

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: P195612

Luminaire Tested: **NAV-AF-06-D-UNV-SL2-7050-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195612
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-SL2-7050-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5000K, 800mA 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: 28532 lumens
Efficiency: N/A
Efficacy: 114.6 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): 249
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

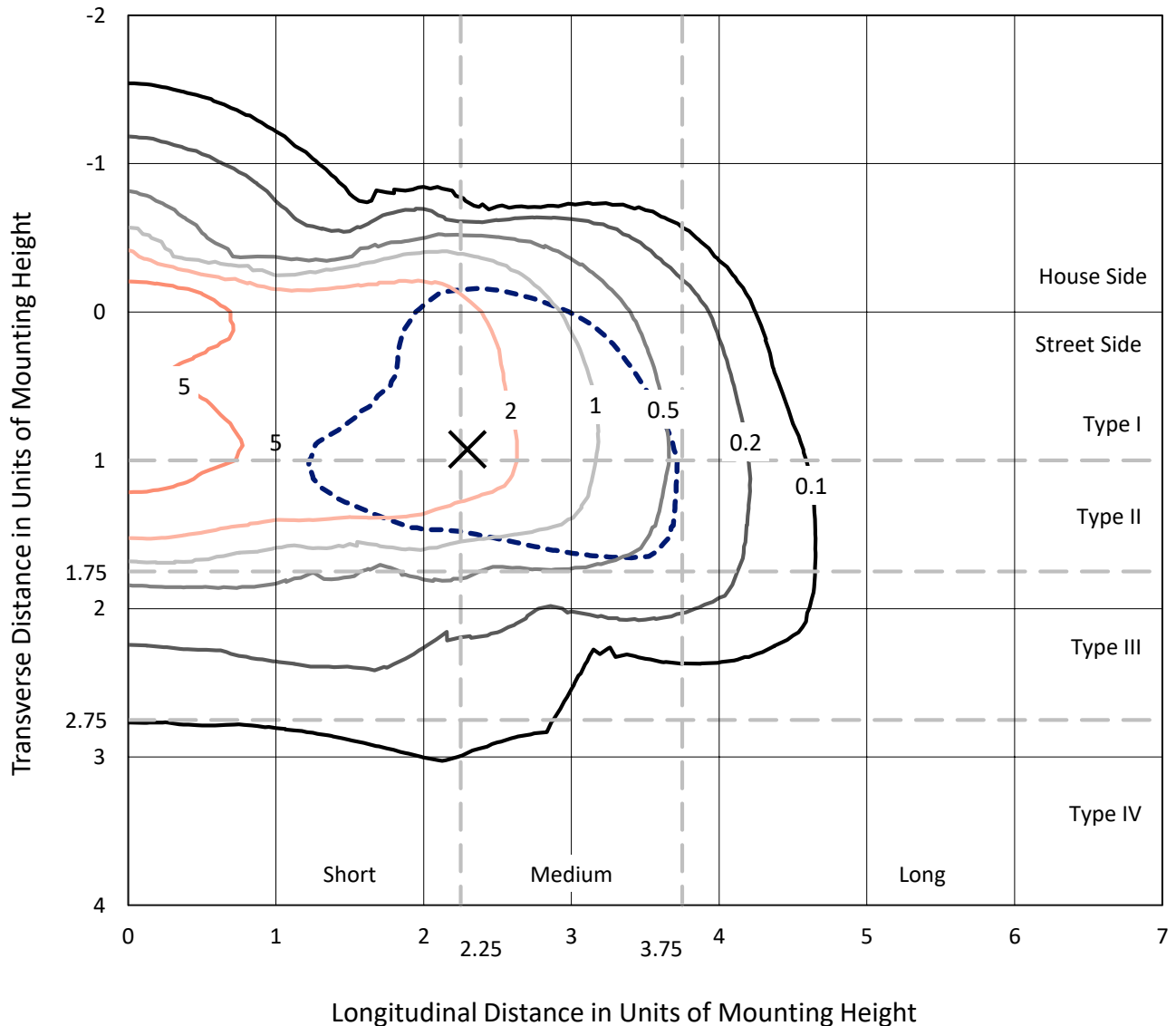


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Iso-Footcandle Lines of Horizontal Illumination

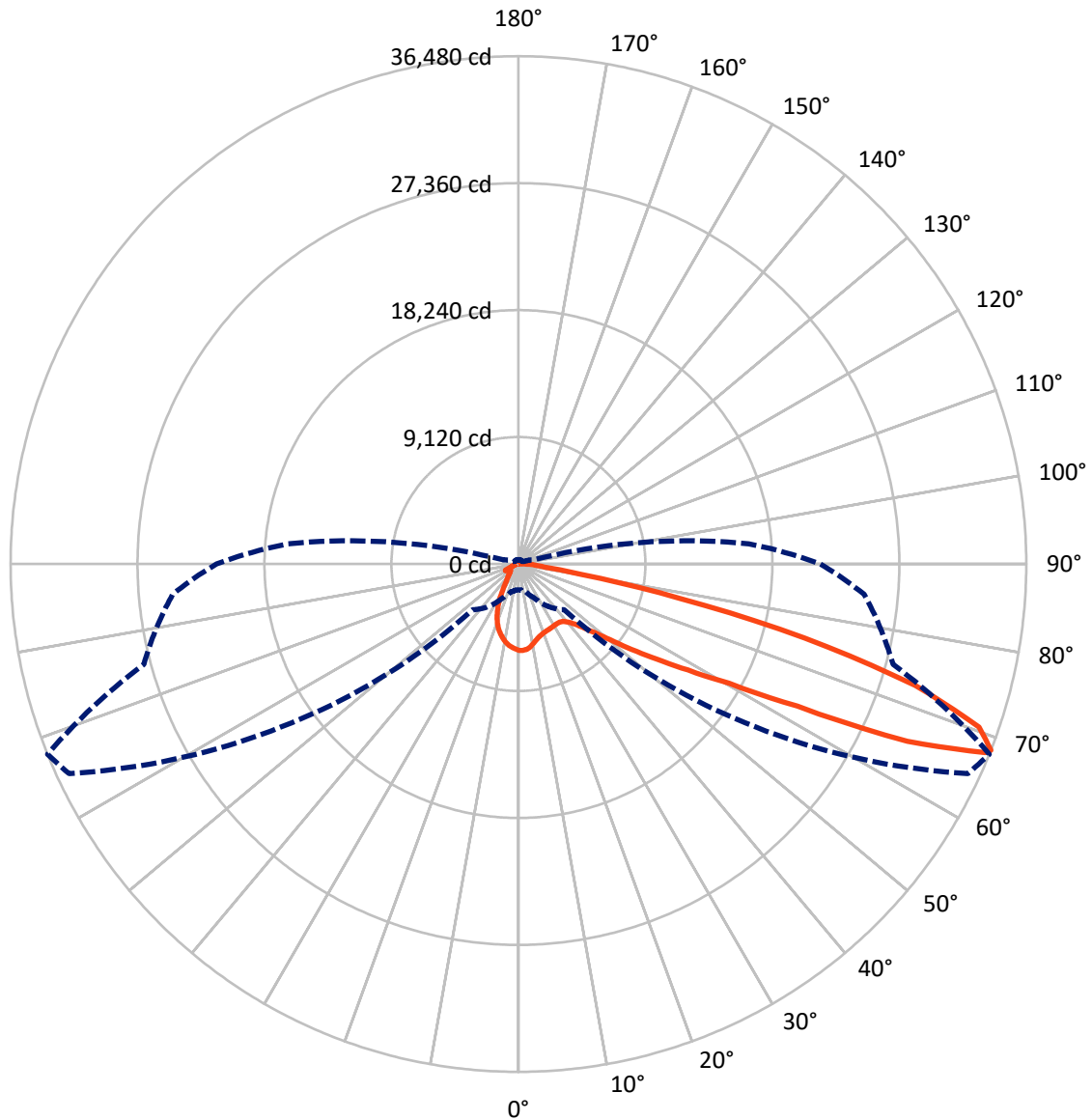
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.9 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	4667.9	0.0	4667.9
	% Fixture	16.4	0.0	16.4
Street Side	Lumens	23864.1	0.0	23864.1
	% Fixture	83.6	0.0	83.6
Total	Lumens	28532.0	0.0	28532.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	531.9	1.9
10°-20°	1233.8	4.3
20°-30°	1668.6	5.8
30°-40°	2352.7	8.2
40°-50°	3868.7	13.6
50°-60°	5996.9	21.0
60°-70°	7775.4	27.3
70°-80°	4461.9	15.6
80°-90°	642.0	2.3
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°	28532.0	100.0
0°-180°	28532.0	100.0



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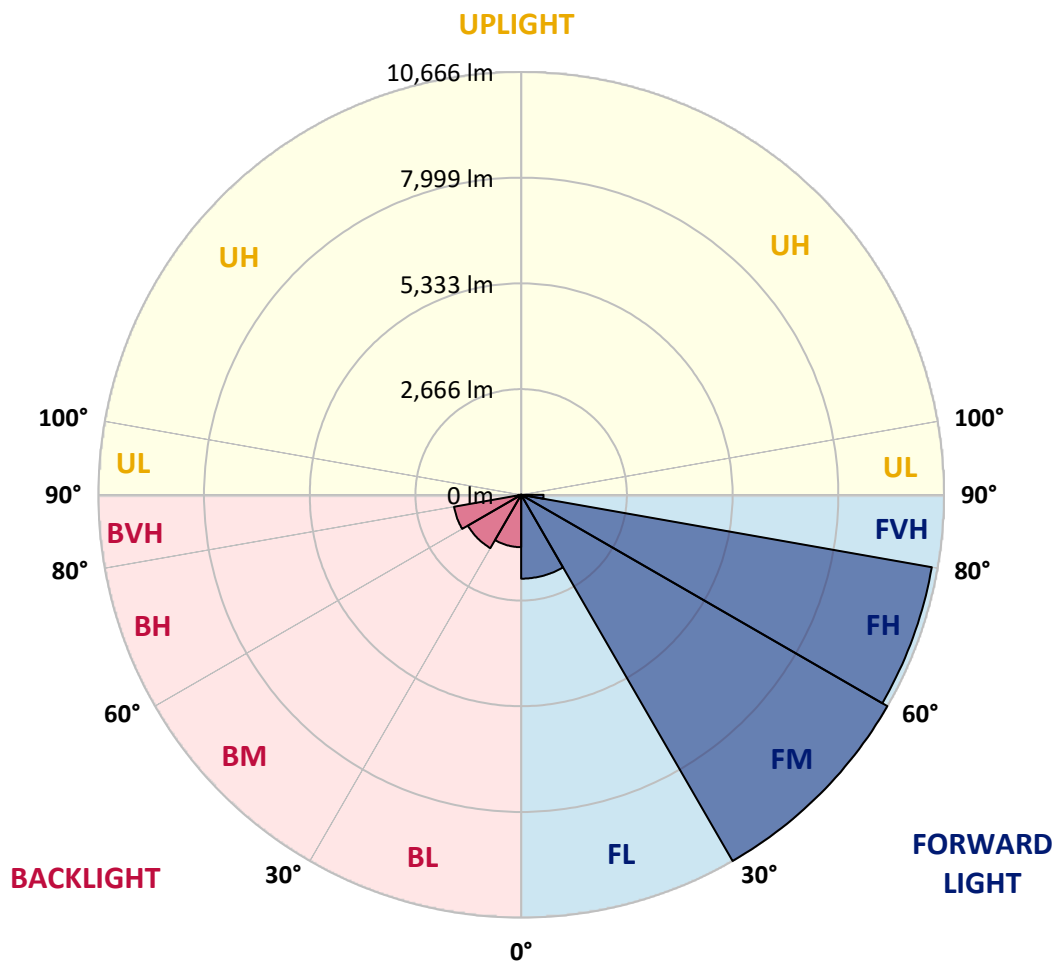
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2114.7	7.4			
FM (30°-60°)	10665.7	37.4			
FH (60°-80°)	10518.2	36.9			G4/12000
FVH (80°-90°)	565.5	2.0			G4/750
BL (0°-30°)	1319.7	4.6	B3/2500		
