

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: P197064

Luminaire Tested: **NAV-AF-06-D-UNV-SL2-8030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197064
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24257)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-06-D-UNV-SL2-8030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 31612 lumens
Efficiency: N/A
Efficacy: 82.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B3 - U0 - G4

Input Watts (W): 382
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: 25 FT

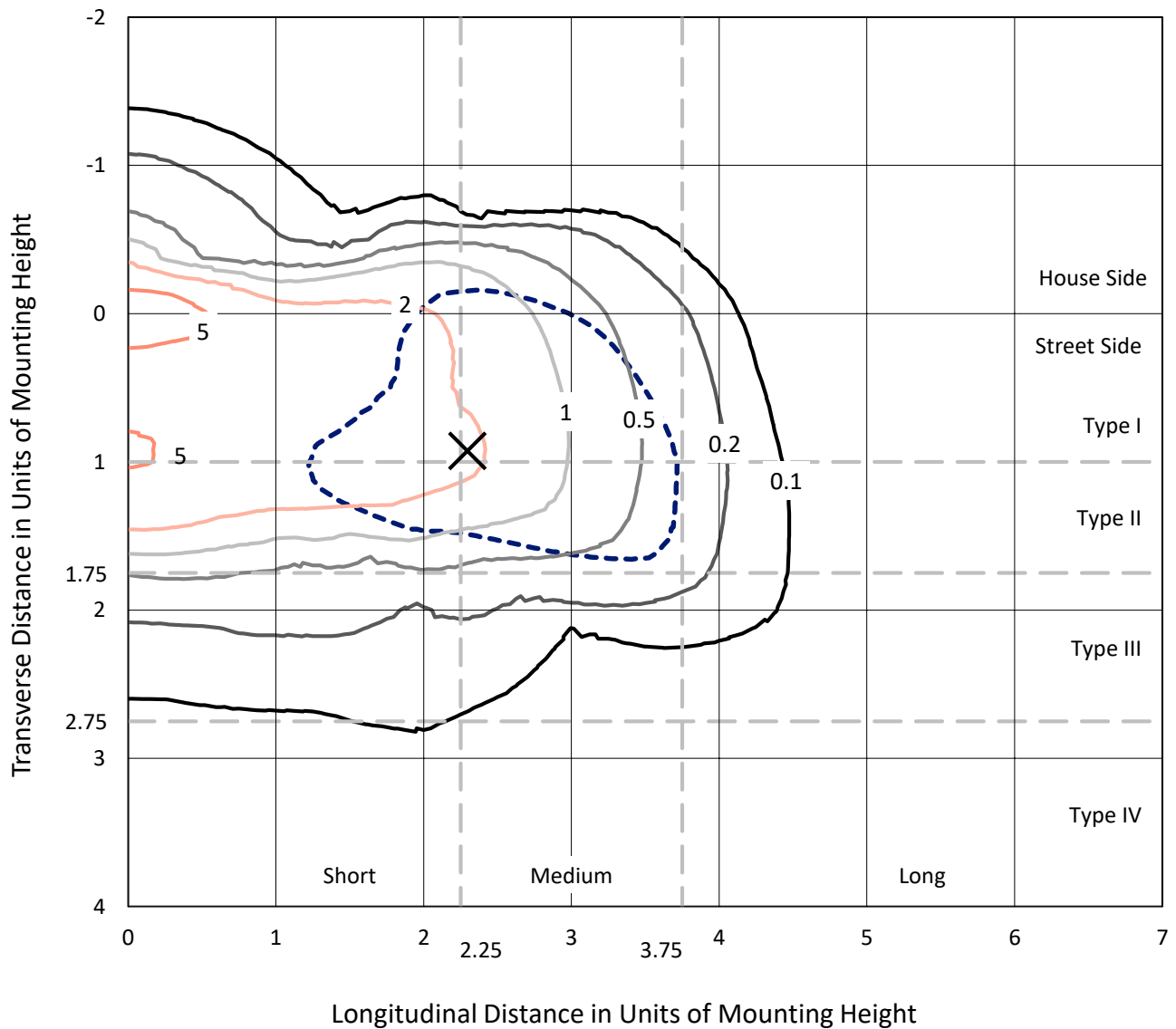


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Iso-Footcandle Lines of Horizontal Illumination

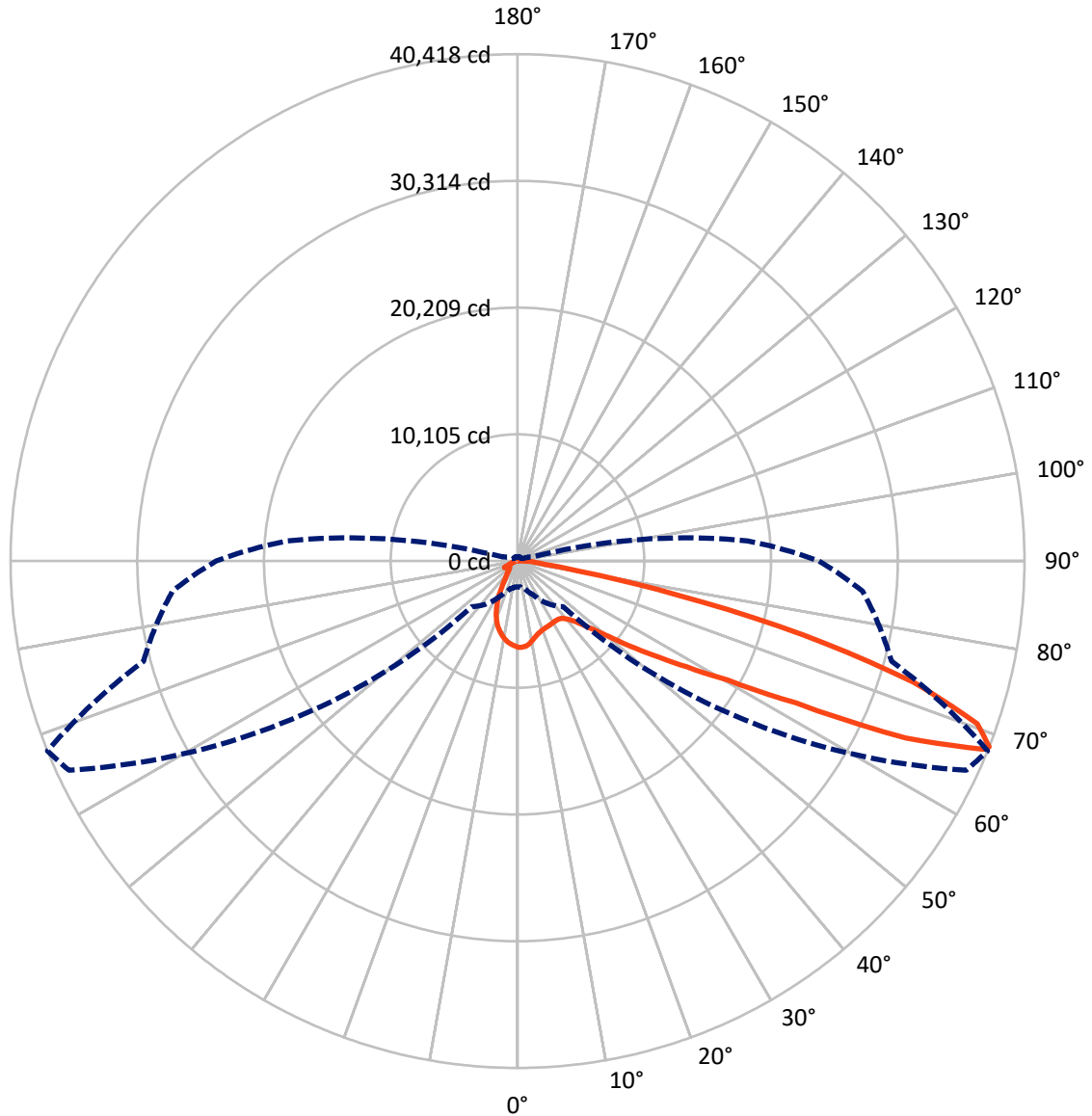
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 7.6 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5171.8	0.0	5171.8
	% Fixture	16.4	0.0	16.4
Street Side	Lumens	26440.2	0.0	26440.2
	% Fixture	83.6	0.0	83.6
Total	Lumens	31612.0	0.0	31612.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	589.3	1.9
10°-20°	1367.0	4.3
20°-30°	1848.8	5.8
30°-40°	2606.7	8.2
40°-50°	4286.4	13.6
50°-60°	6644.2	21.0
60°-70°	8614.8	27.3
70°-80°	4943.6	15.6
80°-90°	711.3	2.2
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°	31612.0	100.0
0°-180°	31612.0	100.0



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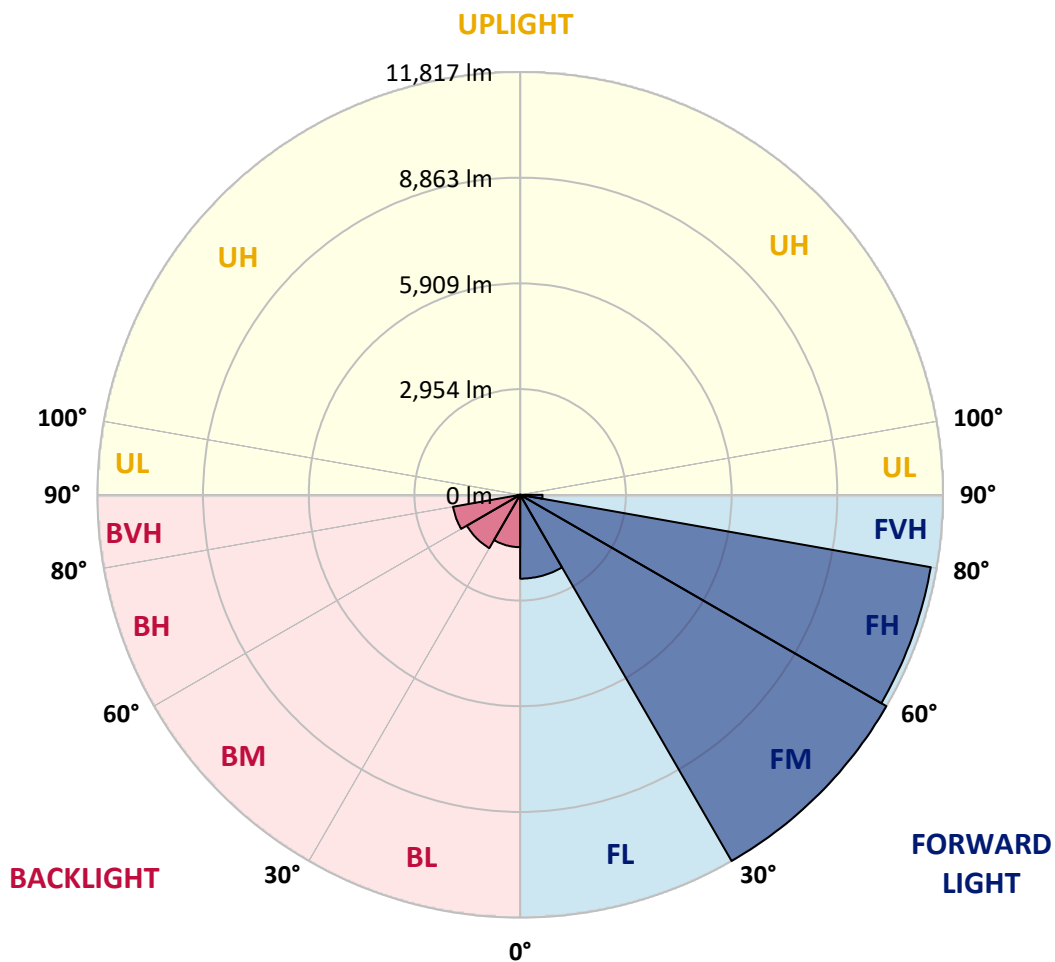
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2343.0	7.4			
FM (30°-60°)	11817.1	37.4			
FH (60°-80°)	11653.6	36.9			G4/12000
FVH (80°-90°)	626.5	2.0			G4/750
