

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: P197298

Luminaire Tested: **NAV-AF-06-D-UNV-T3R-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197298
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24250)
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-T3R-8030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 80 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 29897 lumens
Efficiency: N/A
Efficacy: 89.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - Full Cutoff
BUG Rating: B3 - U0 - G4

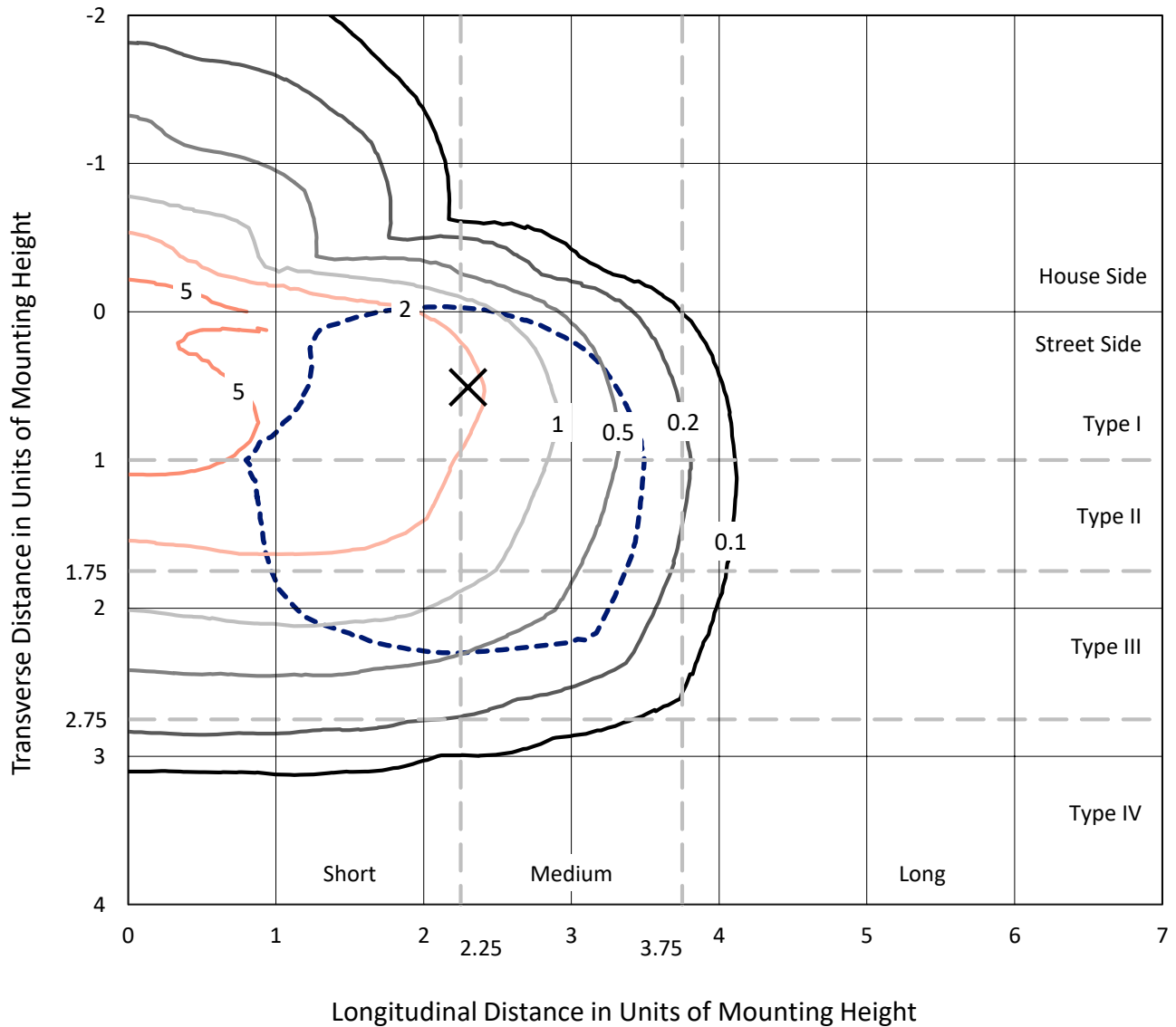
Input Watts (W): 333
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

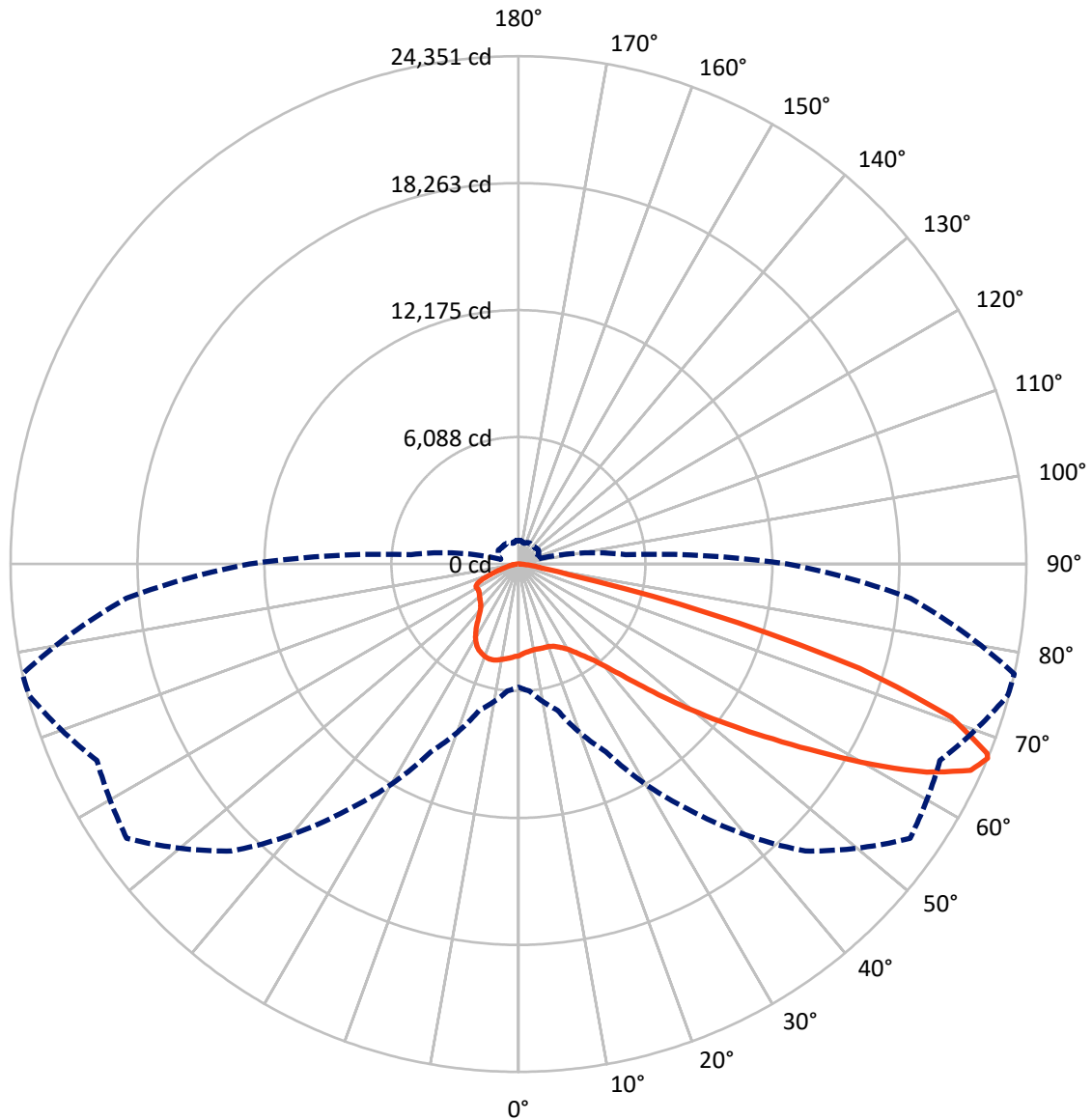
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.5 fc
 Type III - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5137.8	0.0	5137.8
	% Fixture	17.2	0.0	17.2
Street Side	Lumens	24759.2	0.0	24759.2
	% Fixture	82.8	0.0	82.8
Total	Lumens	29897.0	0.0	29897.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	391.9	1.3
10°-20°	1085.3	3.6
20°-30°	1844.0	6.2
30°-40°	2950.0	9.9
40°-50°	4541.5	15.2
50°-60°	6300.9	21.1
60°-70°	8404.9	28.1
70°-80°	3999.9	13.4
80°-90°	378.7	1.3
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°	29897.0	100.0
0°-180°	29897.0	100.0



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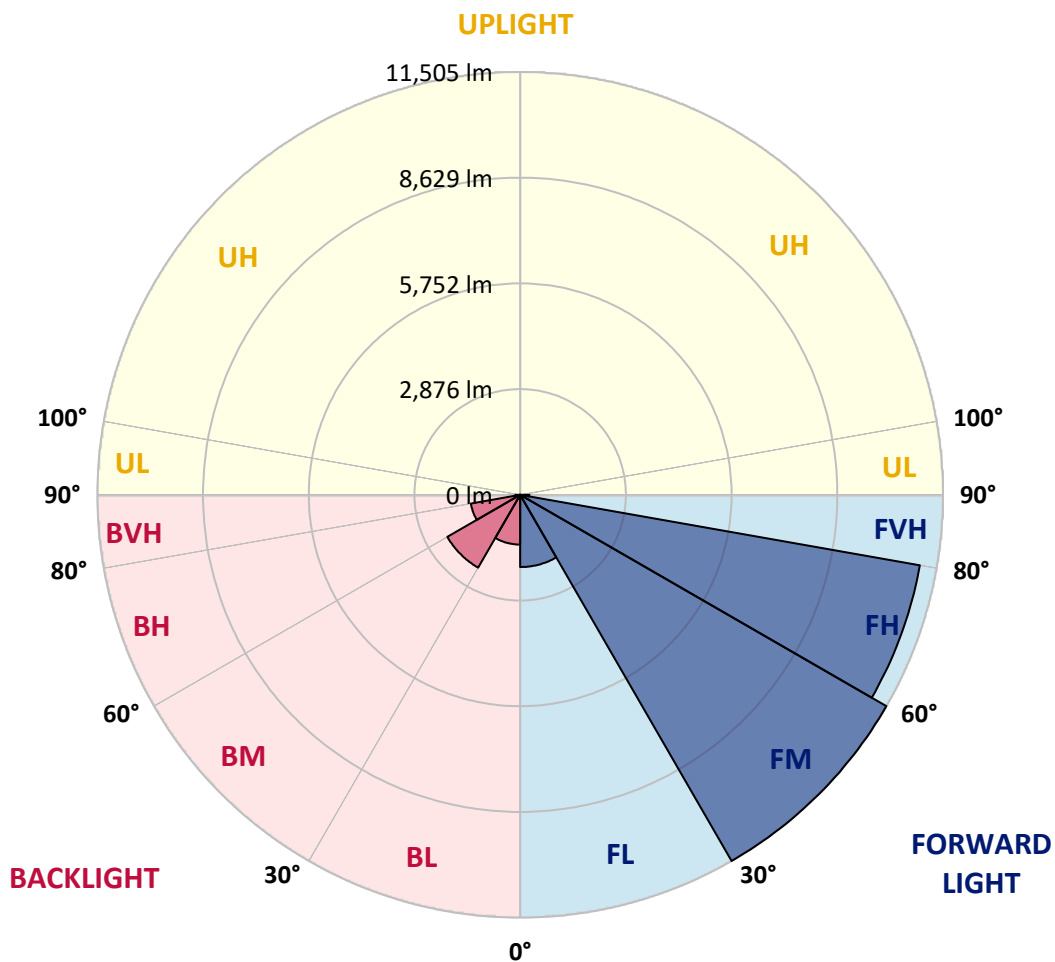