BM (30°-60°)	1552.6	5.4	B2/2500		
BH (60°-80°)	1719.1	6.0	B3/2500		G3/2500
BVH (80°-90°)	76.5	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°	6208.3	6208.3	6208.3	6208.3	6208.3	6208.3	6208.3	6208.3	6208.3	6208.3	6208.3
2.5°	6042.4	6090.9	6090.9	6126.3	6158.0	6184.1	6206.4	6206.4	6206.4	6191.5	6178.5
5°	5406.9	5472.1	5481.4	5570.9	5688.3	5831.8	5992.1	6133.8	6161.7	6213.9	6234.4
7.5°	4965.2	4985.7	5021.1	5082.6	5201.9	5378.9	5630.5	5947.4	6023.8	6187.8	6273.5
10°	4652.0	4668.8	4698.6	4760.1	4868.2	5028.5	5276.4	5688.3	5815.0	6105.8	6275.4
12.5°	4422.8	4435.8	4463.8	4519.7	4629.7	4773.2	5026.7	5455.3	5611.9	6023.8	6301.5
15°	4243.9	4266.2	4288.6	4342.6	4454.5	4592.4	4849.6	5285.7	5455.3	5958.6	6350.0
17.5°	4173.0	4184.2	4188.0	4215.9	4316.6	4456.3	4713.5	5166.4	5341.6	5906.4	6387.2
20°	4217.8	4219.6	4182.4	4163.7	4221.5	4350.1	4599.9	5077.0	5255.9	5859.8	6402.1
22.5°	4413.5	4413.5	4316.6	4234.5	4195.4	4275.6	4523.4	5015.5	5209.3	5824.4	6402.1
25°	4786.2	4769.5	4618.5	4456.3	4283.0	4249.5	4475.0	4976.3	5173.9	5805.7	6377.9
27.5°	5276.4	5261.5	5069.5	4829.1	4516.0	4305.4	4458.2	4944.7	5138.5	5777.8	6325.7
30°	5872.8	5859.8	5641.7	5326.7	4864.5	4482.4	4497.3	4922.3	5110.5	5731.2	6238.1
32.5°	6467.4	6459.9	6286.6	5964.2	5345.4	4782.5	4599.9	4918.6	5095.6	5675.3	6131.9
35°	7065.7	7065.7	6959.4	6687.3	5992.1	5233.5	4814.2	4987.5	5123.6	5645.4	6040.6
37.5°	7949.1	7913.7	7716.1	7434.7	6806.6	5818.8	5160.9	5132.9	5231.7	5695.8	6010.7
40°	9317.1	9214.6	8720.7	8247.3	7695.6	6568.0	5667.8	5414.3	5474.0	5867.2	6081.6
