

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: P967391

Luminaire Tested: **NAV-SB4D-835-U-T2U-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P967391
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-17)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4D-835-U-T2U-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3500K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II U
OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 29632.7 lumens
Efficiency: N/A
Efficacy: 100.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B3 - U0 - G4

Input Watts (W): 293.6
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

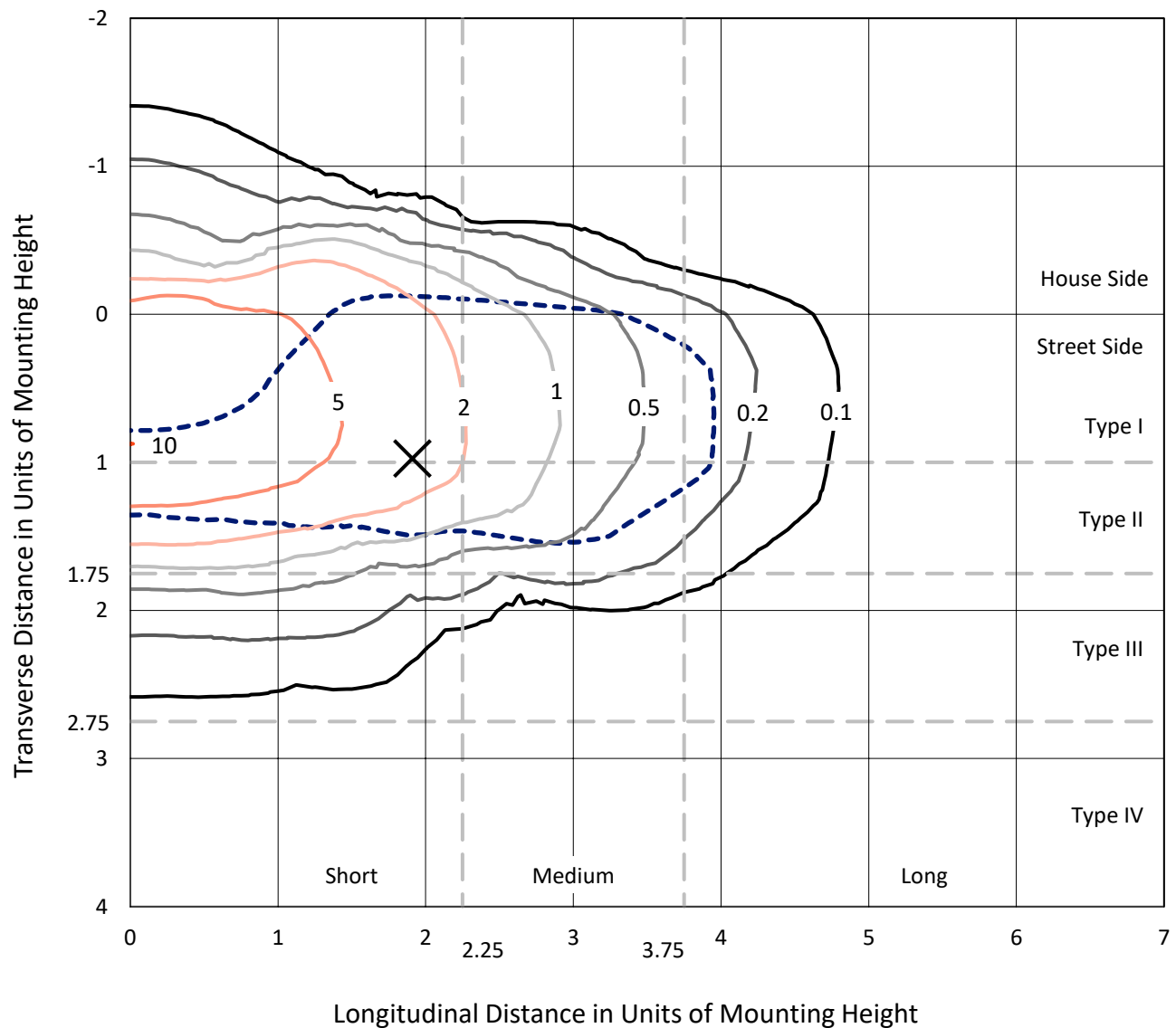


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Iso-Footcandle Lines of Horizontal Illumination

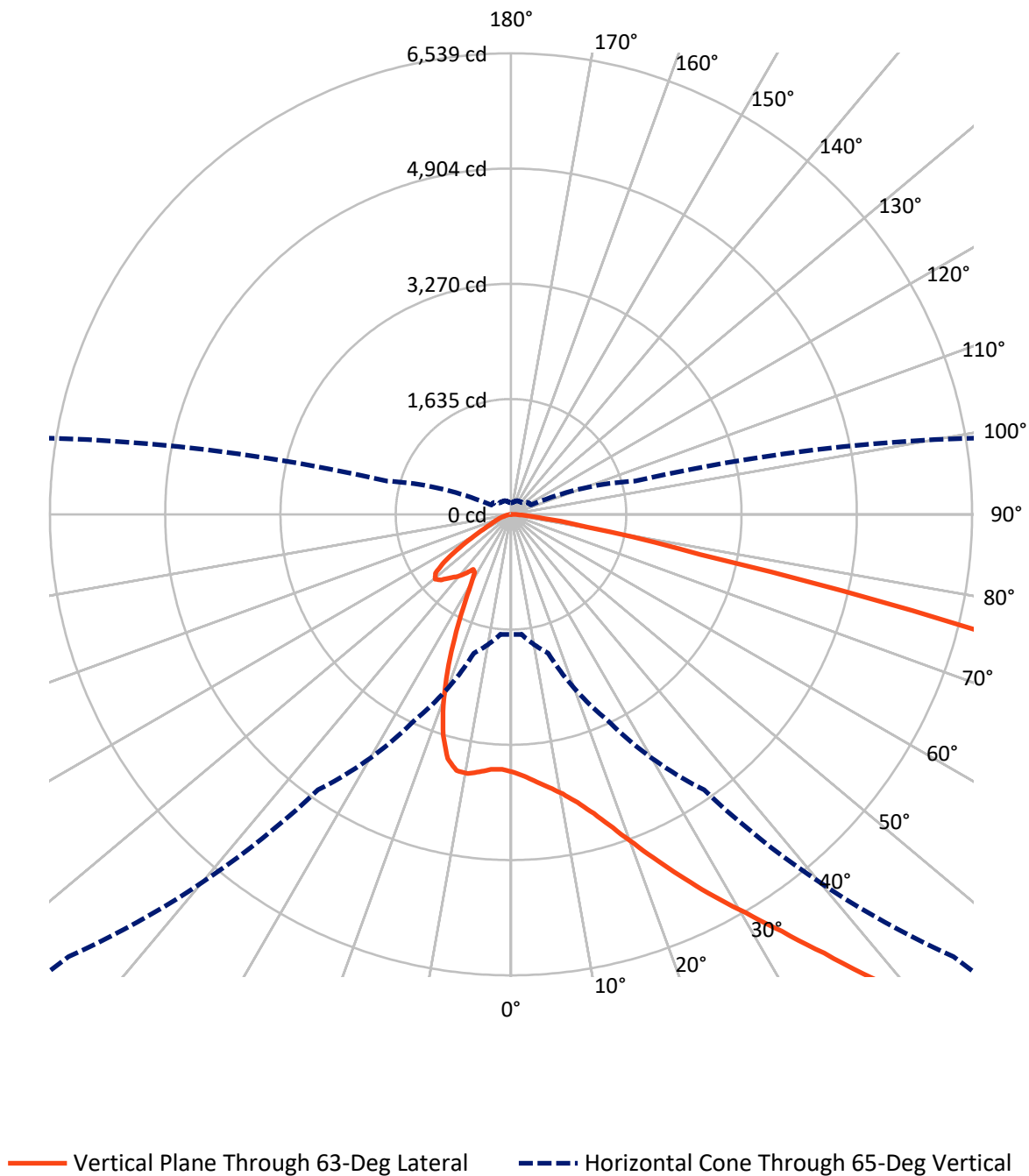
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10 fc
Type II - Short - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4355.8	0.0	4355.8
	% Fixture	14.7	0.0	14.7
Street Side	Lumens	25277.0	0.0	25277.0
	% Fixture	85.3	0.0	85.3
Total	Lumens	29632.7	0.0	29632.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	344.6	1.2
10°-20°	956.1	3.2
20°-30°	1664.8	5.6
30°-40°	3000.6	10.1
40°-50°	5951.2	20.1
50°-60°	8106.5	27.4
60°-70°	6470.5	21.8
70°-80°	2928.1	9.9
80°-90°	210.5	0.7
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°	29632.7	100.0
0°-180°	29632.7	100.0

Coefficient of Utilization



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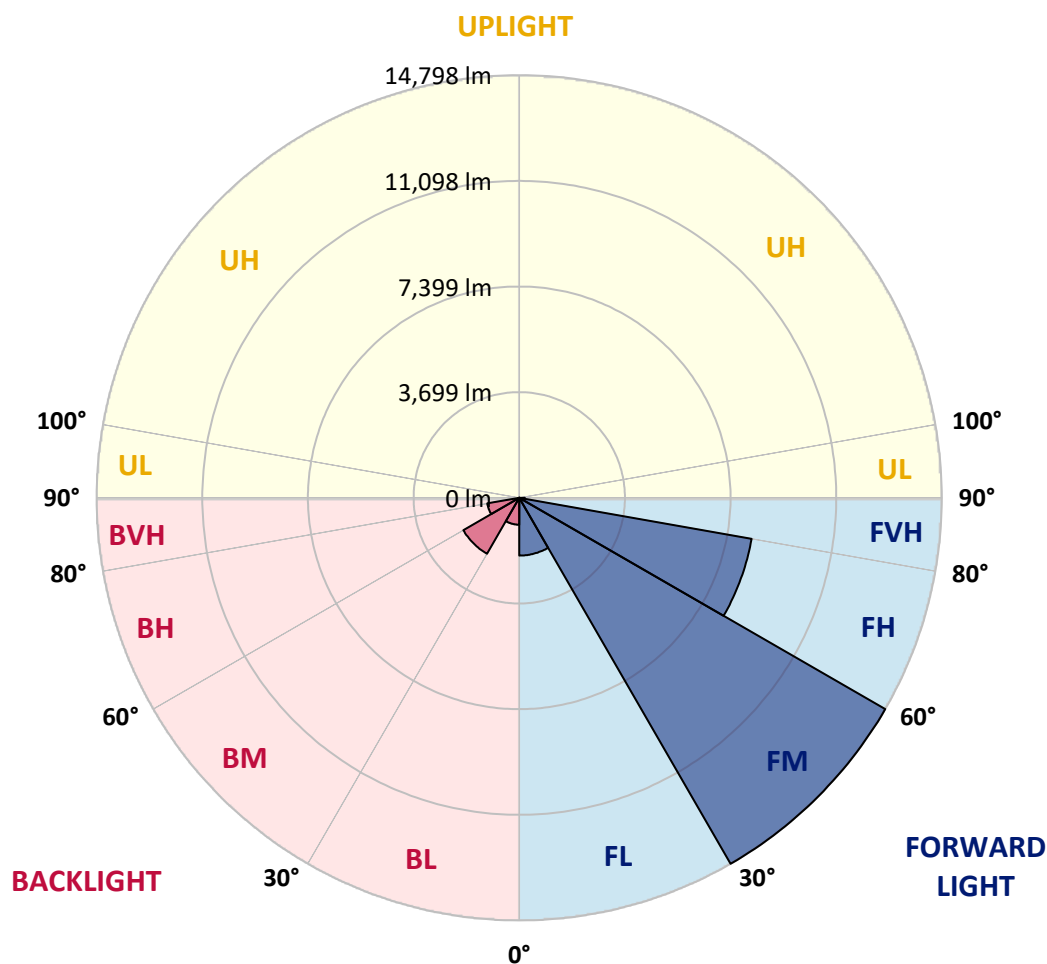
