

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: P270673

Luminaire Tested: **NAV-AF-06-D-UNV-SL3-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270673
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-SL3-7027
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 2700K, 1050mA 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: 31255.3 lumens
Efficiency: N/A
Efficacy: 93.9 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 - G4

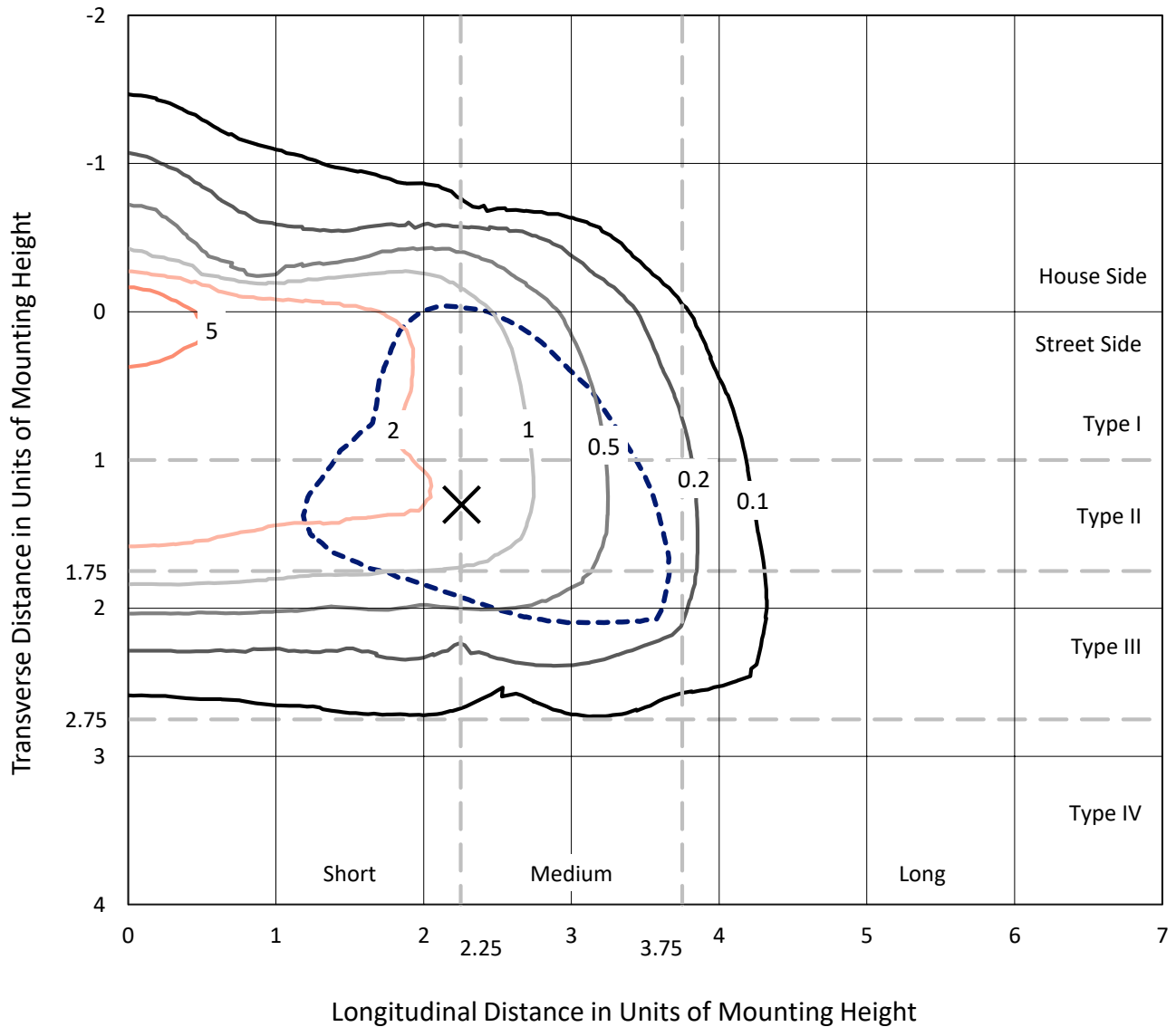
Input Watts (W): 333
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

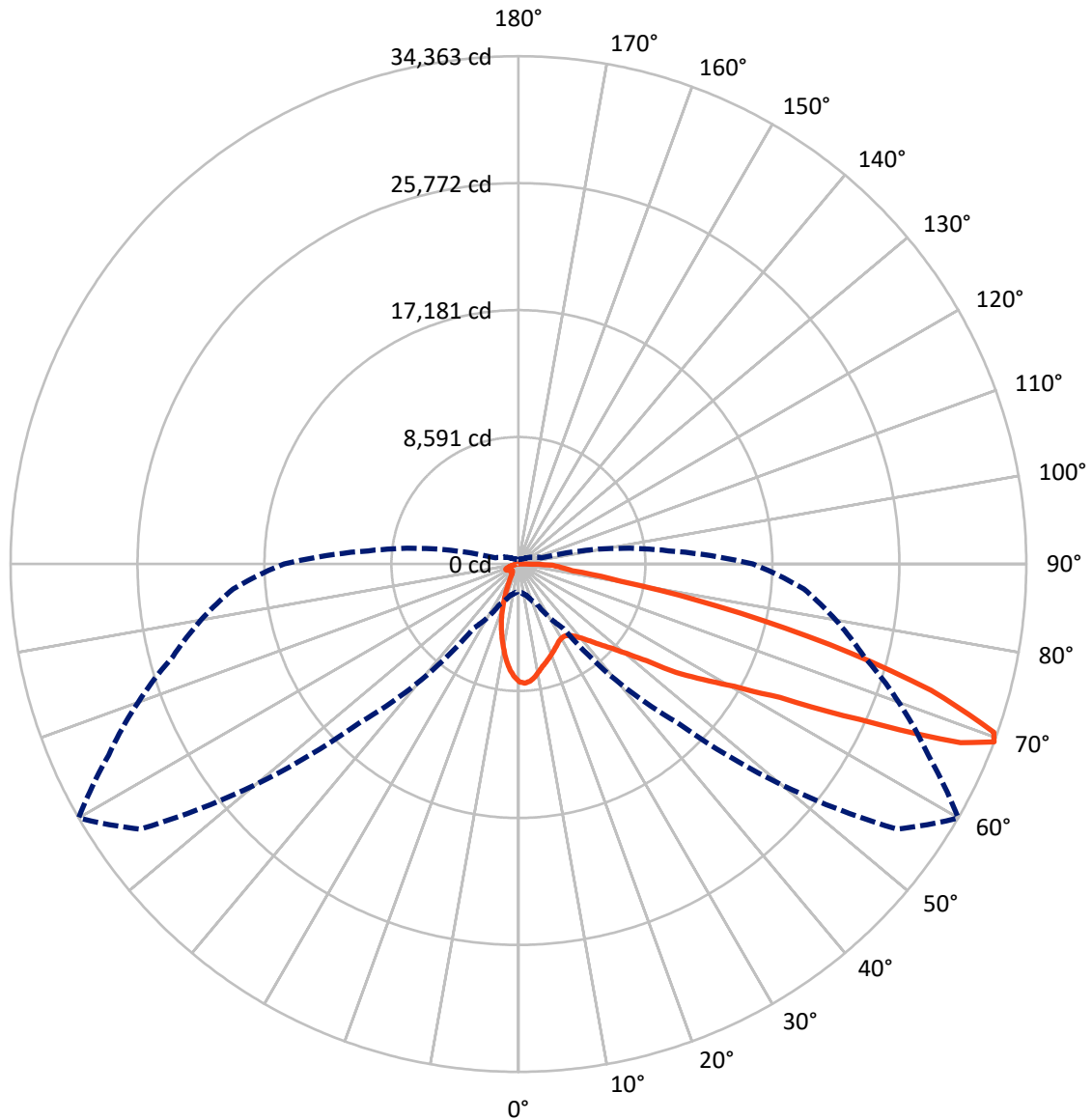
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 8.9 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	4458.0	0.0	4458.0
	% Fixture	14.3	0.0	14.3
Street Side	Lumens	26797.2	0.0	26797.2
	% Fixture	85.7	0.0	85.7
Total	Lumens	31255.3	0.0	31255.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	676.5	2.2
10°-20°	1448.6	4.6
20°-30°	1847.9	5.9
30°-40°	2542.9	8.1
40°-50°	4119.0	13.2
50°-60°	6464.6	20.7
60°-70°	8618.5	27.6
70°-80°	4793.8	15.3
80°-90°	743.5	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°	31255.3	100.0
0°-180°	31255.3	100.0

Coefficient of Utilization



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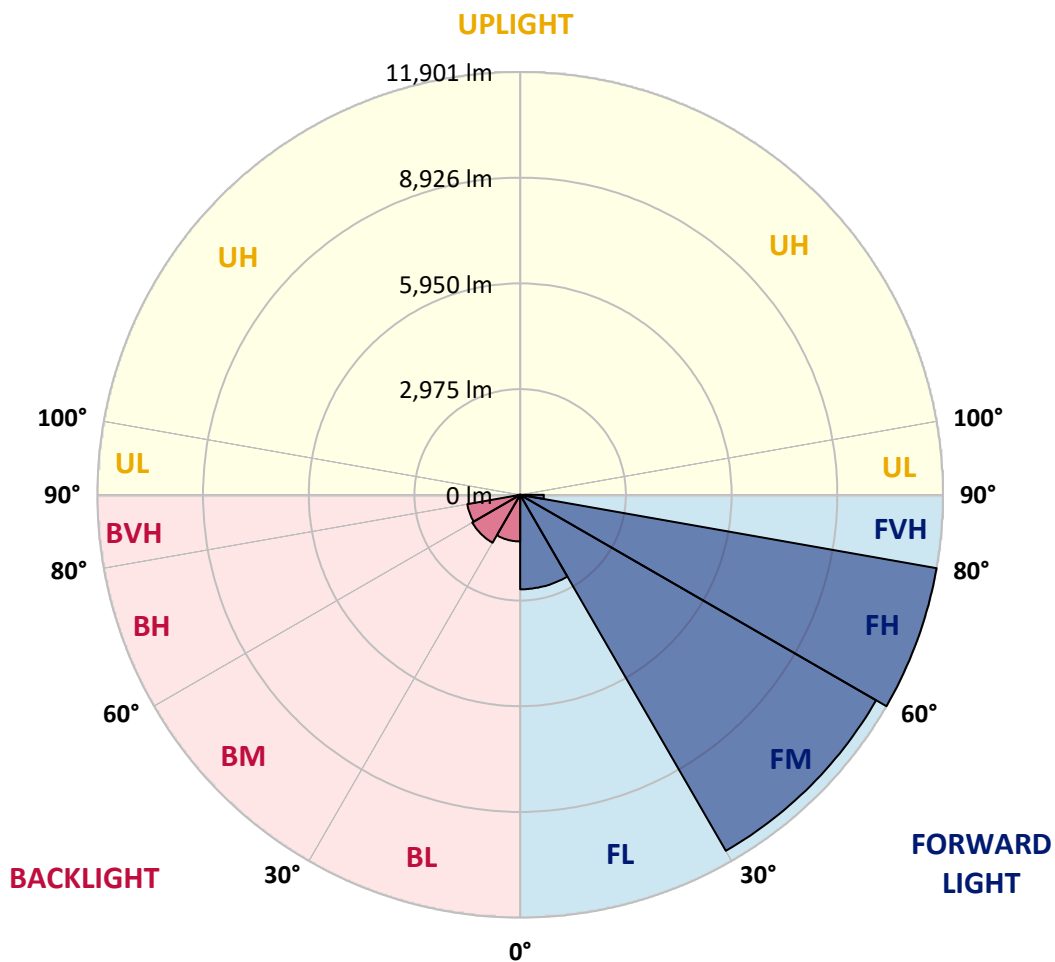
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2659.2	8.5			
FM	(30°-60°)	11569.1	37.0			
FH	(60°-80°)	11900.8	38.1			G4/12000
FVH	(80°-90°)	668.2	2.1			G4/750
BL	(0°-30°)	1313.8	4.2	B3/2500		
BM	(30°-60°)	1557.4	5.0	B2/2500		
