

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: P195192

Luminaire Tested: **NAV-AF-06-D-UNV-SL3-7060-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195192
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-06-D-UNV-SL3-7060-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5700K, 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: 39464 lumens
Efficiency: N/A
Efficacy: 103.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B3 - U0 - G5

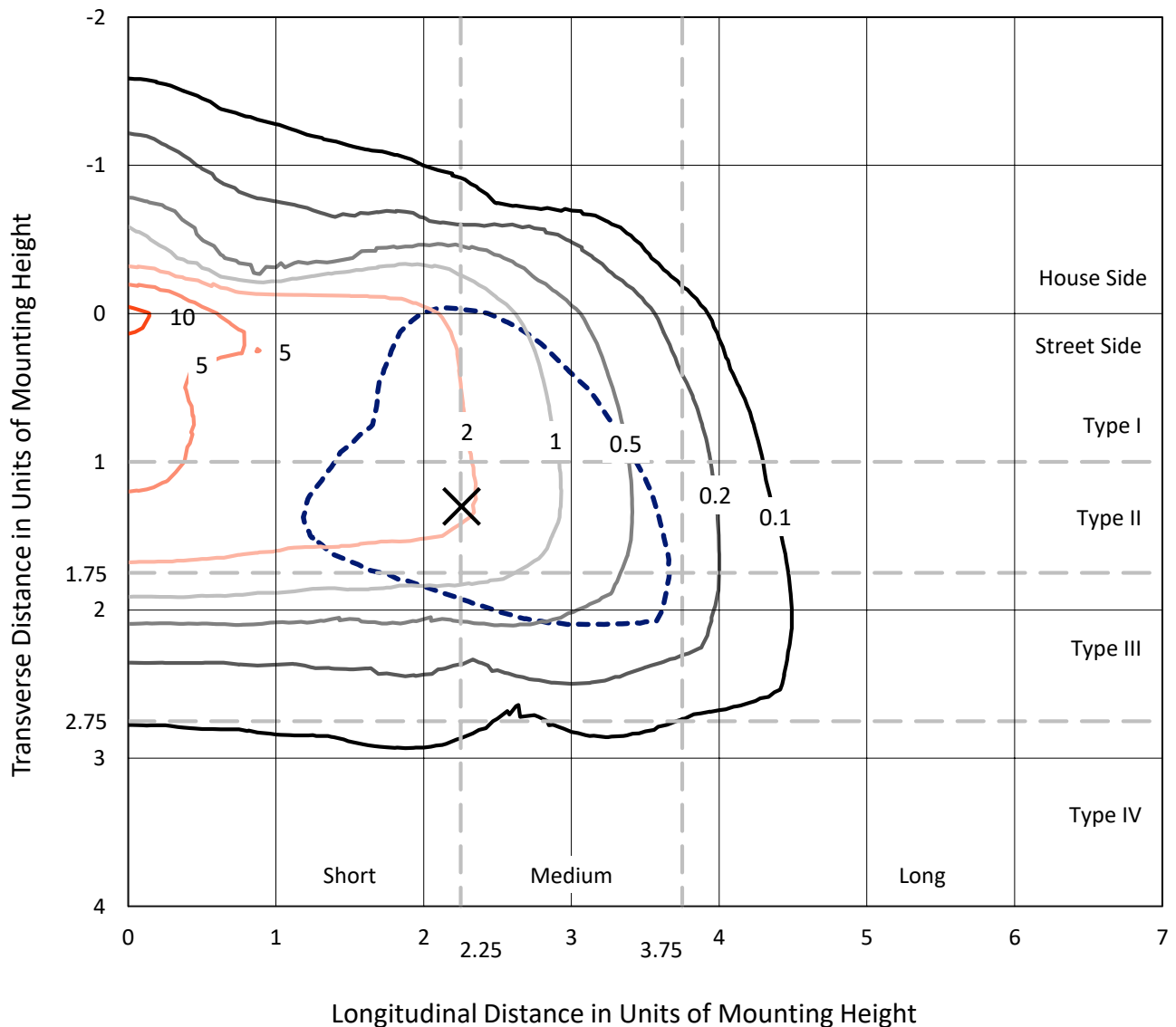
Input Watts (W): 382
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

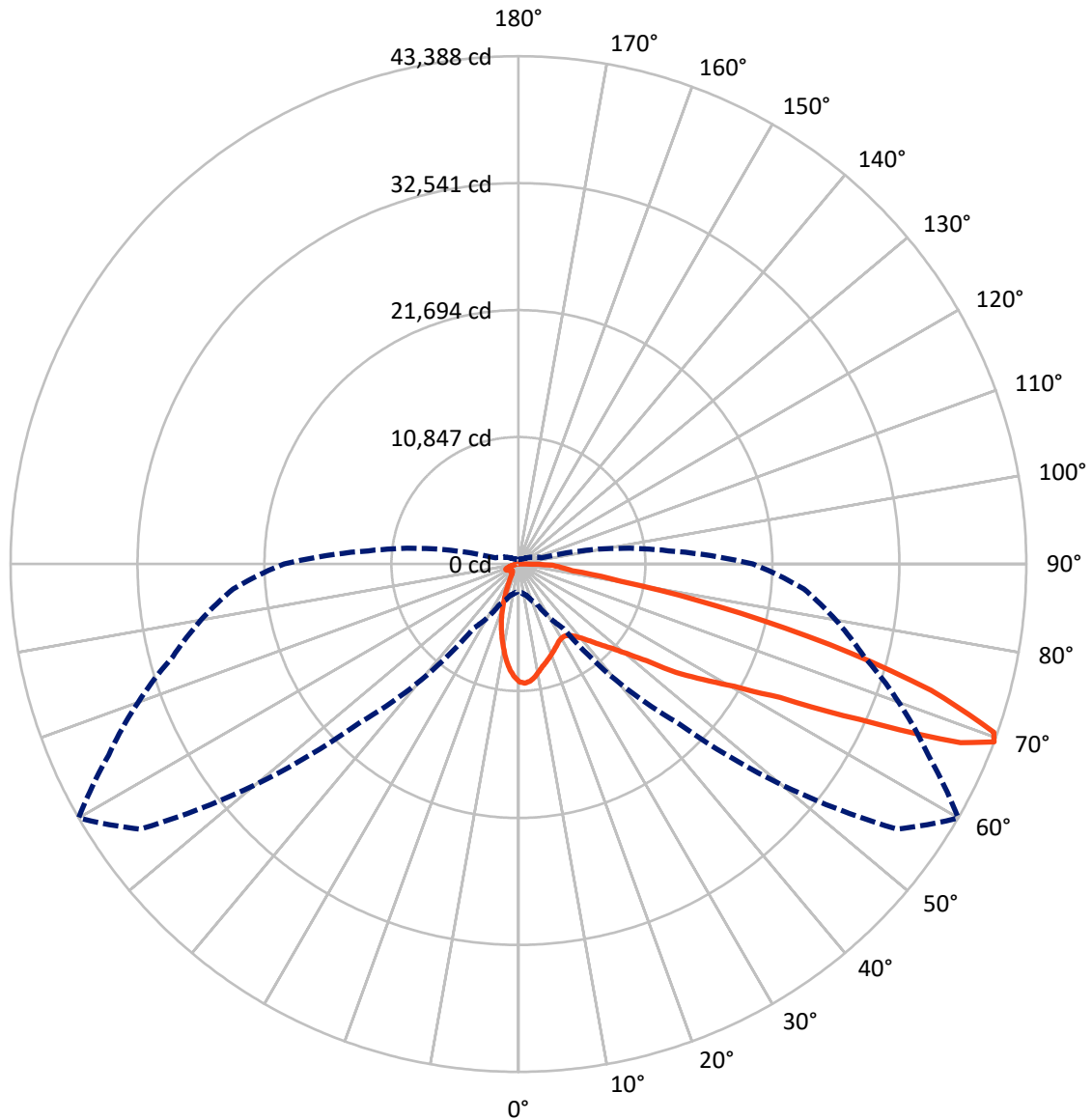
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 11.2 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	5628.9	0.0	5628.9
	% Fixture	14.3	0.0	14.3
Street Side	Lumens	33835.1	0.0	33835.1
	% Fixture	85.7	0.0	85.7
Total	Lumens	39464.0	0.0	39464.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	854.2	2.2
10°-20°	1829.0	4.6
20°-30°	2333.2	5.9
30°-40°	3210.7	8.1
40°-50°	5200.8	13.2
50°-60°	8162.4	20.7
60°-70°	10882.0	27.6
70°-80°	6052.9	15.3
80°-90°	938.8	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°	39464.0	100.0
0°-180°	39464.0	100.0

Coefficient of Utilization



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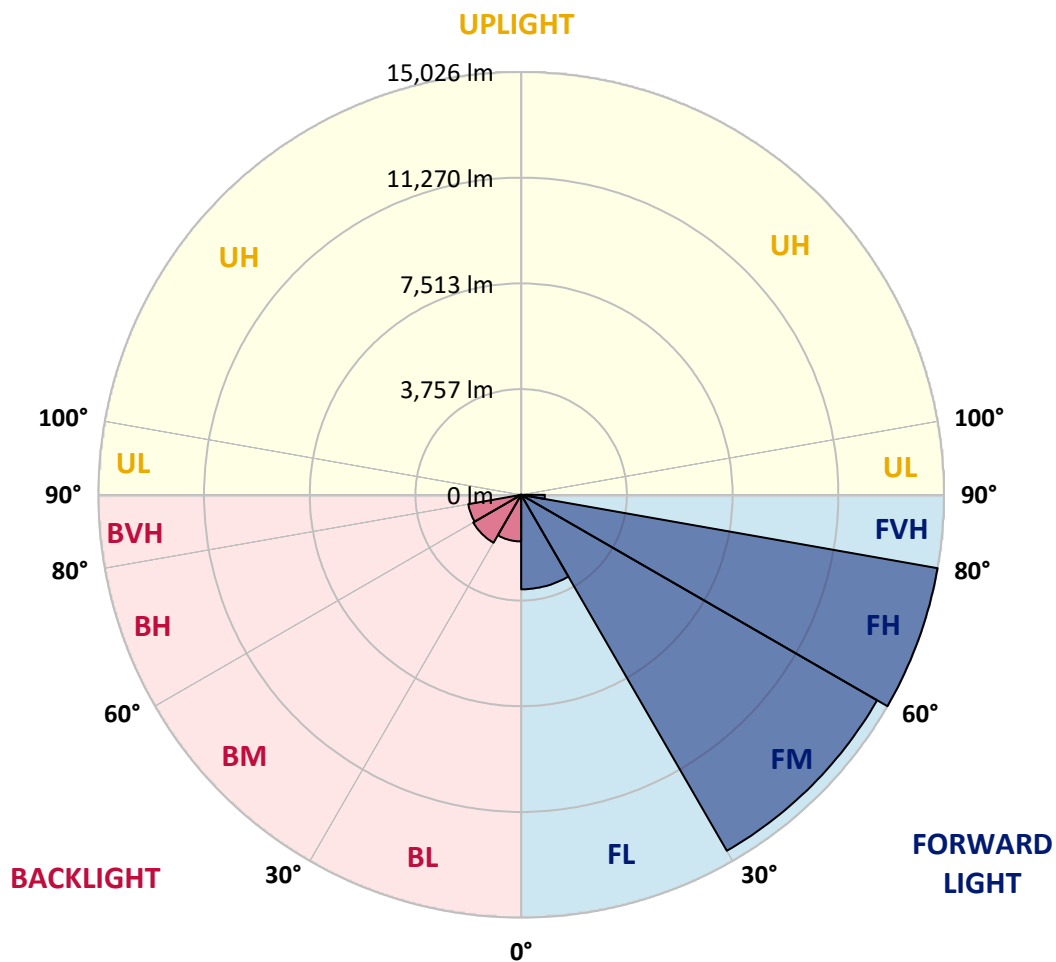
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3357.6	8.5			
FM	(30°-60°)	14607.5	37.0			
FH	(60°-80°)	15026.4	38.1			G5
FVH	(80°-90°)	843.6	2.1			G5
BL	(0°-30°)	1658.8	4.2	B3/2500		
BM	(30°-60°)	1966.4	5.0	B2/2500		
BH	(60°-80°)	1908.5	4.8	B3/2500		G3/2500