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1966.0	6.6			
FM	(30°-60°)	11504.7	38.5			
FH	(60°-80°)	11042.5	36.9			G4/12000
FVH	(80°-90°)	246.0	0.8			G3/500
BL	(0°-30°)	1355.1	4.5	B3/2500		
BM	(30°-60°)	2287.6	7.7	B2/2500		
BH	(60°-80°)	1362.3	4.6	B3/2500		G3/2500
BVH	(80°-90°)	132.7	0.4			G2/225
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°	65°	75°	77.5°	85°
0°	4400.1	4400.1	4400.1	4400.1	4400.1	4400.1	4400.1	4400.1	4400.1	4400.1	4400.1
2.5°	3945.4	3963.9	3965.8	4019.4	4043.4	4104.4	4170.9	4230.0	4281.8	4300.3	4333.5
5°	3550.0	3550.0	3555.5	3590.6	3659.0	3757.0	3895.6	4047.1	4206.0	4244.8	4342.8
7.5°	3343.0	3346.7	3350.4	3385.5	3439.1	3526.0	3664.6	3871.5	4135.8	4200.5	4372.3
10°	3361.5	3355.9	3337.5	3330.1	3352.2	3407.7	3527.8	3740.3	4076.7	4176.4	4425.9
12.5°	3651.6	3640.5	3579.5	3490.8	3409.5	3389.2	3472.4	3673.8	4048.9	4176.4	4516.5
15°	4148.7	4156.1	4036.0	3851.2	3638.7	3494.5	3483.5	3649.8	4039.7	4187.5	4621.8
17.5°	4795.5	4799.2	4632.9	4364.9	4012.0	3714.5	3559.2	3649.8	4039.7	4198.6	4723.5
20°	5483.0	5457.1	5268.6	4932.3	4474.0	4019.4	3697.8	3671.9	4050.8	4215.3	4819.5
22.5°	6072.5	6048.5	5850.7	5497.8	4972.9	4379.7	3884.5	3745.9	4111.8	4283.6	4954.4
25°	6588.1	6602.9	6410.7	6013.3	5470.0	4786.3	4163.5	3915.9	4239.3	4407.4	5120.8