BL (0°-30°)	1462.1	4.6	B3/2500		
BM (30°-60°)	1720.2	5.4	B2/2500		
BH (60°-80°)	1904.7	6.0	B3/2500		G3/2500
BVH (80°-90°)	84.8	0.3			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 Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	6878.5	6878.5	6878.5	6878.5	6878.5	6878.5	6878.5	6878.5	6878.5	6878.5	6878.5
2.5°	6694.7	6748.4	6748.4	6787.6	6822.7	6851.6	6876.4	6876.4	6876.4	6859.9	6845.4
5°	5990.5	6062.8	6073.1	6172.3	6302.4	6461.4	6639.0	6795.9	6826.9	6884.7	6907.4
7.5°	5501.1	5523.9	5563.1	5631.2	5763.4	5959.6	6238.3	6589.4	6674.1	6855.8	6950.8
10°	5154.2	5172.8	5205.8	5274.0	5393.8	5571.3	5846.0	6302.4	6442.8	6764.9	6952.8
12.5°	4900.2	4914.7	4945.7	5007.6	5129.4	5288.4	5569.3	6044.2	6217.7	6674.1	6981.7
15°	4702.0	4726.8	4751.5	4811.4	4935.3	5088.1	5373.1	5856.3	6044.2	6601.8	7035.4
17.5°	4623.5	4635.9	4640.0	4671.0	4782.5	4937.4	5222.4	5724.2	5918.3	6544.0	7076.7
20°	4673.1	4675.1	4633.8	4613.2	4677.2	4819.7	5096.4	5625.0	5823.3	6492.3	7093.2
22.5°	4889.9	4889.9	4782.5	4691.7	4648.3	4737.1	5011.7	5556.9	5771.7	6453.1	7093.2
25°	5302.9	5284.3	5117.1	4937.4	4745.4	4708.2	4958.0	5513.5	5732.4	6432.5	7066.4
27.5°	5846.0	5829.5	5616.8	5350.4	5003.5	4770.1	4939.5	5478.4	5693.2	6401.5	7008.6
30°	6506.8	6492.3	6250.7	5901.7	5389.6	4966.3	4982.8	5453.6	5662.2	6349.9	6911.5
32.5°	7165.5	7157.3	6965.2	6608.0	5922.4	5298.8	5096.4	5449.5	5645.7	6287.9	6793.8
35°	7828.4	7828.4	7710.7	7409.2	6639.0	5798.5	5333.9	5525.9	5676.7	6254.9	6692.6
37.5°	8807.2	8768.0	8549.1	8237.3	7541.4	6446.9	5718.0	5687.0	5796.4	6310.6	6659.6