42.5°	10748.5	10586.4	9932.2	9175.5	8614.5	7492.5	6333.2	5871.0	5869.1	6199.0	6307.1
45°	11976.8	11892.9	11184.6	10224.8	9663.8	8532.5	7173.8	6549.4	6482.3	6713.4	6741.4
47.5°	12690.6	12634.7	12207.9	11335.6	10908.8	9760.7	8239.8	7490.6	7363.9	7501.8	7458.9
50°	12493.0	12547.1	12424.1	11978.6	12247.0	11486.6	9598.6	8780.3	8539.9	8677.8	8573.5
52.5°	11453.0	11598.4	11708.4	11794.1	13016.8	13795.8	11305.8	10390.7	10191.2	10167.0	10066.4
55°	9579.9	9811.0	10157.7	10787.7	12809.9	15650.3	14287.9	12338.3	12047.6	11894.8	11933.9
57.5°	6519.6	6870.0	7617.3	8815.8	11734.5	16440.6	18697.6	14854.5	14362.4	13818.2	13944.9
60°	3591.5	3884.2	4773.2	5980.9	9279.8	16323.1	22606.0	18943.6	17394.8	15952.2	16213.2
62.5°	2324.2	2387.5	3049.2	4085.4	5695.8	14410.9	24777.3	25778.2	22496.0	18766.6	19133.7
65°	1867.5	1912.3	2236.6	3295.2	3968.0	9270.5	24874.2	32868.1	30704.2	22591.1	22602.3
67.5°	1824.7	1845.2	2033.4	2771.5	3722.0	5047.2	21500.8	35663.8	36165.1	27105.2	24922.7
68°	1850.8	1875.0	2065.1	2685.7	3720.1	4652.0	19871.8	35620.9	36480.1	27860.0	24922.7
70°	1632.7	1662.5	2106.1	2778.9	3561.7	3999.7	13607.6	33729.1	35112.1	29595.2	23647.9
72.5°	853.6	829.4	1041.9	2193.7	4009.0	4167.5	7188.7	28178.8	29792.8	27409.0	20430.9
75°	665.4	605.7	583.4	866.7	3526.3	4322.1	4174.9	20028.4	21247.3	19758.1	13656.0
77.5°	626.2	553.5	510.7	512.5	1552.5	4497.3	3377.2	11786.7	11786.7	9425.2	4357.6
80°	503.2	436.1	408.2	465.9	749.2	4145.1	3524.4	5371.5	4581.2	2436.0	1200.3
82.5°	331.8	296.3	298.2	378.4	568.5	2767.7	4081.7	2652.2	1992.4	1079.1	706.4
