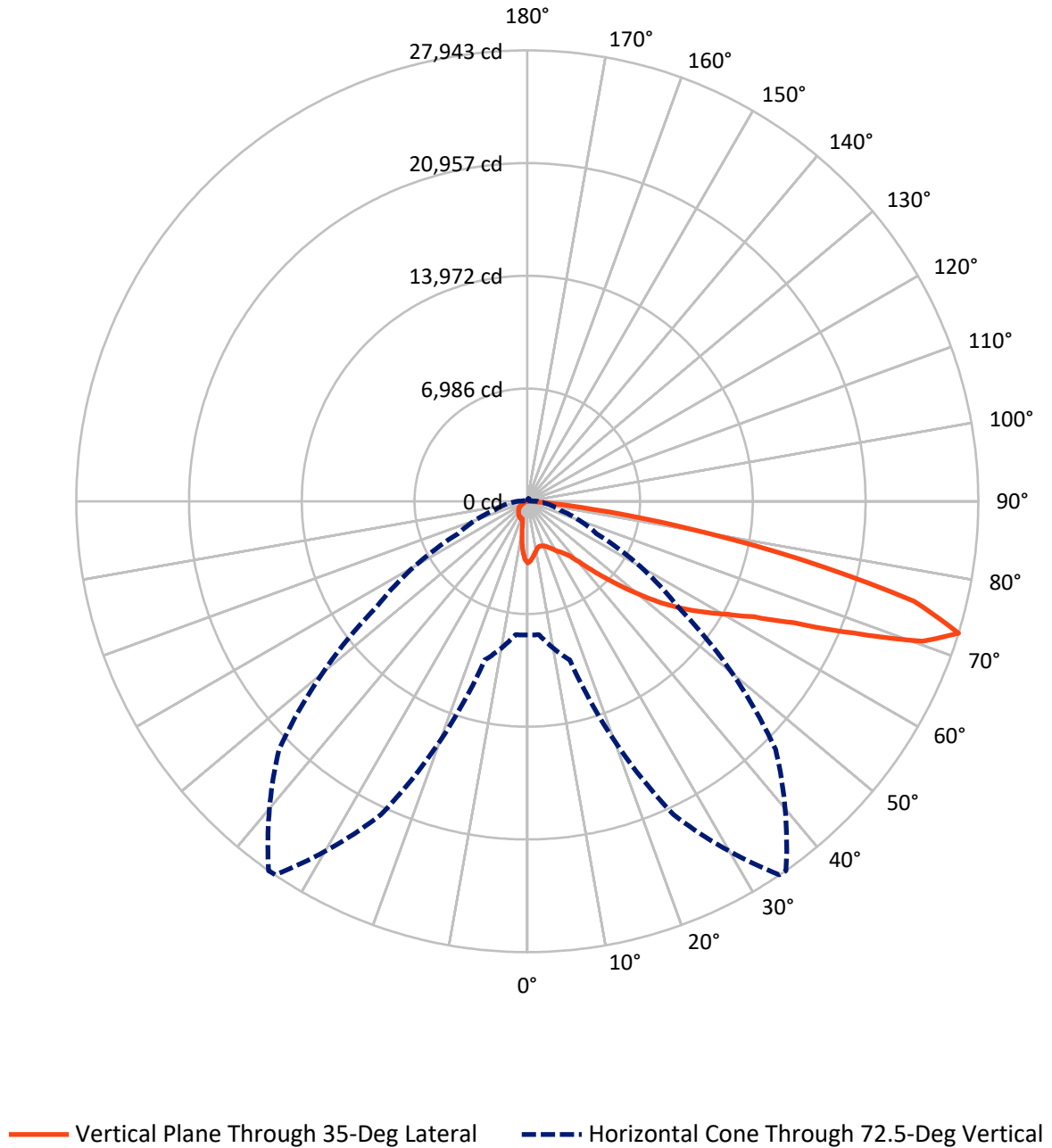
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.1 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2965.1	0.0	2965.1
	% Fixture	11.3	0.0	11.3
Street Side	Lumens	23380.9	0.0	23380.9
	% Fixture	88.7	0.0	88.7
Total	Lumens	26346.0	0.0	26346.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	313.8	1.2
10°-20°	734.0	2.8
20°-30°	1192.4	4.5
30°-40°	1989.5	7.6
40°-50°	3764.3	14.3
50°-60°	5981.4	22.7
60°-70°	7399.4	28.1
70°-80°	4599.5	17.5
80°-90°	371.7	1.4
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°	26346.0	100.0
0°-180°	26346.0	100.0

Coefficient of Utilization



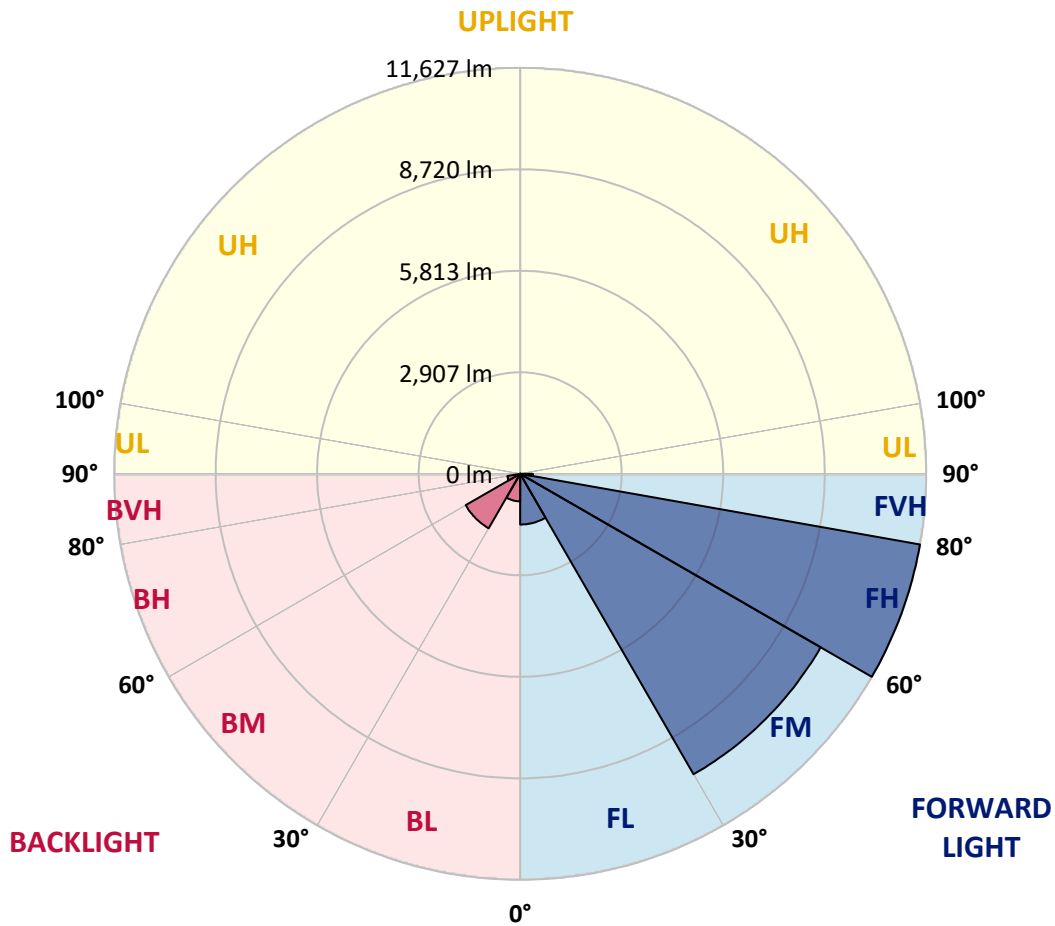
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1452.3	5.5			
FM (30°-60°)	9935.1	37.7			
FH (60°-80°)	11626.8	44.1			G4/12000
FVH (80°-90°)	366.7	1.4			G3/500
BL (0°-30°)	787.9	3.0	B2/1000		
BM (30°-60°)	1800.1	6.8	B2/2500		
BH (60°-80°)	372.1	1.4	B1/500		G1/500
BVH (80°-90°)	5.1	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 IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	3818.4	3818.4	3818.4	3818.4	3818.4	3818.4	3818.4	3818.4	3818.4	3818.4	3818.4
2.5°	3648.5	3679.4	3685.2	3694.9	3694.9	3706.5	3725.8	3752.8	3797.2	3820.3	3835.8
5°	3362.8	3386.0	3415.0	3438.1	3482.5	3488.3	3563.6	3637.0	3739.3	3816.5	3870.5
7.5°	3075.2	3102.2	3140.8	3196.8	3254.7	3272.1	3386.0	3509.5	3671.7	3816.5	3907.2
10°	2872.5	2874.4	2909.2	2965.2	3057.8	3079.1	3218.1	3393.7	3596.4	3793.3	3942.0
12.5°	2758.6	2772.1	2787.6	2830.0	2918.8	2932.3	3081.0	3287.5	3521.1	3779.8	3982.5
15°	2758.6	2768.3	2777.9	2799.1	2870.6	2882.2	3013.4	3220.0	3482.5	3785.6	4048.1
17.5°	2787.6	2803.0	2795.3	2820.4	2895.7	2903.4	3019.2	3200.7	3480.6	3822.3	4148.5
