

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: P196630

Luminaire Tested: **NAV-AF-04-D-UNV-SL3-7030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196630
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24262)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-04-D-UNV-SL3-7030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 25850.7 lumens
Efficiency: N/A
Efficacy: 100.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B3 - U0 - G4

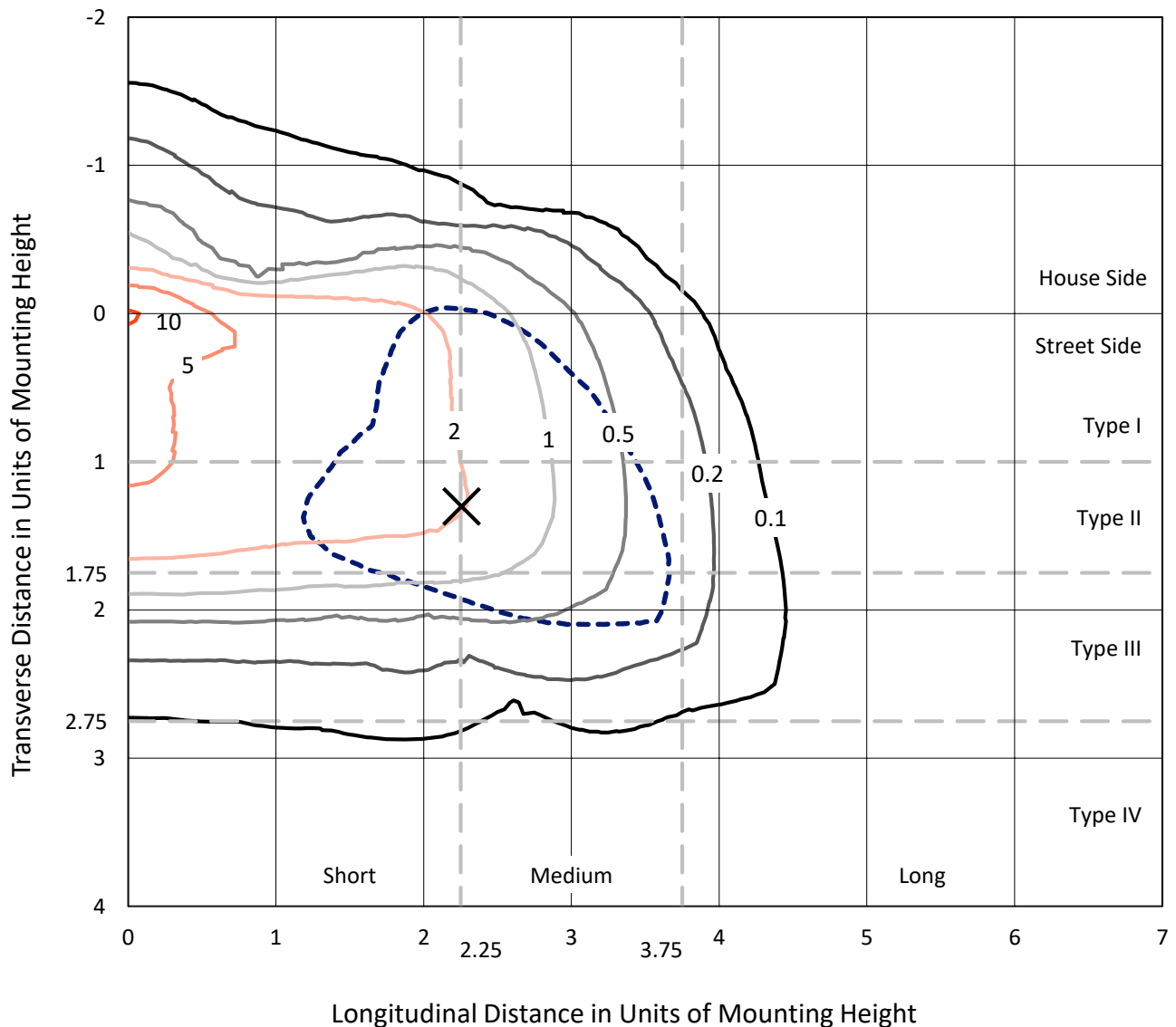
Input Watts (W): 258
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

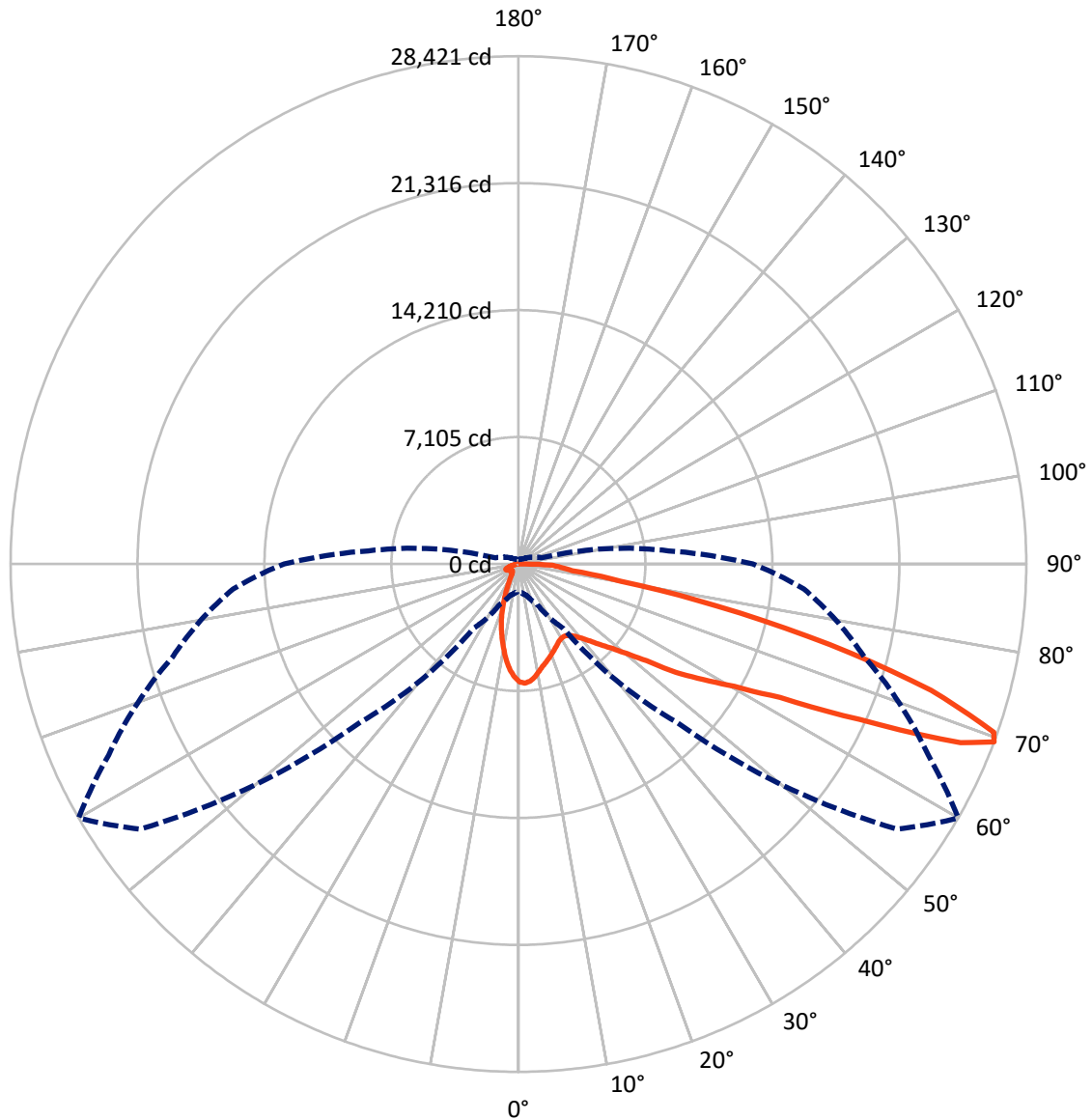
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10.6 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3687.2	0.0	3687.2
	% Fixture	14.3	0.0	14.3
Street Side	Lumens	22163.6	0.0	22163.6
	% Fixture	85.7	0.0	85.7
Total	Lumens	25850.7	0.0	25850.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	559.6	2.2
10°-20°	1198.1	4.6
20°-30°	1528.4	5.9
30°-40°	2103.2	8.1
40°-50°	3406.7	13.2
50°-60°	5346.8	20.7
60°-70°	7128.2	27.6
70°-80°	3964.9	15.3
80°-90°	614.9	2.4
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°	25850.7	100.0
0°-180°	25850.7	100.0

Coefficient of Utilization



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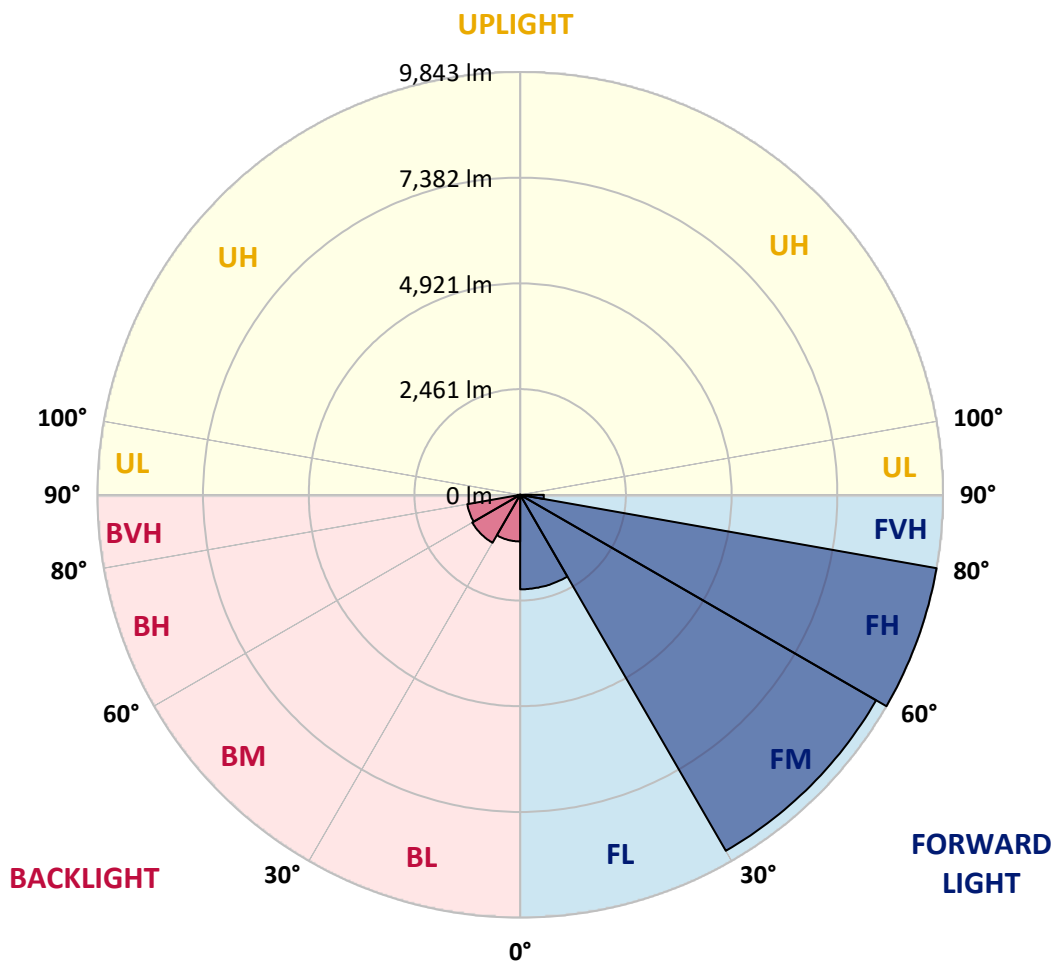
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2199.4	8.5			
FM	(30°-60°)	9568.6	37.0			
FH	(60°-80°)	9843.0	38.1			G4/12000
FVH	(80°-90°)	552.6	2.1			G4/750
BL	(0°-30°)	1086.6	4.2	B3/2500		
BM	(30°-60°)	1288.1	5.0	B2/2500		