85°	210.6	180.8	201.3	264.7	424.9	1233.8	4040.7	1843.3	1319.6	605.7	352.3
87.5°	106.2	82.0	100.6	137.9	259.1	354.1	3326.9	1645.7	978.5	251.6	192.0
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°	6208.3	6208.3	6208.3	6208.3	6208.3	6208.3	6208.3	6208.3	6208.3	6208.3	6208.3
2.5°	6178.5	6137.5	6117.0	6083.4	6042.4	6001.4	5973.5	5960.4	5953.0	5956.7	5954.8
5°	6223.2	6169.2	6081.6	5956.7	5828.1	5692.0	5587.7	5507.5	5457.2	5442.3	5438.6
7.5°	6256.8	6178.5	6014.5	5787.1	5567.2	5328.6	5125.4	4963.3	4853.3	4803.0	4801.1
10°	6251.2	6150.5	5891.5	5556.0	5233.5	4883.1	4564.4	4292.3	4094.8	3999.7	3996.0
12.5°	6256.8	6118.8	5740.5	5285.7	4823.5	4322.1	3848.7	3425.7	3131.2	2991.4	2985.8
15°	6279.1	6085.3	5585.8	4983.8	4344.5	3636.3	2959.7	2428.5	2160.1	2068.8	2068.8
17.5°	6277.3	6029.4	5406.9	4633.4	3776.1	2827.4	2020.4	1692.3	1666.2	1750.1	1763.2
20°	6240.0	5939.9	5175.8	4217.8	3108.8	1957.0	1369.9	1323.3	1532.0	1763.2	1789.2
22.5°	6182.2	5824.4	4909.2	3735.0	2331.6	1274.8	1056.8	1127.6	1410.9	1697.9	1738.9
25°	6102.1	5684.6	4603.6	3174.0	1550.7	917.0	881.6	969.2	1168.6	1360.6	1390.4
27.5°	5984.7	5507.5	4270.0	2566.4	989.7	754.8	767.9	829.4	915.1	997.1	1013.9
30°	5837.4	5300.6	3906.5	1893.6	751.1	674.7	697.1	734.3	771.6	823.8	835.0
32.5°	5688.3	5090.0	3528.2	1300.9	656.1	631.8	654.2	674.7	706.4	741.8	749.2
35°	5554.1	4894.3	3138.6	907.7	615.1	603.9	615.1	628.1	659.8	695.2	698.9
37.5°	5457.2	4734.0	2732.3	717.6	590.8	579.6	585.2	590.8	628.1	680.3	685.9
40°	5444.2	4627.8	2320.4	644.9	572.2	557.3	553.5	557.3	605.7	665.4	671.0