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2022.8	6.8			
FM	(30°-60°)	14797.9	49.9			
FH	(60°-80°)	8261.5	27.9			G4/12000
FVH	(80°-90°)	194.8	0.7			G2/225
BL	(0°-30°)	942.7	3.2	B2/1000		
BM	(30°-60°)	2260.4	7.6	B2/2500		
BH	(60°-80°)	1137.1	3.8	B3/2500		G3/2500
BVH	(80°-90°)	15.6	0.1			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type II Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	63°	65°	75°	85°
0°	3657.2	3657.2	3657.2	3657.2	3657.2	3657.2	3657.2	3657.2	3657.2	3657.2	3657.2
2.5°	3742.9	3732.6	3747.0	3740.8	3736.7	3728.6	3724.5	3720.4	3712.2	3706.2	3681.7
5°	3753.0	3747.0	3761.2	3773.4	3785.6	3797.9	3804.0	3812.2	3804.0	3787.7	3763.3
7.5°	3667.4	3663.4	3693.9	3730.6	3785.6	3832.6	3883.5	3912.0	3914.1	3908.0	3881.5
10°	3661.3	3651.2	3681.7	3726.6	3797.9	3881.5	3971.2	4032.3	4040.4	4067.0	4038.5
12.5°	3757.1	3747.0	3789.7	3838.7	3912.0	3999.8	4109.8	4195.4	4207.6	4244.3	4223.9
15°	3918.2	3903.9	3952.8	4016.1	4109.8	4209.7	4325.9	4403.4	4413.5	4458.4	4421.7
17.5°	4105.7	4091.5	4148.6	4215.8	4317.7	4454.3	4588.9	4674.5	4686.7	4715.3	4648.0
20°	4346.3	4328.0	4372.8	4433.9	4542.0	4705.1	4866.1	4988.5	4986.4	4986.4	4876.3
22.5°	4625.6	4597.0	4635.8	4684.7	4786.6	4984.4	5198.4	5343.1	5343.1	5286.1	5104.6
25°	4925.2	4896.7	4939.5	4984.4	5074.1	5298.3	5549.0	5728.4	5736.6	5638.7	5349.3
27.5°	5300.4	5263.7	5296.3	5349.3	5402.3	5630.6	5928.2	6136.2	6140.3	5989.4	5581.6
30°	6022.0	5918.0	5816.2	5759.1	5783.5	6009.8	6327.8	6558.2	6578.6	6370.6	5834.5
32.5°	7343.0	7322.6	6963.8	6495.0	6250.3	6417.5	6774.2	7051.5	7063.7	6796.7	6162.7
