

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: McGRAW-EDISON

Report Number: P301107

Luminaire Tested: **GLNA-AF-05-LED-E1-T3R**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301107
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P194839)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-05-LED-E1-T3R
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(5) 70 CRI, 4000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III
Roadway OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 30311.3 lumens
Efficiency: N/A
Efficacy: 108.6 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type III - Short - Full Cutoff
BUG Rating: B3 - U0 - G4

Input Watts (W): 279
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

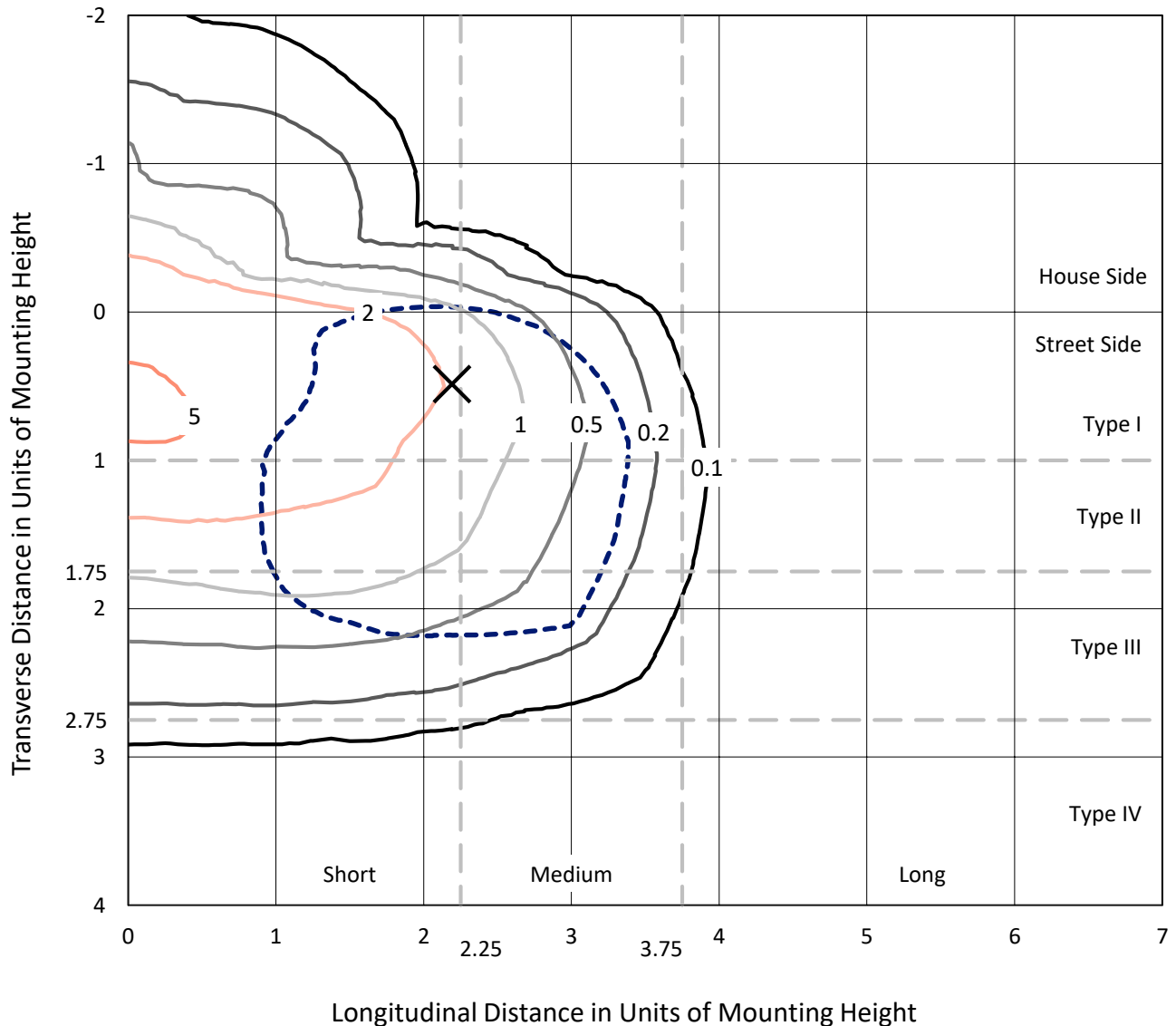


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

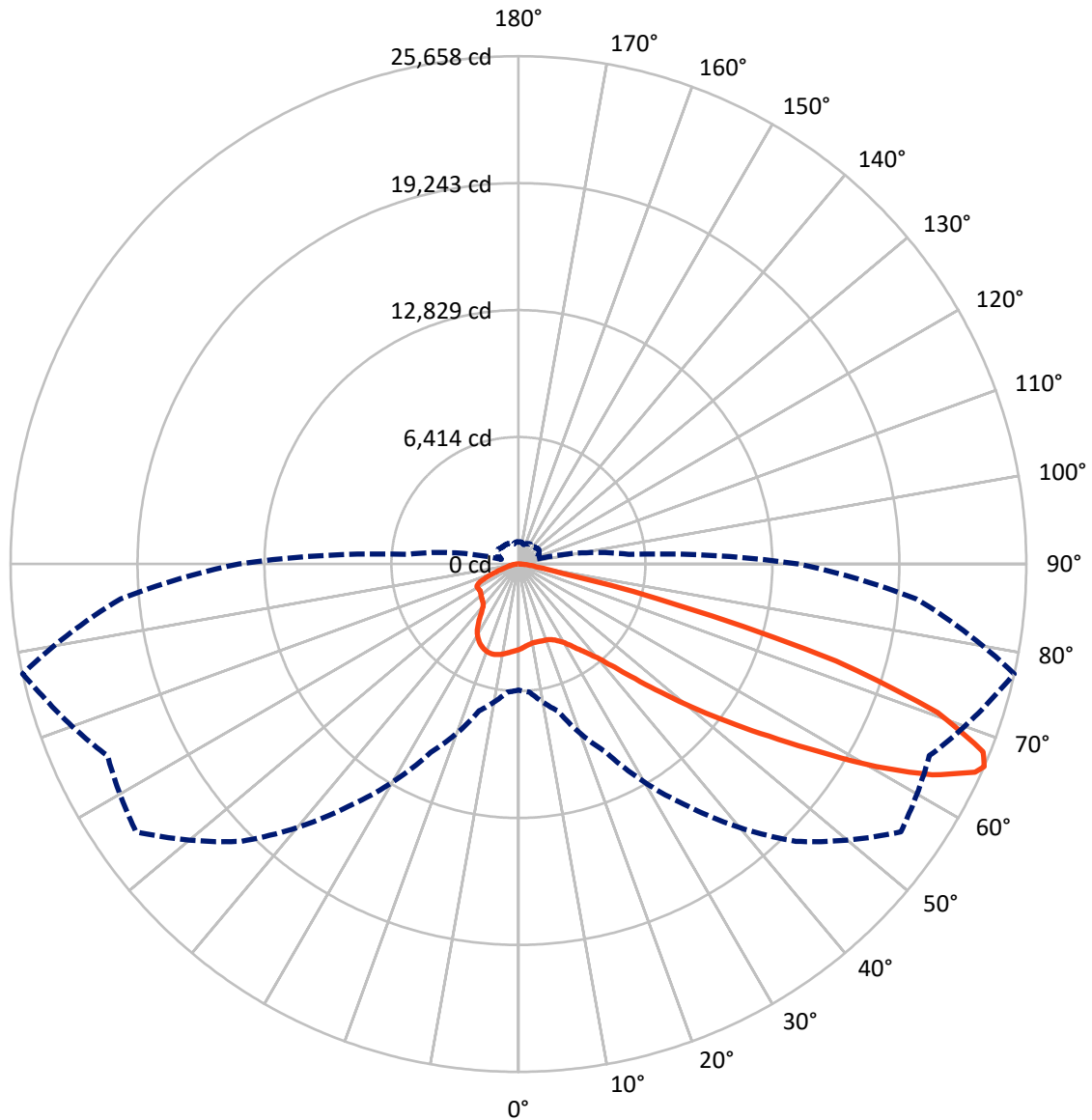


Based on 30 foot mounting height. Maximum calculated value = 5.9 fc
 Type III - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral - - - Horizontal Cone Through 66-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5178.5	0.0	5178.5
	% Fixture	17.1	0.0	17.1
Street Side	Lumens	25132.8	0.0	25132.8
	% Fixture	82.9	0.0	82.9
Total	Lumens	30311.3	0.0	30311.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	385.9	1.3
10°-20°	1088.7	3.6
20°-30°	1858.1	6.1
30°-40°	2974.4	9.8