42.5°	5570.9	4633.4	1917.8	615.1	557.3	540.5	525.6	533.0	575.9	622.5	626.2
45°	5871.0	4763.9	1569.3	602.0	544.2	531.2	508.8	512.5	533.0	557.3	561.0
47.5°	6400.3	5049.0	1302.8	594.6	533.0	521.9	493.9	482.7	484.6	497.6	497.6
50°	7246.4	5526.2	1140.6	587.1	523.7	503.2	471.5	449.2	443.6	451.0	452.9
52.5°	8508.2	6344.4	1062.4	572.2	507.0	479.0	443.6	421.2	411.9	419.4	419.4
55°	10213.6	7650.9	1025.1	551.7	486.5	449.2	417.5	398.9	391.4	397.0	397.0
57.5°	12157.5	9348.8	1088.5	523.7	460.4	417.5	395.1	382.1	376.5	382.1	383.9
60°	14466.8	11570.5	1524.6	488.3	432.4	389.5	376.5	369.0	365.3	370.9	370.9
62.5°	17536.5	14526.4	2359.6	460.4	402.6	363.4	359.7	356.0	352.3	357.8	357.8
65°	20850.3	17215.9	2428.5	443.6	376.5	341.1	342.9	342.9	339.2	344.8	344.8
67.5°	21905.2	16982.9	1356.8	423.1	344.8	318.7	326.2	326.2	324.3	329.9	328.0
68°	21681.6	16613.9	1181.6	417.5	339.2	313.1	320.6	322.4	320.6	326.2	324.3
70°	20015.3	14586.1	777.2	385.8	315.0	294.5	305.7	307.5	305.7	313.1	311.3
72.5°	16522.6	10940.5	574.0	337.3	285.2	270.3	281.4	283.3	285.2	292.6	290.8
75°	10493.2	6042.4	452.9	287.0	255.3	242.3	253.5	259.1	262.8	274.0	268.4
77.5°	2874.0	1834.0	367.2	244.2	219.9	214.3	221.8	229.2	233.0	246.0	236.7
80°	1006.5	810.8	305.7	206.9	182.7	180.8	188.2	195.7	199.4	210.6	199.4
82.5°	611.3	529.3	244.2	162.2	143.5	141.6	151.0	158.4	162.2	162.2	154.7
85°	318.7	279.6	178.9	113.7	98.8	93.2	110.0	119.3	121.1	119.3	113.7
87.5°	178.9	158.4	95.1	54.1	44.7	46.6	57.8	70.8	76.4	74.6	70.8
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)