20°	2857.1	2868.6	2853.2	2868.6	2943.9	2959.4	3079.1	3237.4	3513.4	3886.0	4274.0
22.5°	2967.1	2972.9	2936.2	2947.8	3025.0	3044.3	3183.3	3341.6	3592.6	3988.3	4442.0
25°	3106.1	3117.7	3061.7	3075.2	3148.6	3171.7	3331.9	3498.0	3718.0	4129.2	4656.2
27.5°	3266.3	3272.1	3223.8	3221.9	3316.5	3349.3	3511.5	3691.0	3886.0	4306.8	4926.5
30°	3449.7	3467.1	3420.7	3413.0	3532.7	3559.7	3720.0	3928.5	4133.1	4573.2	5310.7
32.5°	3594.5	3608.0	3581.0	3600.3	3721.9	3743.1	3972.9	4264.4	4521.1	4951.6	5833.8
35°	3803.0	3810.7	3748.9	3783.7	3922.7	3976.7	4318.4	4735.4	5009.5	5426.5	6517.2
37.5°	4557.8	4557.8	4295.2	4123.4	4256.6	4304.9	4791.4	5328.0	5611.8	6063.5	7378.2
40°	5602.1	5584.8	5200.6	4849.3	4831.9	4926.5	5465.1	6075.1	6389.8	6828.0	8347.2
42.5°	6716.0	6689.0	6165.8	5818.4	5760.4	5793.3	6243.1	6995.9	7316.4	7760.4	9389.7
45°	7704.4	7696.7	7217.9	6750.8	6646.5	6750.8	7214.1	8073.1	8302.8	8770.0	10430.2
47.5°	8532.6	8532.6	8183.2	7878.1	7824.1	7885.9	8528.7	9268.1	9246.8	9845.3	11443.7
50°	9486.2	9478.5	9146.4	9015.2	9071.2	9158.0	10042.2	10526.7	10223.6	10901.2	12349.1
52.5°	10154.1	10200.5	10086.6	10065.3	10351.0	10501.6	11578.8	11758.3	11098.1	11903.1	13026.6
55°	10683.1	10737.1	10868.4	11017.0	11567.2	11764.1	13067.2	12926.3	11829.8	12771.8	13416.6
57.5°	11432.1	11354.9	11557.6	11851.0	12740.9	12978.4	14509.2	14028.5	12418.5	13476.4	13459.1
60°	12341.3	12352.9	12387.7	12758.3	13912.7	14217.7	15930.0	15071.0	12796.9	13908.9	12988.0
62.5°	13434.0	13451.3	13522.8	14092.2	15486.0	15773.7	17443.5	15924.2	12970.7	13787.2	11771.8
65°	13358.7	13432.0	14229.3	16177.1	17877.8	18161.6	19209.9	16522.7	12708.1	12675.3	9584.7
67.5°	12169.5	12289.2	13623.1	18667.4	21483.9	21800.5	21344.9	16640.4	11574.9	9856.8	6252.7
