

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: P884160

Luminaire Tested: **NAV-SB4D-830-U-T4FT-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884160
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-830-U-T4FT-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3000K, 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: 27321 lumens
Efficiency: N/A
Efficacy: 93.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G5

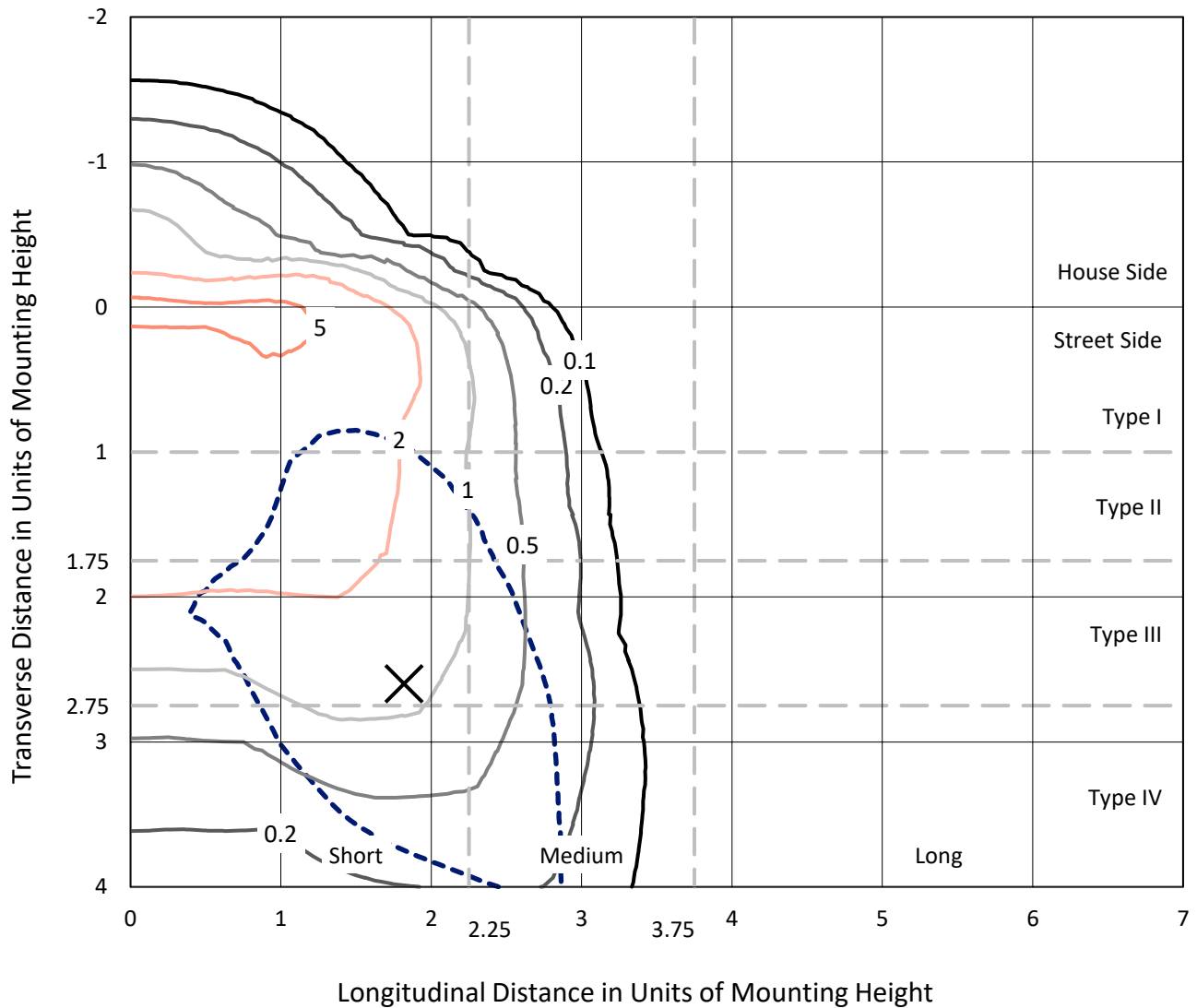
Input Watts (W): 293.6
Input Voltage (V): 120.0
Input Current (Ain): 2.469
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 3.108
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

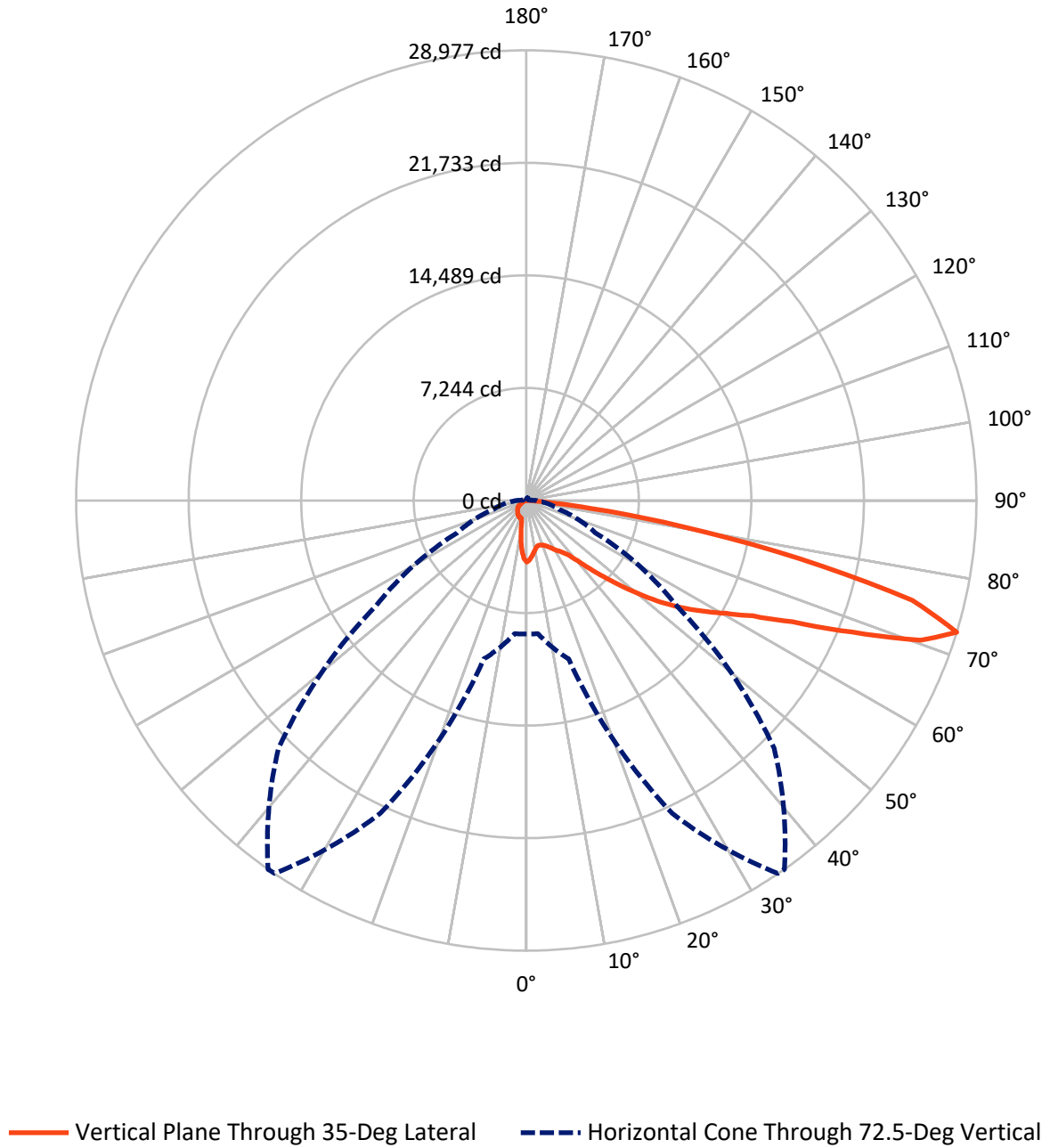
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.3 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	3074.9	0.0	3074.9
	% Fixture	11.3	0.0	11.3
Street Side	Lumens	24246.1	0.0	24246.1
	% Fixture	88.7	0.0	88.7
Total	Lumens	27321.0	0.0	27321.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	325.4	1.2
10°-20°	761.2	2.8
20°-30°	1236.5	4.5
30°-40°	2063.2	7.6
40°-50°	3903.6	14.3
50°-60°	6202.7	22.7
60°-70°	7673.2	28.1
70°-80°	4769.7	17.5
80°-90°	385.5	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°	27321.0	100.0
0°-180°	27321.0	100.0

Coefficient of Utilization



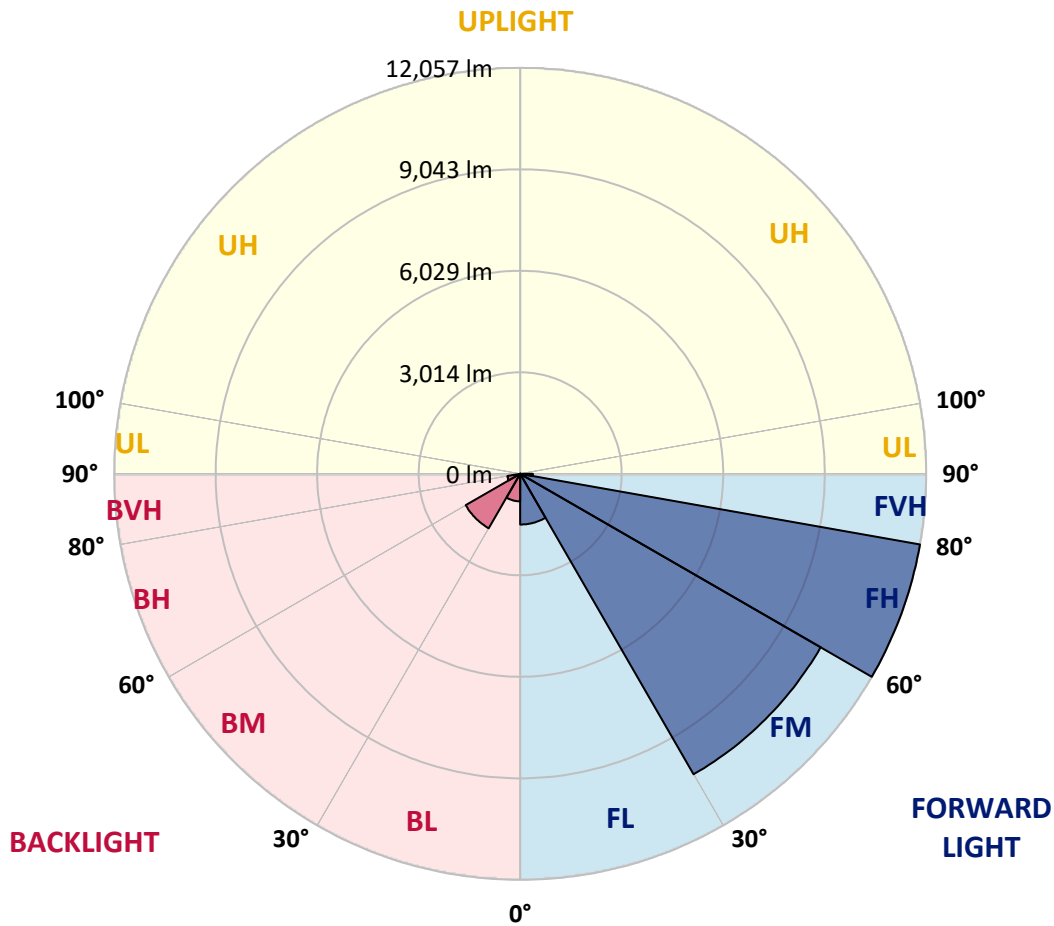
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1506.1	5.5			
FM (30°-60°)	10302.8	37.7			
FH (60°-80°)	12057.1	44.1			G5
FVH (80°-90°)	380.2	1.4			G3/500