BVH	(80°-90°)	95.1	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-G5

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	10069.4	10069.4	10069.4	10069.4	10069.4	10069.4	10069.4	10069.4	10069.4	10069.4	10069.4
2.5°	10337.6	10365.4	10365.4	10342.7	10330.0	10256.6	10213.6	10183.2	10130.1	10031.4	9942.8
5°	9968.1	10021.3	10044.1	10054.2	10120.0	10097.2	10099.7	10079.5	10033.9	9927.6	9783.4
7.5°	9289.9	9300.1	9340.5	9408.9	9568.3	9679.6	9770.8	9788.5	9778.3	9699.9	9497.4
10°	8621.8	8639.6	8687.6	8804.1	8955.9	9115.3	9312.7	9393.7	9454.4	9429.1	9173.5
12.5°	8067.6	8070.2	8123.3	8257.4	8427.0	8626.9	8895.2	9021.7	9165.9	9224.1	8938.2
15°	7533.7	7569.1	7619.7	7781.7	7991.7	8244.8	8553.5	8728.1	8917.9	9085.0	8756.0
17.5°	7128.8	7156.6	7187.0	7321.1	7564.0	7880.4	8262.5	8449.8	8700.3	8955.9	8568.7
20°	6906.1	6916.2	6893.4	6959.2	7164.2	7505.8	7948.7	8173.9	8472.5	8831.9	8376.4
22.5°	6860.5	6860.5	6777.0	6764.4	6855.5	7144.0	7624.8	7900.6	8265.0	8745.8	8204.3
25°	7073.1	7057.9	6901.0	6756.8	6723.9	6870.7	7316.0	7655.1	8087.9	8743.3	8075.2
27.5°	7475.5	7455.2	7260.4	7017.4	6807.4	6744.1	7078.2	7424.9	7948.7	8829.4	8009.4
30°	7976.5	7968.9	7771.6	7467.9	7121.2	6794.7	6984.5	7305.9	7855.1	8988.8	8006.9
32.5°	8525.7	8490.3	8368.8	8065.1	7614.7	7075.6	7040.2	7311.0	7829.8	9221.6	8065.1
35°	9110.3	9085.0	9054.6	8748.4	8242.3	7571.6	7285.7	7485.6	7953.8	9545.5	8229.6
37.5°	9854.3	9826.4	9877.0	9543.0	8988.8	8222.0	7700.7	7834.8	8206.8	10016.2	8535.8
40°	11177.8	11096.8	10955.1	10441.4	9859.3	9019.2	8300.5	8320.7	8639.6	10646.3	9026.7