35°	9395.9	9371.5	8794.5	7901.6	7104.5	6963.8	7316.6	7644.8	7636.6	7334.9	6588.7
37.5°	11846.2	11823.9	11063.4	9868.8	8578.4	7789.5	8015.8	8360.3	8411.3	8015.8	7139.1
40°	13939.9	13856.4	13375.2	12223.4	10535.5	9159.4	9010.6	9238.9	9291.9	8823.0	7838.4
42.5°	15526.0	15454.6	15210.0	14490.3	12904.3	11185.8	10182.8	10270.4	10329.5	9766.9	8641.6
45°	16347.5	16331.2	16429.0	16361.8	15318.0	13672.9	11858.5	11493.6	11516.1	10812.7	9552.9
47.5°	16463.7	16455.6	16902.0	17534.0	17393.3	16478.0	14009.2	13018.5	12939.0	11993.0	10543.7
50°	15778.7	15762.4	16618.6	17803.0	18779.5	18834.6	16451.5	14737.0	14561.7	13214.2	11577.2
52.5°	13591.3	13587.2	14993.9	16965.2	19266.7	20897.6	18865.1	16624.8	16331.2	14506.6	12669.9
55°	10458.0	10533.4	12145.9	14476.1	18377.9	21890.4	21032.2	18720.4	18269.9	15807.2	13677.0
57.5°	7408.3	7518.4	9112.6	11187.8	15621.7	21303.3	22497.9	20820.2	20335.0	17103.9	14698.3
60°	3979.4	4077.1	5673.4	8150.3	11622.1	19113.9	23270.6	22642.7	22184.0	18335.1	15619.8
62.5°	2370.9	2403.5	3064.0	5261.6	7860.8	14602.5	22942.4	24030.9	23653.8	19368.7	16420.9
65°	1702.2	1708.4	2040.7	3212.9	4772.4	8872.0	20640.8	24695.5	24579.4	20147.4	17014.1
67.5°	1433.2	1429.1	1567.6	2134.5	3251.6	4444.1	15819.5	23755.8	24249.1	20640.8	17350.5
70°	1229.3	1235.4	1398.5	1563.6	2444.3	2515.7	7864.9	20683.6	21735.5	20771.2	17330.1
72.5°	915.3	935.7	1086.6	1425.0	1844.9	1730.8	2715.4	15336.4	17238.3	19570.5	16431.1
75°	646.3	656.4	764.4	1198.7	1376.1	1259.8	1386.2	7928.1	10366.2	15004.1	13448.6