BH	(60°-80°)	1511.5	4.8	B3/2500		G3/2500
BVH	(80°-90°)	75.3	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°	7975.0	7975.0	7975.0	7975.0	7975.0	7975.0	7975.0	7975.0	7975.0	7975.0	7975.0
2.5°	8187.3	8209.4	8209.4	8191.4	8181.4	8123.3	8089.1	8065.1	8023.0	7944.8	7874.6
5°	7894.8	7936.9	7954.9	7962.8	8014.9	7996.9	7999.0	7982.9	7946.9	7862.7	7748.4
7.5°	7357.6	7365.7	7397.6	7451.8	7578.0	7666.2	7738.4	7752.5	7744.4	7682.2	7521.9
10°	6828.5	6842.5	6880.6	6972.7	7092.9	7219.3	7375.7	7439.8	7487.8	7467.8	7265.4
12.5°	6389.6	6391.5	6433.7	6539.8	6674.1	6832.5	7044.9	7145.1	7259.4	7305.5	7079.1
15°	5966.6	5994.7	6034.8	6163.0	6329.4	6529.8	6774.4	6912.6	7063.0	7195.2	6934.6
17.5°	5645.9	5667.9	5692.0	5798.3	5990.6	6241.2	6543.9	6692.2	6890.5	7092.9	6786.3
20°	5469.6	5477.5	5459.5	5511.7	5674.1	5944.5	6295.3	6473.7	6710.2	6994.8	6634.1
22.5°	5433.5	5433.5	5367.4	5357.3	5429.4	5658.0	6038.8	6257.2	6545.9	6926.7	6497.8
25°	5601.9	5589.9	5465.6	5351.4	5325.3	5441.6	5794.2	6062.8	6405.5	6924.7	6395.6
27.5°	5920.5	5904.5	5750.2	5557.8	5391.4	5341.3	5605.9	5880.5	6295.3	6992.8	6343.4
30°	6317.4	6311.3	6155.0	5914.5	5640.0	5381.3	5531.8	5786.3	6221.2	7119.1	6341.5
32.5°	6752.3	6724.3	6628.1	6387.5	6030.9	5603.8	5575.8	5790.2	6201.1	7303.5	6387.5
35°	7215.2	7195.2	7171.2	6928.6	6527.9	5996.6	5770.3	5928.5	6299.4	7560.0	6517.8
37.5°	7804.6	7782.5	7822.6	7558.0	7119.1	6511.8	6099.0	6205.1	6499.7	7932.8	6760.4
40°	8852.7	8788.6	8676.4	8269.4	7808.5	7143.1	6573.9	6590.0	6842.5	8431.9	7149.2