40°-50°	4595.2	15.2
50°-60°	6517.6	21.5
60°-70°	8718.8	28.8
70°-80°	3786.4	12.5
80°-90°	386.1	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°	30311.3	100.0
0°-180°	30311.3	100.0



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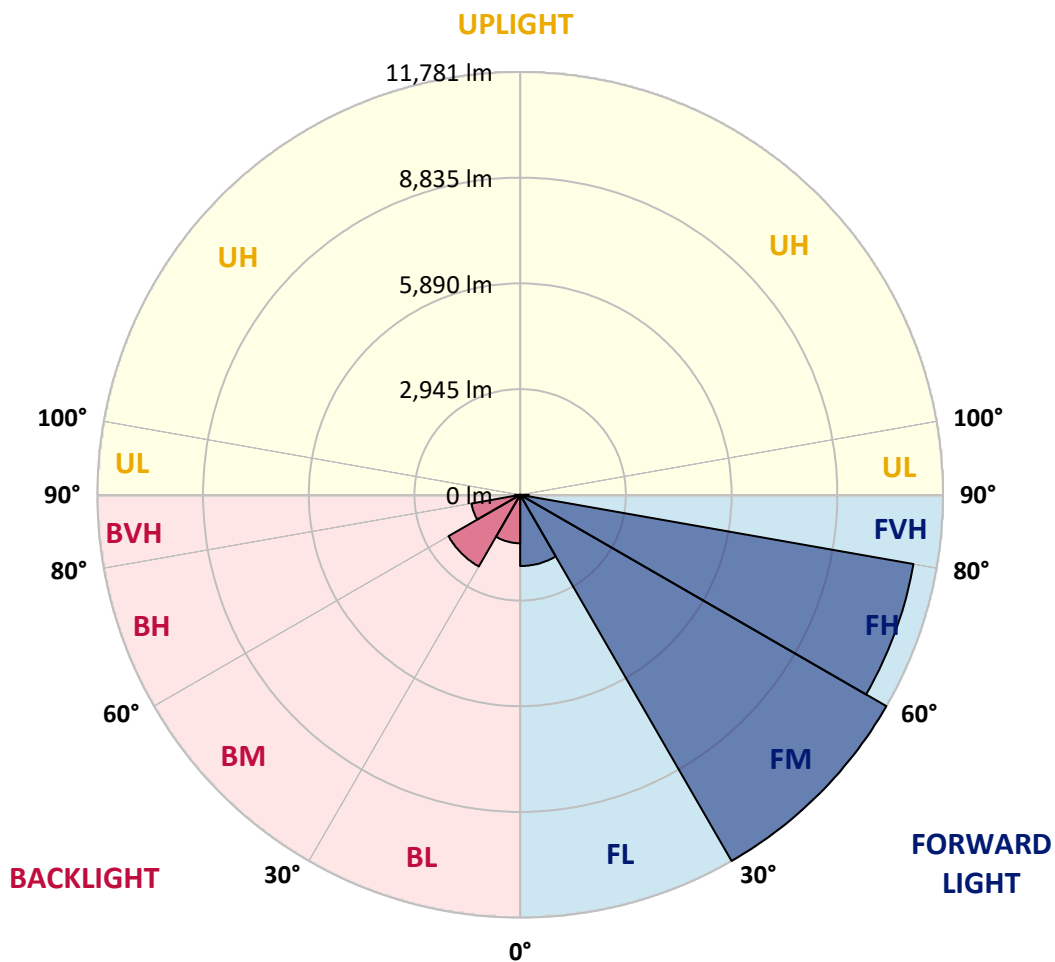
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1984.0	6.5			
FM (30°-60°)	11780.5	38.9			
FH (60°-80°)	11126.1	36.7			G4/12000
FVH (80°-90°)	242.2	0.8			G3/500
BL (0°-30°)	1348.7	4.4	B3/2500		
BM (30°-60°)	2306.7	7.6	B2/2500		
BH (60°-80°)	1379.2	4.5	B3/2500		G3/2500
BVH (80°-90°)	143.9	0.5			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 Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	4319.5	4319.5	4319.5	4319.5	4319.5	4319.5	4319.5	4319.5	4319.5	4319.5	4319.5
2.5°	3821.2	3846.8	3868.5	3888.4	3928.3	3994.2	4070.1	4131.7	4220.6	4237.9	4285.2
5°	3470.4	3470.4	3487.3	3517.7	3571.9	3670.7	3773.9	3911.4	4104.8	4150.3	4276.5
7.5°	3300.0	3301.3	3311.3	3336.8	3384.1	3474.3	3587.5	3749.7	4011.6	4087.5	4302.1
10°	3362.9	3348.5	3326.9	3314.3	3321.2	3374.1	3481.7	3662.1	3954.3	4051.5	4359.8
12.5°	3715.0	3688.1	3613.5	3514.6	3420.1	3381.5	3444.4	3620.4	3930.1	4043.2	4435.7
15°	4290.8	4279.6	4140.4	3935.7	3706.7	3514.6	3471.7	3604.8	3932.7	4053.2	4525.9
17.5°	5012.8	4996.8	4813.8	4515.9	4142.1	3768.3	3567.5	3617.8	3942.6	4070.1	4613.0