BH	(60°-80°)	1250.1	4.8	B3/2500		G3/2500
BVH	(80°-90°)	62.3	0.2			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 III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	6595.9	6595.9	6595.9	6595.9	6595.9	6595.9	6595.9	6595.9	6595.9	6595.9	6595.9
2.5°	6771.6	6789.8	6789.8	6774.9	6766.7	6718.6	6690.4	6670.5	6635.7	6571.1	6513.1
5°	6529.6	6564.4	6579.4	6585.9	6629.1	6614.1	6615.7	6602.5	6572.7	6503.1	6408.6
7.5°	6085.3	6092.0	6118.5	6163.2	6267.6	6340.7	6400.3	6411.9	6405.3	6353.9	6221.2
10°	5647.7	5659.3	5690.8	5767.0	5866.5	5970.9	6100.3	6153.3	6193.1	6176.5	6009.0
12.5°	5284.7	5286.3	5321.2	5409.0	5520.1	5651.0	5826.7	5909.7	6004.2	6042.2	5854.8
15°	4934.9	4958.0	4991.3	5097.4	5234.9	5400.6	5603.0	5717.3	5841.6	5951.1	5735.6
17.5°	4669.6	4687.9	4707.8	4795.6	4954.8	5162.0	5412.2	5535.0	5699.1	5866.5	5612.8
20°	4523.8	4530.4	4515.4	4558.7	4692.9	4916.6	5206.8	5354.2	5550.0	5785.3	5486.9
22.5°	4494.0	4494.0	4439.3	4431.0	4490.7	4679.6	4994.6	5175.3	5414.1	5728.9	5374.3
25°	4633.2	4623.3	4520.5	4426.0	4404.5	4500.6	4792.3	5014.5	5298.0	5727.3	5289.7
27.5°	4896.8	4883.6	4755.8	4596.7	4459.2	4417.7	4636.5	4863.6	5206.8	5783.6	5246.5
30°	5225.0	5220.1	5090.7	4891.7	4664.8	4450.9	4575.2	4785.7	5145.4	5888.1	5244.9
32.5°	5584.7	5561.6	5482.0	5283.0	4987.9	4634.9	4611.7	4789.1	5128.8	6040.6	5283.0
35°	5967.6	5951.1	5931.1	5730.5	5399.0	4959.9	4772.5	4903.4	5210.0	6252.8	5390.8
37.5°	6455.0	6436.8	6469.9	6251.0	5888.1	5385.8	5044.3	5132.1	5375.9	6561.1	5591.4
40°	7322.0	7268.9	7176.0	6839.6	6458.4	5907.9	5437.2	5450.4	5659.3	6973.8	5912.9