BL (0°-30°)	817.1	3.0	B2/1000		
BM (30°-60°)	1866.7	6.8	B2/2500		
BH (60°-80°)	385.8	1.4	B1/500		G1/500
BVH (80°-90°)	5.2	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G5

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	3959.7	3959.7	3959.7	3959.7	3959.7	3959.7	3959.7	3959.7	3959.7	3959.7	3959.7
2.5°	3783.6	3815.6	3821.6	3831.6	3831.6	3843.6	3863.6	3891.7	3937.7	3961.7	3977.7
5°	3487.3	3511.3	3541.3	3565.4	3611.4	3617.4	3695.5	3771.6	3877.7	3957.7	4013.8
7.5°	3189.0	3217.0	3257.1	3315.1	3375.2	3393.2	3511.3	3639.4	3807.6	3957.7	4051.8
10°	2978.8	2980.8	3016.8	3074.9	3171.0	3193.0	3337.1	3519.3	3729.5	3933.7	4087.8
12.5°	2860.7	2874.7	2890.7	2934.8	3026.9	3040.9	3195.0	3409.2	3651.4	3919.7	4129.9
15°	2860.7	2870.7	2880.7	2902.7	2976.8	2988.8	3124.9	3339.1	3611.4	3925.7	4198.0
17.5°	2890.7	2906.7	2898.7	2924.8	3002.8	3010.8	3130.9	3319.1	3609.4	3963.7	4302.1
20°	2962.8	2974.8	2958.8	2974.8	3052.9	3068.9	3193.0	3357.2	3643.4	4029.8	4432.2
22.5°	3076.9	3082.9	3044.9	3056.9	3137.0	3157.0	3301.1	3465.3	3725.5	4135.9	4606.3
25°	3221.0	3233.0	3175.0	3189.0	3265.1	3289.1	3455.3	3627.4	3855.6	4282.0	4828.5
27.5°	3387.2	3393.2	3343.1	3341.1	3439.2	3473.3	3641.4	3827.6	4029.8	4466.2	5108.8
30°	3577.4	3595.4	3547.3	3539.3	3663.4	3691.5	3857.6	4073.8	4286.0	4742.5	5507.2
32.5°	3727.5	3741.5	3713.5	3733.5	3859.6	3881.7	4119.9	4422.2	4688.4	5134.8	6049.7
35°	3943.7	3951.7	3887.7	3923.7	4067.8	4123.9	4478.2	4910.6	5194.9	5627.3	6758.4