20°	5741.8	5692.8	5495.5	5140.3	4660.3	4113.1	3726.7	3650.8	3955.6	4088.8	4705.0
22.5°	6286.0	6245.7	6068.3	5723.1	5170.3	4512.9	3940.0	3708.0	3997.3	4143.4	4817.7
25°	6764.3	6766.9	6590.9	6257.4	5685.9	4937.0	4215.0	3861.1	4103.1	4254.9	4972.5
27.5°	7355.8	7321.5	7156.8	6825.9	6195.8	5365.0	4547.1	4071.9	4260.9	4414.0	5175.9
30°	8063.1	8038.8	7848.4	7473.3	6761.3	5824.6	4926.6	4316.4	4464.3	4623.0	5442.2
32.5°	8895.2	8883.9	8686.2	8203.6	7414.3	6366.2	5372.3	4640.4	4767.8	4932.6	5824.6
35°	9872.2	9873.5	9640.2	9060.0	8129.0	6996.3	5877.5	5057.1	5137.3	5309.0	6280.4
37.5°	10473.6	10546.5	10459.3	9867.9	8938.1	7701.0	6533.6	5610.0	5558.4	5731.8	6768.6
40°	10602.4	10691.3	10967.6	10667.0	9843.6	8477.2	7115.1	6141.2	6077.0	6288.6	7397.4
42.5°	10422.0	10545.2	11129.7	11341.4	10804.5	9433.8	7897.0	6930.4	6848.9	7133.8	8179.3
45°	10314.5	10406.4	11082.5	11692.6	11638.0	10515.3	8892.6	7921.3	7891.3	8265.1	9081.7
47.5°	10128.5	10211.7	10861.8	11774.1	12128.0	11506.1	10088.6	9133.3	9191.8	9681.8	10099.9
50°	10228.6	10262.9	10615.4	11566.4	12269.8	12232.5	11424.6	10536.5	10737.3	11348.7	11252.9
52.5°	10214.3	10303.2	10586.8	11225.6	12288.4	12680.9	12740.7	12102.0	12524.8	13226.4	12531.7
55°	8258.2	8421.2	10250.3	11139.7	12353.9	13120.1	13912.4	13751.9	14539.4	15357.3	13975.3
57.5°	7885.7	7988.9	9002.7	11320.1	12703.4	13959.7	15215.5	15568.0	16885.4	17835.1	15734.1