42.5°	8745.8	8575.2	8116.0	7497.7	7060.0	6514.7	5949.3	5886.5	6050.6	7519.2	6380.4
45°	10173.1	9980.9	9205.1	8215.4	7683.3	7166.1	6582.7	6431.8	6537.8	8154.1	6982.1
47.5°	11094.8	11000.3	10125.0	8933.2	8336.5	7875.6	7307.0	7058.3	7134.6	8873.6	7724.7
50°	11365.0	11283.9	10595.9	9495.1	8953.1	8732.6	8203.8	7874.0	7887.2	9714.0	8615.0
52.5°	11162.8	11129.7	10673.7	9843.2	9520.1	9636.1	9445.5	8986.2	8876.9	10635.7	9579.8
55°	10892.6	10904.2	10728.5	10193.1	10096.8	10478.2	11069.9	10700.3	10236.2	11595.4	10584.3
57.5°	10042.2	10050.5	10511.3	10859.5	11197.7	11658.4	12334.9	12178.9	11638.6	12631.5	11709.9
60°	8086.2	8150.8	9176.9	10721.8	12455.8	13984.2	14149.9	13881.4	13130.4	13825.0	13173.6
62.5°	5777.0	5835.0	7023.6	9307.9	12308.3	16616.5	17501.8	16434.2	15154.5	15610.3	15232.4
65°	3035.2	3025.3	3945.3	6431.8	10367.1	17226.6	22783.1	20966.3	18564.4	18065.4	17221.7
67.5°	1695.8	1750.6	2106.9	3244.1	6756.7	15161.2	26156.4	26691.9	23305.3	20013.1	17135.4
69°	1568.2	1586.5	1825.0	2508.0	4404.5	12508.9	25866.4	28420.8	25304.5	20021.4	16031.4
70°	1523.4	1543.3	1760.5	2310.9	3699.9	10249.4	24810.5	28218.6	25790.1	19577.2	15026.9
72.5°	1366.0	1392.4	1603.0	2077.0	3118.0	5283.0	19984.9	24152.3	23361.6	17110.5	11651.9
75°	1165.4	1210.1	1528.4	2062.2	2954.0	3358.4	13327.8	17994.1	17387.4	12236.9	6610.8
77.5°	482.4	487.4	668.0	1510.2	3099.9	3214.2	7162.8	11398.2	10090.3	5365.9	1990.9
80°	336.5	329.9	333.2	441.0	2501.4	3235.8	3675.1	5796.9	4505.6	1415.7	931.7