42.5°	13351.6	13090.9	12389.9	11446.0	10777.9	9945.4	9082.4	8986.3	9236.8	11478.9	9740.4
45°	15530.5	15236.9	14052.6	12541.8	11729.5	10939.9	10049.1	9818.8	9980.8	12448.2	10659.0
47.5°	16937.5	16793.2	15457.1	13637.5	12726.5	12023.0	11155.0	10775.4	10891.8	13546.4	11792.7
50°	17350.0	17226.0	16175.8	14495.4	13667.9	13331.3	12524.1	12020.5	12040.7	14829.5	13151.7
52.5°	17041.2	16990.6	16294.7	15026.9	14533.4	14710.5	14419.5	13718.5	13551.5	16236.5	14624.5
55°	16628.7	16646.5	16378.2	15560.8	15414.0	15996.1	16899.5	16335.2	15626.6	17701.7	16158.1
57.5°	15330.5	15343.2	16046.7	16578.1	17094.4	17797.9	18830.4	18592.5	17767.5	19283.4	17876.3
60°	12344.4	12443.1	14009.6	16368.1	19015.1	21348.4	21601.4	21191.5	20045.1	21105.4	20110.9
62.5°	8819.2	8907.8	10722.3	14209.5	18789.9	25367.0	26718.4	25088.6	23135.0	23830.9	23253.9
65°	4633.6	4618.4	6022.9	9818.8	15826.5	26298.3	34780.9	32007.4	28340.5	27578.8	26290.7
67.5°	2588.8	2672.3	3216.4	4952.4	10314.8	23145.1	39930.8	40748.2	35578.1	30552.3	26159.1
69°	2394.0	2421.8	2786.2	3828.8	6723.9	19096.1	39487.9	43387.6	38630.0	30564.9	24473.7
70°	2325.6	2356.0	2687.5	3527.7	5648.4	15646.9	37875.9	43078.9	39371.5	29886.7	22940.1
72.5°	2085.2	2125.7	2447.1	3170.9	4760.1	8065.1	30509.2	36871.2	35664.1	26121.1	17787.8
75°	1779.0	1847.4	2333.2	3148.1	4509.6	5127.1	20346.2	27470.0	26543.7	18681.1	10092.1
77.5°	736.4	744.0	1019.8	2305.4	4732.3	4906.9	10934.8	17400.6	15403.9	8191.6	3039.3
80°	513.7	503.6	508.7	673.1	3818.7	4939.8	5610.4	8849.6	6878.2	2161.2	1422.2
82.5°	432.7	427.7	447.9	422.6	1293.2	5605.3	4691.8	4613.3	3239.2	1164.1	678.2