60°	7812.4	7939.9	8989.7	11540.8	13412.4	15327.4	17147.8	17766.6	19740.0	20779.9	17773.5
62.5°	7584.8	7722.2	8905.2	11511.8	14419.3	17219.3	19621.2	20103.9	22446.8	23458.1	19479.4
65°	6863.2	6992.0	8216.6	11049.5	15098.4	19238.8	22548.3	22246.5	24583.8	25343.9	20329.8
66°	6368.8	6495.0	7673.6	10505.3	14940.5	19811.6	23585.5	22909.5	25062.1	25657.9	20163.7
67.5°	5465.1	5564.0	6619.5	9286.3	14102.8	19972.0	24457.6	23407.8	25111.9	25322.7	19214.5
70°	3453.1	3481.7	4302.1	6410.5	10675.7	17320.8	23129.8	22170.6	23041.3	22471.1	16107.9
72.5°	1498.2	1488.2	2065.4	3261.0	6044.0	11622.4	18710.2	18293.4	18074.4	16774.0	11275.9
75°	833.5	845.2	1072.8	1513.8	2456.1	5708.8	12239.4	11712.5	9889.1	8438.6	5113.0
77.5°	668.7	684.7	889.4	1074.1	1102.7	1990.8	5727.5	4660.3	2805.6	2251.4	1420.6
80°	528.6	557.2	776.2	836.5	743.3	820.4	1850.3	1479.6	1110.1	1018.2	736.3
82.5°	418.0	438.4	666.1	633.1	519.9	552.9	886.4	863.8	722.0	657.4	425.4
85°	300.9	337.8	547.3	477.0	340.8	372.5	588.4	564.2	413.7	337.8	187.8
87.5°	123.2	160.4	386.8	316.6	190.4	173.5	293.6	276.2	196.0	143.1	93.2
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°	4319.5	4319.5	4319.5	4319.5	4319.5	4319.5	4319.5	4319.5	4319.5	4319.5	4319.5
2.5°	4315.1	4349.4	4394.0	4421.4	4435.7	4445.7	4461.3	4460.0	4464.3	4465.6	4471.2
5°	4343.7	4401.0	4465.6	4482.9	4482.9	4466.9	4451.3	4425.3	4415.3	4412.7	4415.3