27.5°	7214.5	7186.8	6965.1	6586.2	5981.9	5207.6	4512.8	4130.2	4390.8	4557.1	5324.0
30°	7938.9	7926.0	7626.6	7236.7	6545.6	5678.9	4858.4	4361.2	4588.5	4762.3	5579.1
32.5°	8818.6	8816.7	8495.2	8016.6	7179.4	6211.1	5266.8	4677.3	4876.8	5052.4	5917.2
35°	9814.6	9812.8	9480.2	8848.2	7909.4	6800.6	5747.2	5061.6	5233.5	5418.3	6320.1
37.5°	10505.8	10494.7	10321.0	9707.5	8716.9	7486.2	6347.8	5579.1	5638.2	5845.2	6806.1
40°	10638.9	10705.4	10855.1	10492.9	9598.4	8247.6	6950.3	6135.3	6190.8	6456.9	7417.8
42.5°	10494.7	10581.6	11078.7	11180.3	10479.9	9169.7	7704.3	6905.9	6976.1	7306.9	8136.7
45°	10369.0	10444.8	11067.6	11561.0	11350.3	10175.0	8644.9	7846.5	7979.6	8389.9	8957.2
47.5°	10154.7	10224.9	10849.5	11629.4	11847.4	11143.4	9777.7	8977.5	9206.7	9703.8	9892.3
50°	10143.6	10175.0	10552.0	11400.2	12019.3	11878.8	11032.5	10300.7	10651.8	11224.7	10927.1
52.5°	9862.7	10082.6	10424.5	11034.3	12023.0	12307.6	12268.8	11751.3	12292.8	12926.7	12061.8
55°	8144.1	8397.2	9999.4	10855.1	12000.8	12675.3	13397.9	13294.4	14140.8	14807.9	13333.2
57.5°	7604.5	7711.6	8772.4	10908.7	12185.6	13283.3	14527.0	14952.0	16254.9	16983.0	14857.8
60°	7456.6	7569.3	8526.6	10934.5	12686.4	14390.3	16059.0	16824.1	18740.4	19512.9	16589.4
62.5°	7292.1	7438.1	8545.1	10958.6	13566.1	16027.6	18091.8	18855.0	21292.5	21981.8	18211.9