42.5°	10574.4	10368.0	9812.7	9065.2	8536.1	7876.7	7193.2	7117.1	7315.4	9091.2	7714.4
45°	12300.0	12067.6	11129.6	9933.0	9289.6	8664.3	7958.9	7776.4	7904.7	9858.9	8441.9
47.5°	13414.4	13300.1	12241.9	10801.0	10079.3	9522.2	8834.7	8534.1	8626.2	10728.6	9339.8
50°	13741.2	13642.9	12811.1	11480.2	10824.9	10558.4	9918.9	9520.1	9536.1	11744.9	10416.0
52.5°	13496.6	13456.5	12905.3	11901.1	11510.3	11650.7	11420.2	10865.0	10732.7	12859.2	11582.6
55°	13170.0	13184.0	12971.4	12324.0	12207.8	12668.8	13384.3	12937.4	12376.2	14019.7	12797.1
57.5°	12141.8	12151.7	12709.0	13129.7	13538.6	14095.8	14913.7	14725.1	14071.8	15272.4	14157.9
60°	9776.8	9854.9	11095.4	12963.4	15059.8	16907.8	17108.2	16783.6	15875.6	16715.4	15927.7
62.5°	6984.9	7054.8	8491.9	11253.8	14881.5	20090.6	21160.8	19870.1	18322.8	18874.0	18417.1
65°	3669.8	3657.8	4770.1	7776.4	12534.5	20828.1	27546.3	25349.7	22445.5	21842.3	20822.2
67.5°	2050.3	2116.4	2547.5	3922.3	8169.2	18330.9	31624.9	32272.2	28177.7	24197.3	20717.9
69°	1896.1	1918.2	2206.6	3032.4	5325.3	15124.0	31274.2	34362.8	30594.7	24207.3	19383.1
70°	1842.0	1866.0	2128.5	2793.9	4473.5	12392.3	29997.6	34118.3	31182.1	23670.1	18168.5
72.5°	1651.5	1683.6	1938.2	2511.3	3769.9	6387.5	24163.1	29201.8	28245.8	20687.7	14087.8
75°	1409.0	1463.1	1848.0	2493.2	3571.5	4060.6	16114.2	21756.1	21022.6	14795.4	7992.8
77.5°	583.2	589.3	807.7	1825.8	3748.0	3886.2	8660.3	13781.2	12199.8	6487.6	2407.1
80°	406.8	398.8	402.9	533.1	3024.5	3912.3	4443.3	7008.8	5447.5	1711.6	1126.4
82.5°	342.8	338.8	354.7	334.7	1024.2	4439.5	3715.8	3653.8	2565.4	921.9	537.1