7.5°	4418.3	4481.2	4537.1	4517.2	4474.3	4411.0	4329.4	4257.9	4219.3	4206.3	4203.7
10°	4512.9	4588.8	4611.7	4535.8	4409.7	4257.9	4096.1	3978.6	3911.4	3892.8	3887.1
12.5°	4627.3	4698.9	4667.7	4507.2	4273.5	4028.9	3805.2	3617.8	3477.3	3433.1	3430.1
15°	4753.5	4809.5	4698.9	4418.3	4070.1	3709.3	3311.3	2987.8	2813.0	2757.1	2752.7
17.5°	4871.1	4899.7	4680.2	4263.5	3770.9	3186.8	2658.2	2408.9	2349.0	2363.3	2365.9
20°	4971.2	4971.2	4617.4	4041.5	3300.0	2497.8	2163.9	2159.9	2202.9	2245.8	2254.5
22.5°	5081.4	5015.5	4507.2	3728.0	2632.2	2043.7	1995.2	2035.1	2083.6	2130.9	2138.3
25°	5217.5	5051.4	4353.7	3252.7	2069.3	1856.0	1874.6	1907.6	1931.9	1962.2	1966.5
27.5°	5369.3	5097.0	4152.1	2597.9	1796.1	1738.9	1753.2	1764.5	1761.4	1773.1	1775.7
30°	5551.0	5150.3	3875.4	2030.7	1682.9	1638.3	1612.7	1602.7	1602.7	1621.4	1628.3
32.5°	5794.7	5228.8	3478.6	1740.2	1628.3	1566.7	1483.9	1446.6	1460.9	1523.8	1538.1
35°	6062.7	5313.4	2941.8	1641.3	1617.0	1533.8	1405.0	1336.0	1337.8	1396.3	1415.0
37.5°	6354.5	5420.9	2352.9	1622.7	1642.6	1535.5	1363.4	1268.8	1230.2	1230.2	1237.6
40°	6728.3	5531.0	1905.0	1635.7	1697.3	1552.4	1342.1	1215.9	1107.1	1110.1	1115.7
42.5°	7215.3	5625.6	1664.3	1662.6	1763.2	1575.4	1340.4	1145.7	1051.1	1115.7	1174.3
45°	7756.9	5672.8	1558.1	1687.3	1816.1	1589.7	1317.8	1134.4	1058.5	1250.2	1362.1
47.5°	8379.6	5645.5	1499.5	1695.5	1829.1	1589.7	1291.8	1161.7	1108.4	1447.9	1578.4