65°	6811.7	7005.7	8203.2	10807.0	14528.9	18082.5	20778.7	20972.8	23401.0	23839.0	19191.3
67°	5900.6	6113.1	7264.4	9931.1	14440.2	19466.7	22928.0	22297.8	24297.3	24350.9	18873.5
67.5°	5612.3	5832.2	6946.6	9567.0	14187.0	19647.8	23308.6	22480.7	24289.9	24230.8	18577.8
70°	3779.1	4026.8	4919.3	7024.2	11379.9	18285.8	23216.2	21917.1	22697.0	22018.7	15961.0
72.5°	1875.7	1883.1	2454.1	3847.5	6894.8	13115.2	19366.9	18749.7	18398.5	17117.9	11712.5
75°	903.7	920.3	1158.7	1700.1	2906.9	6771.0	13207.6	12651.3	10771.9	9326.8	5861.8
77.5°	689.3	705.9	900.0	1106.9	1212.3	2208.3	6541.9	5287.1	3121.2	2492.9	1652.1
80°	532.2	563.6	759.5	850.1	802.0	885.2	2056.8	1618.8	1214.1	1114.3	818.7
82.5°	415.8	434.3	644.9	644.9	554.4	593.2	957.3	935.1	754.0	680.1	439.8
85°	293.8	330.8	519.3	480.5	364.1	367.7	572.9	548.9	388.1	312.3	171.9
87.5°	131.2	168.2	369.6	314.2	194.0	149.7	234.7	201.4	153.4	118.3	79.5
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°	4400.1	4400.1	4400.1	4400.1	4400.1	4400.1	4400.1	4400.1	4400.1	4400.1	4400.1
2.5°	4370.5	4400.1	4446.3	4474.0	4510.9	4525.7	4540.5	4566.4	4586.7	4581.2	4571.9
5°	4411.1	4461.0	4518.3	4536.8	4536.8	4518.3	4507.2	4509.1	4503.5	4499.8	4488.8
7.5°	4470.3	4538.7	4579.3	4560.8	4503.5	4431.5	4363.1	4322.4	4283.6	4259.6	4267.0
10°	4553.4	4629.2	4631.1	4549.7	4413.0	4255.9	4121.0	4034.2	3951.0	3914.0	3925.1