37.5°	4726.5	4726.5	4454.2	4276.0	4414.2	4464.2	4968.7	5525.2	5819.5	6287.9	7651.2
40°	5809.5	5791.5	5393.1	5028.7	5010.7	5108.8	5667.3	6299.9	6626.2	7080.7	8656.2
42.5°	6964.6	6936.5	6394.0	6033.7	5973.6	6007.7	6474.1	7254.8	7587.1	8047.6	9737.2
45°	7989.5	7981.5	7485.0	7000.6	6892.5	7000.6	7481.0	8371.9	8610.1	9094.6	10816.2
47.5°	8848.3	8848.3	8486.0	8169.7	8113.6	8177.7	8844.3	9611.1	9589.0	10209.6	11867.2
50°	9837.3	9829.3	9484.9	9348.8	9406.9	9496.9	10413.8	10916.3	10602.0	11304.6	12806.1
52.5°	10529.9	10578.0	10459.9	10437.8	10734.1	10890.3	12007.3	12193.5	11508.8	12343.6	13508.7
55°	11078.4	11134.5	11270.6	11424.8	11995.3	12199.5	13550.8	13404.6	12267.6	13244.5	13913.1
57.5°	11855.2	11775.1	11985.3	12289.6	13212.4	13458.7	15046.2	14547.7	12878.1	13975.2	13957.1
60°	12798.1	12810.1	12846.1	13230.5	14427.6	14743.9	16519.6	15628.7	13270.5	14423.6	13468.7
62.5°	13931.1	13949.1	14023.2	14613.8	16059.1	16357.4	18089.0	16513.6	13450.7	14297.5	12207.5
65°	13853.0	13929.1	14755.9	16775.8	18539.5	18833.7	19920.8	17134.1	13178.4	13144.4	9939.4
67.5°	12619.9	12744.0	14127.3	19358.2	22279.0	22607.3	22134.8	17256.3	12003.3	10221.6	6484.1
70°	11002.4	11046.4	12710.0	21680.4	26609.1	26941.4	24116.7	15913.0	9108.6	5701.4	2904.7
72.5°	8592.1	8602.1	10553.9	22218.9	28959.3	28977.3	22561.2	11813.1	4898.6	2190.1	1009.0
75°	6137.8	6077.7	7068.7	18019.0	25478.0	25682.2	16913.9	5541.2	1871.8	1035.0	502.5
77.5°	3291.1	3357.2	3999.8	10686.1	17600.6	17948.9	9228.7	1597.5	952.9	704.7	332.3
80°	1017.0	1073.0	1639.5	4892.6	9969.4	10179.6	3421.2	710.7	664.6	502.5	218.2