40°	10322.9	10209.3	9662.1	9137.6	8526.4	7277.0	6279.6	5998.8	6064.9	6500.6	6738.1
42.5°	11908.8	11729.2	11004.3	10166.0	9544.4	8301.3	7016.8	6504.7	6502.7	6868.2	6987.9
45°	13269.6	13176.7	12392.0	11328.5	10707.0	9453.5	7948.2	7256.4	7182.0	7438.1	7469.1
47.5°	14060.5	13998.6	13525.7	12559.3	12086.4	10814.4	9129.3	8299.2	8158.8	8311.6	8264.1
50°	13841.6	13901.5	13765.2	13271.7	13569.1	12726.5	10634.7	9728.2	9461.8	9614.6	9499.0
52.5°	12689.4	12850.4	12972.3	13067.3	14421.9	15285.1	12526.2	11512.3	11291.4	11264.5	11153.0
55°	10614.1	10870.1	11254.2	11952.2	14192.7	17339.7	15830.2	13670.2	13348.1	13178.8	13222.1
57.5°	7223.3	7611.6	8439.6	9767.4	13001.2	18215.3	20716.0	16458.0	15912.8	15309.9	15450.3
60°	3979.2	4303.4	5288.4	6626.6	10281.6	18085.2	25046.3	20988.6	19272.6	17674.3	17963.4
62.5°	2575.0	2645.3	3378.3	4526.5	6310.6	15966.5	27452.0	28560.9	24924.5	20792.4	21199.2
65°	2069.1	2118.7	2478.0	3650.9	4396.4	10271.3	27559.4	36416.1	34018.7	25029.8	25042.2
67.5°	2021.6	2044.3	2252.9	3070.6	4123.8	5592.0	23821.8	39513.6	40069.1	30031.2	27613.1
68°	2050.5	2077.4	2288.0	2975.7	4121.7	5154.2	22016.9	39466.1	40418.1	30867.5	27613.1
70°	1808.9	1842.0	2333.4	3078.9	3946.2	4431.5	15076.5	37370.2	38902.4	32790.0	26200.6
72.5°	945.8	918.9	1154.3	2430.5	4441.8	4617.3	7964.7	31220.6	33008.9	30367.8	22636.4
75°	737.2	671.1	646.3	960.2	3907.0	4788.7	4625.6	22190.4	23540.9	21891.0	15130.2
77.5°	693.8	613.3	565.8	567.9	1720.1	4982.8	3741.8	13059.0	13059.0	10442.7	4828.0
80°	557.5	483.2	452.2	516.2	830.1	4592.5	3904.9	5951.3	5075.8	2698.9	1329.9