12.5°	4673.6	4749.3	4684.6	4509.1	4268.8	4023.1	3775.4	3596.2	3435.4	3396.6	3385.5
15°	4802.9	4862.0	4717.9	4422.2	4061.9	3657.2	3241.4	2973.4	2794.2	2762.7	2751.7
17.5°	4915.6	4948.9	4701.3	4267.0	3734.8	3097.2	2613.1	2431.9	2395.0	2413.5	2413.5
20°	5015.4	5004.3	4629.2	4026.8	3219.2	2476.3	2195.4	2193.6	2243.5	2289.7	2293.3
22.5°	5141.1	5054.2	4514.6	3670.1	2603.8	2066.0	2018.0	2066.0	2121.5	2173.2	2178.8
25°	5290.8	5109.7	4361.2	3161.9	2093.8	1875.7	1896.0	1936.7	1971.8	2012.5	2014.3
27.5°	5440.5	5152.2	4145.0	2565.0	1816.6	1753.7	1775.9	1792.5	1801.8	1827.7	1827.7
30°	5614.2	5185.4	3832.7	2055.0	1689.1	1646.6	1633.6	1626.2	1633.6	1668.7	1670.6
32.5°	5832.2	5244.6	3405.8	1763.0	1629.9	1570.8	1504.3	1467.3	1493.2	1556.0	1567.1
35°	6079.9	5314.8	2893.9	1646.6	1609.6	1533.8	1411.9	1354.6	1363.8	1421.1	1430.3
37.5°	6390.3	5405.4	2389.4	1618.8	1629.9	1530.1	1369.4	1288.0	1247.4	1249.2	1247.4
40°	6787.6	5495.9	1990.3	1626.2	1674.3	1539.4	1349.0	1221.5	1136.5	1140.2	1147.6
42.5°	7203.4	5555.0	1737.1	1648.4	1727.9	1552.3	1341.6	1156.8	1082.9	1145.8	1203.0
45°	7689.5	5538.4	1605.9	1668.7	1768.5	1557.9	1313.9	1149.4	1088.5	1277.0	1384.1
47.5°	8247.6	5466.3	1532.0	1678.0	1779.6	1556.0	1293.6	1173.5	1134.7	1461.8	1583.7
50°	8853.7	5353.6	1472.8	1663.2	1774.1	1548.6	1315.8	1203.0	1153.1	1502.4	1596.7