77.5°	497.4	515.8	578.9	837.8	1355.7	884.8	848.1	2743.9	4215.8	9063.6	9220.6
80°	269.1	301.8	417.9	605.5	952.0	625.9	419.9	1092.6	1429.1	4238.3	3555.3
82.5°	138.6	155.0	291.5	436.2	542.2	546.3	208.0	454.6	589.2	1308.8	487.2
85°	55.0	67.2	195.7	240.6	279.3	269.1	93.8	183.5	212.0	362.8	148.8
87.5°	12.2	20.4	71.3	55.0	53.0	57.1	22.4	42.8	40.8	42.8	26.5
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°	3657.2	3657.2	3657.2	3657.2	3657.2	3657.2	3657.2	3657.2	3657.2	3657.2	3657.2
2.5°	3679.6	3671.6	3649.1	3624.6	3596.1	3579.8	3569.6	3567.5	3553.3	3543.1	3553.3
5°	3740.8	3732.6	3689.9	3638.9	3583.8	3541.1	3500.3	3463.6	3410.6	3400.3	3396.3
7.5°	3863.1	3840.7	3771.4	3702.1	3598.2	3473.7	3322.9	3149.6	2994.7	2947.8	2925.4
10°	4014.0	3983.5	3895.7	3773.4	3543.1	3204.7	2839.8	2501.3	2232.2	2156.8	2128.3
12.5°	4185.3	4158.7	4042.5	3816.3	3312.7	2699.1	2140.5	1720.6	1459.6	1394.4	1376.1
15°	4389.0	4350.4	4189.3	3751.0	2901.0	2050.8	1469.8	1221.1	1127.3	1115.1	1102.9
17.5°	4605.2	4542.0	4319.8	3516.6	2346.4	1457.6	1135.5	1064.2	1023.4	1011.2	1005.0
20°	4802.9	4721.4	4397.2	3161.8	1753.2	1135.5	1017.2	970.4	933.7	919.4	911.2
22.5°	5000.7	4884.4	4397.2	2678.7	1314.9	1007.1	933.7	890.8	848.1	829.7	819.5
25°	5206.6	5051.6	4319.8	2140.5	1058.0	923.5	854.1	807.3	770.6	748.1	740.0
27.5°	5406.4	5192.3	4142.4	1630.9	941.9	850.1	780.7	735.9	701.3	685.0	685.0
30°	5596.0	5330.9	3893.7	1237.4	866.4	778.7	713.5	674.8	640.1	623.8	625.9
32.5°	5852.9	5506.2	3628.7	1015.3	801.1	711.5	652.3	615.6	585.1	572.9	572.9
35°	6209.6	5765.1	3400.3	996.9	746.1	656.4	597.3	562.6	532.1	521.9	521.9