70°	10609.7	10652.2	12256.4	20906.7	25659.5	25979.9	23256.1	15345.1	8783.5	5497.9	2801.1
72.5°	8285.5	8295.1	10177.3	21426.0	27925.8	27943.2	21756.1	11391.6	4723.8	2111.9	972.9
75°	5918.7	5860.8	6816.4	17375.9	24568.8	24765.7	16310.3	5343.5	1805.0	998.0	484.5
77.5°	3173.7	3237.4	3857.0	10304.7	16972.5	17308.4	8899.3	1540.5	918.9	679.5	320.5
80°	980.7	1034.7	1581.0	4718.0	9613.6	9816.3	3299.1	685.3	640.9	484.5	210.4
82.5°	308.9	320.5	737.4	1982.6	3990.2	4082.9	955.6	388.0	438.2	320.5	123.5
85°	88.8	90.7	328.2	739.4	986.5	1005.8	268.3	150.6	251.0	198.8	63.7
87.5°	9.7	30.9	123.5	123.5	86.9	84.9	29.0	32.8	71.4	25.1	11.6
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°	3818.4	3818.4	3818.4	3818.4	3818.4	3818.4	3818.4	3818.4	3818.4	3818.4	3818.4
2.5°	3826.1	3828.1	3803.0	3760.5	3714.2	3675.6	3627.3	3588.7	3561.7	3553.9	3567.5
5°	3853.2	3839.7	3768.2	3638.9	3484.5	3351.3	3202.6	3084.8	3007.6	2974.8	2986.4
7.5°	3893.7	3855.1	3698.7	3443.9	3148.6	2886.0	2619.6	2413.1	2281.8	2216.1	2225.8
10°	3928.5	3851.2	3582.9	3162.1	2710.3	2312.7	1953.6	1704.6	1565.6	1500.0	1501.9
12.5°	3961.3	3849.3	3432.3	2828.1	2216.1	1729.7	1395.7	1272.2	1233.6	1220.0	1216.2
15°	4023.0	3855.1	3243.1	2445.9	1723.9	1306.9	1185.3	1183.4	1191.1	1187.2	1185.3
17.5°	4108.0	3860.9	3028.9	2040.5	1330.1	1152.5	1146.7	1164.1	1175.6	1169.8	1167.9
20°	4218.0	3884.1	2801.1	1638.9	1142.8	1113.9	1127.4	1142.8	1152.5	1142.8	1140.9
22.5°	4372.5	3924.6	2552.0	1316.6	1083.0	1090.7	1102.3	1119.7	1129.3	1115.8	1113.9
25°	4561.6	3988.3	2306.9	1144.8	1054.0	1063.7	1081.0	1100.4	1111.9	1098.4	1096.5
27.5°	4806.8	4090.6	2081.0	1106.1	1025.1	1030.9	1056.0	1084.9	1100.4	1083.0	1083.0