52.5°	9517.1	5250.1	1411.9	1629.9	1746.3	1526.4	1343.5	1190.1	1101.4	1384.1	1456.2
55°	10302.5	5226.1	1343.5	1572.6	1700.1	1502.4	1328.7	1149.4	1044.1	1227.1	1271.4
57.5°	11200.6	5375.8	1254.8	1502.4	1637.3	1454.4	1293.6	1127.3	1023.8	1116.2	1140.2
60°	12340.8	5706.6	1160.5	1428.5	1559.7	1382.3	1262.2	1132.8	1029.3	1099.6	1105.1
62.5°	13231.6	6004.1	1075.5	1337.9	1456.2	1295.4	1228.9	1138.4	1046.0	1121.7	1112.5
65°	13555.0	5858.1	970.2	1203.0	1310.2	1199.3	1182.7	1142.1	1046.0	1134.7	1114.3
67°	12891.5	5161.4	870.4	1068.1	1171.6	1114.3	1138.4	1127.3	1027.5	1132.8	1097.7
67.5°	12575.5	4915.6	844.5	1046.0	1134.7	1088.5	1127.3	1119.9	1021.9	1129.1	1088.5
70°	10370.9	3526.0	713.3	877.8	949.9	959.1	1058.9	1071.8	977.6	1060.7	986.8
72.5°	7379.0	2206.5	615.4	680.1	766.9	820.5	966.5	1007.2	918.4	922.1	861.2
75°	3651.6	1184.6	548.9	524.8	596.9	683.8	842.7	918.4	831.6	768.8	748.4
77.5°	1232.6	670.8	463.8	423.2	463.8	548.9	698.5	802.0	733.7	650.5	637.6
80°	637.6	487.9	362.2	340.0	365.9	425.0	547.0	667.1	626.5	630.2	519.3
82.5°	397.3	297.5	260.6	258.7	277.2	325.2	402.9	541.5	537.8	460.1	334.5
85°	184.8	171.9	166.3	171.9	177.4	184.8	262.4	386.2	408.4	247.6	219.9
87.5°	77.6	75.8	66.5	72.1	79.5	77.6	105.3	164.5	229.2	155.2	142.3
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)