82.5°	320.3	332.3	764.7	2055.9	4137.9	4234.0	990.9	402.4	454.4	332.3	128.1
85°	92.1	94.1	340.3	766.7	1023.0	1043.0	278.3	156.1	260.2	206.2	66.1
87.5°	10.0	32.0	128.1	128.1	90.1	88.1	30.0	34.0	74.1	26.0	12.0
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°	3959.7	3959.7	3959.7	3959.7	3959.7	3959.7	3959.7	3959.7	3959.7	3959.7	3959.7
2.5°	3967.7	3969.7	3943.7	3899.7	3851.6	3811.6	3761.5	3721.5	3693.5	3685.5	3699.5
5°	3995.8	3981.7	3907.7	3773.6	3613.4	3475.3	3321.1	3199.0	3118.9	3084.9	3096.9
7.5°	4037.8	3997.8	3835.6	3571.4	3265.1	2992.8	2716.6	2502.4	2366.2	2298.2	2308.2
10°	4073.8	3993.8	3715.5	3279.1	2810.6	2398.3	2025.9	1767.7	1623.5	1555.5	1557.5
12.5°	4107.9	3991.8	3559.4	2932.8	2298.2	1793.7	1447.4	1319.2	1279.2	1265.2	1261.2
15°	4171.9	3997.8	3363.2	2536.4	1787.7	1355.3	1229.2	1227.2	1235.2	1231.2	1229.2
17.5°	4260.0	4003.8	3141.0	2116.0	1379.3	1195.1	1189.1	1207.1	1219.1	1213.1	1211.1
20°	4374.1	4027.8	2904.7	1699.6	1185.1	1155.1	1169.1	1185.1	1195.1	1185.1	1183.1
22.5°	4534.3	4069.8	2646.5	1365.3	1123.1	1131.1	1143.1	1161.1	1171.1	1157.1	1155.1
25°	4730.5	4135.9	2392.3	1187.1	1093.0	1103.0	1121.1	1141.1	1153.1	1139.1	1137.1
27.5°	4984.7	4242.0	2158.0	1147.1	1063.0	1069.0	1095.0	1125.1	1141.1	1123.1	1123.1
30°	5353.0	4416.2	1955.8	1165.1	1045.0	1031.0	1067.0	1109.0	1127.1	1111.0	1109.0
32.5°	5841.5	4662.4	1831.7	1193.1	1037.0	986.9	1021.0	1075.0	1105.0	1095.0	1095.0
35°	6482.1	5036.7	1783.7	1225.2	1031.0	940.9	964.9	1023.0	1075.0	1085.0	1085.0