82.5°	283.4	280.1	293.4	276.9	847.1	3671.7	3073.4	3021.9	2121.9	762.5	444.2
85°	187.3	182.4	240.4	252.0	402.8	2915.8	3305.4	2375.4	1581.4	407.7	189.0
87.5°	91.1	92.9	137.5	170.8	213.8	923.4	3166.2	1878.1	1221.7	177.3	76.3
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°	6595.9	6595.9	6595.9	6595.9	6595.9	6595.9	6595.9	6595.9	6595.9	6595.9	6595.9
2.5°	6489.8	6440.1	6395.3	6339.0	6295.8	6259.4	6209.6	6208.0	6199.7	6211.3	6214.6
5°	6345.6	6262.7	6136.8	5995.8	5896.4	5765.4	5637.8	5594.6	5546.5	5541.6	5556.5
7.5°	6128.5	5999.1	5783.6	5568.2	5352.6	5132.1	4923.3	4817.2	4714.4	4683.0	4697.8
10°	5886.5	5722.4	5392.4	5041.0	4737.6	4409.3	4091.1	3885.6	3698.3	3618.6	3638.6
12.5°	5697.5	5488.5	5024.4	4568.5	4114.3	3643.6	3224.1	2818.1	2511.5	2373.7	2382.1
15°	5535.0	5268.1	4679.6	4072.9	3504.4	2859.6	2277.6	1806.8	1538.4	1438.8	1435.5
17.5°	5359.2	5036.0	4319.9	3612.1	2874.4	2077.0	1525.0	1246.5	1140.4	1107.4	1107.4
20°	5172.0	4797.3	3943.6	3109.8	2211.3	1450.4	1147.1	1039.4	999.6	989.7	987.9
22.5°	4997.8	4563.5	3565.6	2574.3	1599.7	1100.7	976.3	934.9	928.2	936.6	936.6
25°	4860.3	4358.1	3182.7	2010.8	1163.7	921.7	868.6	863.7	888.5	918.4	923.4
27.5°	4757.5	4174.0	2804.8	1468.7	915.0	802.3	784.1	805.7	863.7	923.4	934.9
30°	4686.2	4016.6	2352.3	1056.0	762.5	702.9	711.2	749.3	837.2	928.2	953.2
32.5°	4654.8	3888.9	1896.4	810.6	651.5	618.3	639.8	689.7	780.7	871.9	901.8
35°	4684.6	3796.1	1475.3	673.0	570.3	545.4	570.3	621.5	681.3	726.0	744.3
37.5°	4792.3	3762.9	1110.6	596.8	517.3	492.3	512.2	547.1	573.5	590.1	598.4
40°	5019.5	3797.8	870.2	557.0	487.4	459.2	464.2	480.7	499.0	512.2	513.8