82.5°	367.6	328.3	330.4	419.2	629.8	3066.5	4522.3	2938.5	2207.5	1195.6	782.6
85°	233.3	200.3	223.0	293.2	470.8	1367.0	4476.9	2042.3	1462.0	671.1	390.3
87.5°	117.7	90.9	111.5	152.8	287.0	392.3	3686.0	1823.4	1084.1	278.8	212.7
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°	6878.5	6878.5	6878.5	6878.5	6878.5	6878.5	6878.5	6878.5	6878.5	6878.5	6878.5
2.5°	6845.4	6800.0	6777.3	6740.1	6694.7	6649.3	6618.3	6603.8	6595.6	6599.7	6597.7
5°	6895.0	6835.1	6738.1	6599.7	6457.2	6306.5	6190.8	6102.1	6046.3	6029.8	6025.6
7.5°	6932.2	6845.4	6663.7	6411.8	6168.1	5903.8	5678.7	5499.1	5377.2	5321.5	5319.4
10°	6926.0	6814.5	6527.4	6155.7	5798.5	5410.3	5057.2	4755.7	4536.8	4431.5	4427.3
12.5°	6932.2	6779.4	6360.2	5856.3	5344.2	4788.7	4264.2	3795.5	3469.2	3314.3	3308.1
15°	6957.0	6742.2	6188.8	5521.8	4813.5	4028.8	3279.2	2690.7	2393.3	2292.1	2292.1
17.5°	6954.9	6680.2	5990.5	5133.6	4183.7	3132.6	2238.5	1875.0	1846.1	1939.0	1953.5
20°	6913.6	6581.1	5734.5	4673.1	3444.4	2168.2	1517.8	1466.1	1697.4	1953.5	1982.4
22.5°	6849.6	6453.1	5439.2	4138.2	2583.3	1412.5	1170.9	1249.3	1563.2	1881.2	1926.6
25°	6760.8	6298.2	5100.5	3516.7	1718.1	1016.0	976.7	1073.8	1294.8	1507.4	1540.5
27.5°	6630.7	6102.1	4730.9	2843.5	1096.5	836.3	850.8	918.9	1013.9	1104.8	1123.4
30°	6467.6	5872.8	4328.2	2098.0	832.2	747.5	772.3	813.6	854.9	912.7	925.1
32.5°	6302.4	5639.5	3909.0	1441.4	726.9	700.0	724.8	747.5	782.6	821.9	830.1
35°	6153.7	5422.7	3477.4	1005.7	681.4	669.1	681.4	695.9	731.0	770.2	774.4
37.5°	6046.3	5245.1	3027.3	795.0	654.6	642.2	648.4	654.6	695.9	753.7	759.9
40°	6031.8	5127.4	2570.9	714.5	634.0	617.4	613.3	617.4	671.1	737.2	743.4