85°	286.0	278.4	366.9	384.7	614.9	4451.4	5046.1	3626.4	2414.2	622.5	288.5
87.5°	139.2	141.7	210.0	260.7	326.5	1409.6	4833.5	2867.2	1865.1	270.8	116.4
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°	10069.4	10069.4	10069.4	10069.4	10069.4	10069.4	10069.4	10069.4	10069.4	10069.4	10069.4
2.5°	9907.4	9831.5	9763.2	9677.1	9611.3	9555.6	9479.7	9477.2	9464.5	9482.3	9487.3
5°	9687.2	9560.7	9368.4	9153.3	9001.4	8801.5	8606.7	8540.9	8467.5	8459.9	8482.7
7.5°	9355.7	9158.3	8829.4	8500.4	8171.4	7834.8	7516.0	7354.0	7197.1	7149.0	7171.8
10°	8986.3	8735.7	8232.1	7695.6	7232.5	6731.5	6245.6	5931.8	5645.8	5524.4	5554.7
12.5°	8697.8	8378.9	7670.3	6974.4	6281.0	5562.3	4922.1	4302.1	3833.9	3623.9	3636.5
15°	8449.8	8042.3	7144.0	6217.8	5349.7	4365.3	3477.1	2758.4	2348.4	2196.6	2191.5
17.5°	8181.5	7688.0	6594.8	5514.2	4388.1	3170.9	2328.2	1903.0	1741.1	1690.5	1690.5
20°	7895.6	7323.6	6020.4	4747.5	3375.9	2214.3	1751.2	1586.7	1526.0	1510.8	1508.3
22.5°	7629.8	6966.8	5443.4	3930.1	2442.1	1680.3	1490.5	1427.3	1417.2	1429.8	1429.8
25°	7419.8	6653.0	4858.8	3069.7	1776.5	1407.0	1326.0	1318.5	1356.4	1402.0	1409.6
27.5°	7262.9	6372.1	4281.8	2242.1	1396.9	1224.8	1197.0	1229.9	1318.5	1409.6	1427.3
30°	7154.1	6131.7	3591.0	1612.0	1164.1	1073.0	1085.6	1143.8	1278.0	1417.2	1455.1
32.5°	7106.0	5936.9	2895.0	1237.5	994.5	943.9	976.8	1052.7	1191.9	1331.1	1376.7
35°	7151.6	5795.1	2252.3	1027.4	870.5	832.6	870.5	949.0	1040.1	1108.4	1136.3
37.5°	7316.0	5744.5	1695.5	911.0	789.6	751.6	782.0	835.1	875.6	900.9	913.6
40°	7662.7	5797.7	1328.6	850.3	744.0	701.0	708.6	733.9	761.7	782.0	784.5