30°	5162.0	4258.6	1886.0	1123.5	1007.7	994.2	1028.9	1069.5	1086.8	1071.4	1069.5
32.5°	5633.0	4496.0	1766.4	1150.5	1000.0	951.7	984.5	1036.6	1065.6	1056.0	1056.0
35°	6250.8	4857.0	1720.0	1181.4	994.2	907.3	930.5	986.5	1036.6	1046.3	1046.3
37.5°	6999.8	5358.9	1733.5	1194.9	976.8	870.6	882.2	930.5	996.1	1027.0	1034.7
40°	7851.1	5943.8	1810.8	1181.4	957.5	839.7	841.7	878.4	936.3	982.6	998.0
42.5°	8729.5	6627.2	1953.6	1131.2	940.1	812.7	806.9	832.0	870.6	903.4	917.0
45°	9565.4	7329.9	2094.5	1061.7	918.9	785.7	772.2	781.8	789.6	803.1	810.8
47.5°	10295.1	7824.1	2054.0	998.0	889.9	754.8	731.6	727.8	704.6	702.7	700.8
50°	10798.9	7932.2	1824.3	934.3	847.5	720.1	683.4	660.2	619.7	600.4	602.3
52.5°	10959.1	7505.6	1490.3	870.6	778.0	673.7	621.6	584.9	534.7	517.4	515.4
55°	10746.8	6669.7	1191.1	793.4	681.4	612.0	554.0	505.8	465.2	444.0	444.0
57.5°	10227.5	5606.0	942.1	702.7	579.1	542.5	484.5	436.3	401.5	380.3	376.4
60°	9366.5	4451.6	745.2	594.6	494.2	467.2	407.3	376.4	345.5	320.5	314.7
62.5°	8059.6	3177.5	584.9	471.0	413.1	382.2	347.5	324.3	287.6	252.9	247.1
65°	6289.4	1944.0	451.7	345.5	332.0	316.6	295.4	274.1	229.7	195.0	189.2
67.5°	3967.1	920.8	322.4	260.6	262.5	254.8	245.2	227.8	195.0	164.1	160.2
70°	1747.1	445.9	212.3	198.8	195.0	195.0	202.7	196.9	166.0	137.1	131.3
72.5°	594.6	239.4	158.3	150.6	140.9	139.0	169.9	164.1	133.2	106.2	100.4
75°	310.8	160.2	115.8	108.1	84.9	102.3	135.1	127.4	94.6	69.5	63.7
77.5°	202.7	113.9	79.1	69.5	48.3	67.6	100.4	88.8	56.0	34.7	30.9
80°	127.4	75.3	46.3	32.8	23.2	36.7	54.1	38.6	21.2	7.7	5.8
82.5°	67.6	38.6	17.4	11.6	9.7	11.6	13.5	9.7	3.9	0.0	0.0
85°	27.0	13.5	5.8	3.9	1.9	0.0	3.9	1.9	0.0	0.0	0.0
87.5°	9.7	1.9	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)