42.5°	6172.3	5133.6	2124.9	681.4	617.4	598.8	582.3	590.6	638.1	689.7	693.8
45°	6504.7	5278.1	1738.7	667.0	603.0	588.5	563.7	567.9	590.6	617.4	621.6
47.5°	7091.2	5594.1	1443.4	658.7	590.6	578.2	547.2	534.8	536.9	551.4	551.4
50°	8028.7	6122.7	1263.8	650.5	580.3	557.5	522.4	497.7	491.5	499.7	501.8
52.5°	9426.7	7029.2	1177.0	634.0	561.7	530.7	491.5	466.7	456.4	464.6	464.6
55°	11316.2	8476.8	1135.7	611.2	539.0	497.7	462.6	441.9	433.6	439.8	439.8
57.5°	13469.9	10358.0	1206.0	580.3	510.1	462.6	437.8	423.3	417.1	423.3	425.4
60°	16028.5	12819.5	1689.2	541.0	479.1	431.6	417.1	408.9	404.7	410.9	410.9
62.5°	19429.5	16094.5	2614.3	510.1	446.0	402.7	398.5	394.4	390.3	396.5	396.5
65°	23101.1	19074.3	2690.7	491.5	417.1	377.9	380.0	380.0	375.8	382.0	382.0
67.5°	24269.9	18816.2	1503.3	468.8	382.0	353.1	361.4	361.4	359.3	365.5	363.4
68°	24022.1	18407.3	1309.2	462.6	375.8	346.9	355.2	357.2	355.2	361.4	359.3
70°	22176.0	16160.6	861.1	427.5	349.0	326.3	338.7	340.7	338.7	346.9	344.9
72.5°	18306.2	12121.5	636.0	373.8	315.9	299.4	311.8	313.9	315.9	324.2	322.1
75°	11625.9	6694.7	501.8	318.0	282.9	268.4	280.8	287.0	291.2	303.6	297.4
77.5°	3184.2	2032.0	406.8	270.5	243.7	237.5	245.7	254.0	258.1	272.6	262.3
80°	1115.1	898.3	338.7	229.2	202.4	200.3	208.6	216.8	221.0	233.3	221.0
82.5°	677.3	586.5	270.5	179.7	159.0	156.9	167.3	175.5	179.7	179.7	171.4
85°	353.1	309.7	198.2	126.0	109.4	103.2	121.8	132.2	134.2	132.2	126.0
87.5°	198.2	175.5	105.3	59.9	49.6	51.6	64.0	78.5	84.7	82.6	78.5
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)