42.5°	8214.4	5972.3	1181.8	827.5	716.2	660.5	647.8	665.6	695.9	723.8	728.8
45°	8948.3	6263.3	1166.6	835.1	703.5	627.6	602.3	620.0	660.5	706.0	713.6
47.5°	9897.3	6723.9	1237.5	875.6	711.1	609.9	571.9	589.6	642.8	703.5	713.6
50°	11020.9	7361.6	1369.1	936.3	746.5	609.9	559.3	574.5	630.1	698.5	708.6
52.5°	12344.4	8249.8	1505.7	997.1	797.1	632.7	564.3	561.8	612.4	675.7	688.3
55°	13804.6	9353.2	1637.3	1050.2	825.0	663.0	577.0	546.6	587.1	637.7	647.8
57.5°	15522.9	10864.0	1867.6	1100.8	840.2	685.8	592.2	531.4	554.2	589.6	597.2
60°	17853.6	13083.3	2315.5	1186.9	868.0	695.9	594.7	516.2	513.7	539.0	541.6
62.5°	20892.9	15682.3	2743.2	1288.1	923.7	698.5	584.6	506.1	480.8	488.4	488.4
65°	23054.0	16638.9	2619.2	1374.1	974.3	695.9	574.5	498.5	455.5	442.9	442.9
67.5°	21824.1	14697.9	2224.4	1396.9	979.4	668.1	551.7	480.8	432.7	402.4	402.4
69°	20017.3	12883.4	2042.2	1356.4	938.9	635.2	526.4	463.1	417.6	382.1	382.1
70°	18544.4	11509.3	1930.9	1308.3	890.8	607.4	503.6	445.4	402.4	372.0	369.5
72.5°	13845.1	7680.5	1650.0	1128.7	731.4	513.7	440.3	397.3	361.9	341.6	341.6
75°	7305.9	3849.1	1351.4	921.1	564.3	410.0	361.9	334.0	313.8	311.3	308.7
77.5°	2394.0	1741.1	971.8	693.4	415.0	318.9	288.5	270.8	268.2	278.4	278.4
80°	1293.2	1040.1	625.1	468.2	288.5	237.9	222.7	220.2	227.8	242.9	242.9
82.5°	627.6	513.7	372.0	288.5	197.4	174.6	174.6	177.1	187.3	205.0	205.0
85°	270.8	242.9	215.1	162.0	121.5	108.8	124.0	136.7	144.2	156.9	162.0
87.5°	129.1	113.9	98.7	63.3	53.1	55.7	65.8	81.0	96.2	106.3	108.8
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)