85°	226.6	220.4	290.6	304.6	487.1	3525.5	3996.5	2872.2	1912.0	493.0	228.4
87.5°	110.2	112.3	166.4	206.4	258.5	1116.4	3828.0	2270.8	1477.2	214.4	92.2
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°	7975.0	7975.0	7975.0	7975.0	7975.0	7975.0	7975.0	7975.0	7975.0	7975.0	7975.0
2.5°	7846.6	7786.5	7732.4	7664.2	7612.1	7568.0	7507.9	7505.9	7495.8	7509.9	7514.0
5°	7672.2	7572.1	7419.7	7249.3	7129.0	6970.8	6816.3	6764.2	6706.1	6700.2	6718.2
7.5°	7409.7	7253.4	6992.8	6732.3	6471.7	6205.1	5952.6	5824.3	5700.0	5661.9	5680.1
10°	7117.1	6918.7	6519.8	6094.9	5728.1	5331.4	4946.4	4698.0	4471.5	4375.3	4399.3
12.5°	6888.7	6636.0	6074.9	5523.7	4974.5	4405.3	3898.3	3407.2	3036.5	2870.1	2880.1
15°	6692.2	6369.5	5658.0	4924.4	4236.9	3457.3	2753.8	2184.6	1859.9	1739.7	1735.6
17.5°	6479.7	6088.9	5223.0	4367.2	3475.4	2511.3	1844.0	1507.1	1378.9	1338.8	1338.8
20°	6253.2	5800.3	4768.2	3759.9	2673.6	1753.8	1387.0	1256.6	1208.6	1196.5	1194.6
22.5°	6042.8	5517.7	4311.1	3112.5	1934.1	1330.7	1180.6	1130.3	1122.4	1132.5	1132.5
25°	5876.4	5269.2	3848.2	2431.2	1406.9	1114.3	1050.2	1044.2	1074.3	1110.3	1116.4
27.5°	5752.1	5046.7	3391.2	1775.8	1106.4	970.1	948.0	974.0	1044.2	1116.4	1130.3
30°	5666.0	4856.2	2844.0	1276.8	921.9	849.7	859.8	905.9	1012.1	1122.4	1152.4
32.5°	5627.9	4702.0	2292.8	980.1	787.6	747.6	773.6	833.7	943.9	1054.3	1090.4
35°	5664.1	4589.7	1783.8	813.8	689.4	659.4	689.4	751.6	823.7	877.9	899.9
37.5°	5794.2	4549.6	1342.8	721.5	625.3	595.2	619.3	661.4	693.5	713.6	723.6
40°	6068.9	4591.7	1052.3	673.4	589.3	555.2	561.3	581.3	603.3	619.3	621.3