50°	9063.0	5567.0	1442.3	1678.6	1824.7	1586.7	1316.1	1188.6	1127.0	1482.2	1572.4
52.5°	9866.6	5501.1	1382.0	1641.3	1794.4	1571.1	1344.7	1177.3	1068.5	1347.7	1410.6
55°	10782.8	5519.8	1314.8	1588.4	1747.1	1541.1	1334.7	1131.4	1006.9	1187.3	1225.9
57.5°	11954.5	5741.8	1234.6	1521.2	1682.9	1490.8	1299.2	1110.1	988.3	1077.2	1100.1
60°	13261.9	6128.2	1134.4	1453.6	1602.7	1410.6	1271.9	1120.1	996.9	1068.5	1079.8
62.5°	14221.6	6353.2	1048.5	1354.7	1493.9	1321.7	1237.6	1132.7	1019.9	1098.4	1095.8
65°	14482.2	5983.8	941.0	1210.3	1346.4	1228.9	1194.2	1147.0	1029.9	1122.7	1110.1
66°	14117.1	5585.7	893.7	1143.1	1271.9	1183.0	1173.0	1145.7	1025.6	1125.7	1104.0
67.5°	13230.7	4769.1	812.2	1044.2	1153.0	1114.4	1138.7	1132.7	1013.8	1122.7	1092.8
70°	10790.2	3254.0	694.7	869.4	959.6	980.9	1072.8	1087.1	976.6	1072.8	1006.9
72.5°	7539.2	1982.2	614.5	674.7	776.2	836.5	982.6	1023.8	926.7	936.7	873.8
75°	3643.4	1052.9	557.2	523.0	602.8	699.0	873.8	938.0	847.8	783.6	760.6
77.5°	1135.7	643.1	472.7	421.1	472.7	564.2	730.2	822.2	755.0	656.1	647.4
80°	610.1	472.7	363.8	337.8	373.8	442.7	574.1	686.0	648.7	588.4	525.6
82.5°	402.4	306.6	269.3	261.9	284.9	337.8	426.7	568.5	568.5	504.3	366.9
85°	207.7	187.8	184.7	184.7	199.0	225.1	290.5	438.4	467.0	266.3	220.7
87.5°	103.2	107.5	100.2	104.5	111.9	110.1	138.8	220.7	263.7	161.7	134.4
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)