37.5°	6715.2	6183.1	3280.1	1119.2	701.3	607.5	552.5	515.8	487.2	479.1	477.0
40°	7338.9	6749.8	3345.3	1241.5	670.7	564.7	511.7	475.0	450.5	440.3	438.3
42.5°	8078.9	7449.0	3706.2	1335.3	650.4	528.0	472.9	432.1	415.8	411.8	411.8
45°	8929.1	8217.6	4258.7	1435.2	617.7	493.3	434.2	403.6	391.4	389.4	387.3
47.5°	9895.3	9061.5	4898.8	1559.5	585.1	460.7	403.6	383.2	373.1	369.0	369.0
50°	10853.5	9911.6	5557.2	1628.8	558.6	430.2	379.1	362.8	354.8	352.7	352.7
52.5°	11856.5	10786.2	6089.3	1563.6	536.2	405.7	358.7	346.6	338.5	336.4	336.4
55°	12812.6	11493.6	6181.1	1327.2	491.3	381.2	336.4	330.3	320.1	320.1	318.1
57.5°	13636.2	11848.3	5532.7	974.5	446.5	344.5	314.0	307.8	299.7	297.7	295.6
60°	14392.5	11746.4	4270.9	656.4	397.5	307.8	285.4	281.4	273.2	263.0	261.0
62.5°	14818.5	11297.9	2921.4	428.1	348.6	269.1	252.8	250.7	232.4	212.0	208.0
65°	14979.6	10376.5	1822.6	311.9	291.5	230.3	218.1	214.0	187.6	165.1	163.1
67.5°	14838.9	8859.7	919.4	246.7	230.3	191.7	179.4	179.4	161.0	140.6	138.6
70°	14276.3	6641.8	387.3	197.7	177.3	146.8	146.8	155.0	136.6	114.2	112.1
72.5°	13055.2	4468.6	205.9	150.9	132.5	103.9	120.2	126.4	108.0	85.6	85.6
75°	10378.5	2725.6	142.7	112.1	83.5	73.4	91.7	95.8	73.4	57.1	55.0
77.5°	7098.4	1565.7	95.8	71.3	53.0	42.8	63.2	59.1	38.7	26.5	28.5
80°	3117.0	652.3	55.0	32.6	20.4	16.3	22.4	16.3	12.2	8.2	8.2
82.5°	364.9	152.9	20.4	12.2	8.2	4.1	2.0	0.0	0.0	0.0	0.0
85°	75.4	18.3	10.1	4.1	2.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	14.2	4.1	2.0	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)