37.5°	7258.8	5557.2	1797.7	1239.2	1013.0	902.9	914.9	964.9	1033.0	1065.0	1073.0
40°	8141.7	6163.8	1877.8	1225.2	992.9	870.8	872.8	910.9	970.9	1019.0	1035.0
42.5°	9052.5	6872.5	2025.9	1173.1	974.9	842.8	836.8	862.8	902.9	936.9	950.9
45°	9919.3	7601.2	2172.0	1101.0	952.9	814.8	800.8	810.8	818.8	832.8	840.8
47.5°	10676.1	8113.6	2130.0	1035.0	922.9	782.7	758.7	754.7	730.7	728.7	726.7
50°	11198.5	8225.7	1891.8	968.9	878.8	746.7	708.7	684.6	642.6	622.6	624.6
52.5°	11364.7	7783.3	1545.5	902.9	806.8	698.7	644.6	606.6	554.5	536.5	534.5
55°	11144.5	6916.5	1235.2	822.8	706.7	634.6	574.5	524.5	482.5	460.4	460.4
57.5°	10606.0	5813.5	976.9	728.7	600.6	562.5	502.5	452.4	416.4	394.4	390.4
60°	9713.1	4616.3	772.7	616.6	512.5	484.5	422.4	390.4	358.3	332.3	326.3
62.5°	8357.9	3295.1	606.6	488.5	428.4	396.4	360.3	336.3	298.3	262.2	256.2
65°	6522.1	2015.9	468.4	358.3	344.3	328.3	306.3	284.3	238.2	202.2	196.2
67.5°	4113.9	954.9	334.3	270.3	272.3	264.2	254.2	236.2	202.2	170.2	166.2
70°	1811.7	462.4	220.2	206.2	202.2	202.2	210.2	204.2	172.2	142.1	136.1
72.5°	616.6	248.2	164.2	156.1	146.1	144.1	176.2	170.2	138.1	110.1	104.1
75°	322.3	166.2	120.1	112.1	88.1	106.1	140.1	132.1	98.1	72.1	66.1
77.5°	210.2	118.1	82.1	72.1	50.0	70.1	104.1	92.1	58.1	36.0	32.0
80°	132.1	78.1	48.0	34.0	24.0	38.0	56.1	40.0	22.0	8.0	6.0
82.5°	70.1	40.0	18.0	12.0	10.0	12.0	14.0	10.0	4.0	0.0	0.0
85°	28.0	14.0	6.0	4.0	2.0	0.0	4.0	2.0	0.0	0.0	0.0
87.5°	10.0	2.0	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)