42.5°	5380.8	3912.1	774.1	542.0	469.2	432.6	424.4	436.0	455.8	474.0	477.5
45°	5861.5	4102.8	764.2	547.1	460.8	411.2	394.5	406.1	432.6	462.5	467.4
47.5°	6483.2	4404.5	810.6	573.5	465.8	399.5	374.6	386.2	421.0	460.8	467.4
50°	7219.2	4822.1	896.8	613.4	489.1	399.5	366.3	376.3	412.8	457.5	464.2
52.5°	8086.2	5404.1	986.3	653.2	522.1	414.4	369.7	367.9	401.2	442.6	450.9
55°	9042.7	6126.8	1072.5	687.9	540.4	434.3	377.9	358.1	384.6	417.7	424.4
57.5°	10168.2	7116.4	1223.3	721.1	550.3	449.3	387.9	348.1	363.1	386.2	391.2
60°	11694.9	8570.2	1516.7	777.5	568.5	455.8	389.5	338.1	336.5	353.1	354.8
62.5°	13685.9	10272.7	1796.9	843.8	605.1	457.5	383.0	331.5	315.0	319.9	319.9
65°	15101.5	10899.2	1715.7	900.1	638.2	455.8	376.3	326.5	298.4	290.1	290.1
67.5°	14295.8	9627.8	1457.1	915.0	641.6	437.6	361.3	315.0	283.4	263.6	263.6
69°	13112.2	8439.1	1337.8	888.5	615.0	416.1	344.8	303.3	273.4	250.3	250.3
70°	12147.5	7539.1	1264.7	857.0	583.6	397.8	329.9	291.7	263.6	243.6	242.0
72.5°	9069.2	5031.1	1080.8	739.3	479.1	336.5	288.5	260.2	237.1	223.8	223.8
75°	4785.7	2521.3	885.2	603.4	369.7	268.6	237.1	218.8	205.5	203.9	202.2
77.5°	1568.2	1140.4	636.6	454.2	271.8	208.9	189.0	177.3	175.7	182.4	182.4
80°	847.1	681.3	409.4	306.7	189.0	155.8	145.9	144.2	149.1	159.2	159.2
82.5°	411.2	336.5	243.6	189.0	129.3	114.4	114.4	116.1	122.7	134.3	134.3
85°	177.3	159.2	141.0	106.1	79.5	71.2	81.2	89.5	94.5	102.8	106.1
87.5°	84.5	74.7	64.7	41.4	34.9	36.5	43.0	53.1	63.1	69.6	71.2
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)