42.5°	6505.7	4730.0	935.9	655.5	567.2	523.2	513.1	527.1	551.2	573.2	577.3
45°	7087.0	4960.5	923.9	661.4	557.2	497.0	477.0	491.1	523.2	559.1	565.3
47.5°	7838.6	5325.3	980.1	693.5	563.1	483.0	452.9	466.9	509.1	557.2	565.3
50°	8728.6	5830.3	1084.3	741.6	591.3	483.0	443.0	454.9	499.1	553.1	561.3
52.5°	9776.8	6533.8	1192.5	789.7	631.2	501.1	446.9	444.9	485.1	535.1	545.1
55°	10933.1	7407.7	1296.8	831.8	653.3	525.1	457.0	433.0	465.1	505.0	513.1
57.5°	12294.1	8604.2	1479.1	871.9	665.5	543.1	468.9	420.9	438.9	466.9	473.0
60°	14140.0	10361.9	1833.9	939.9	687.5	551.2	471.0	408.9	406.8	427.0	428.9
62.5°	16547.0	12420.2	2172.6	1020.1	731.6	553.1	462.9	400.9	380.8	386.8	386.8
65°	18258.7	13177.9	2074.4	1088.2	771.6	551.2	454.9	394.9	360.8	350.8	350.8
67.5°	17284.6	11640.6	1761.8	1106.4	775.6	529.1	436.9	380.8	342.8	318.7	318.7
69°	15853.6	10203.6	1617.4	1074.3	743.5	503.1	416.9	366.8	330.7	302.6	302.6
70°	14687.1	9115.3	1529.3	1036.1	705.4	481.0	398.8	352.8	318.7	294.6	292.6
72.5°	10965.3	6082.9	1306.8	894.0	579.2	406.8	348.7	314.6	286.6	270.6	270.6
75°	5786.3	3048.5	1070.3	729.6	446.9	324.6	286.6	264.6	248.6	246.6	244.5
77.5°	1896.1	1378.9	769.7	549.1	328.7	252.6	228.4	214.4	212.4	220.4	220.4
80°	1024.2	823.7	495.1	370.8	228.4	188.5	176.3	174.5	180.4	192.3	192.3
82.5°	497.0	406.8	294.6	228.4	156.3	138.2	138.2	140.2	148.3	162.4	162.4
85°	214.4	192.3	170.4	128.3	96.2	86.1	98.3	108.2	114.3	124.2	128.3
87.5°	102.1	90.2	78.2	50.1	42.1	44.0	52.1	64.0	76.1	84.3	86.1
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)