

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: P195828

Luminaire Tested: **NAV-AF-06-D-UNV-T3-7050-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195828
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (p24135)
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-T3-7050-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 29112 lumens
Efficiency: N/A
Efficacy: 116.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G4

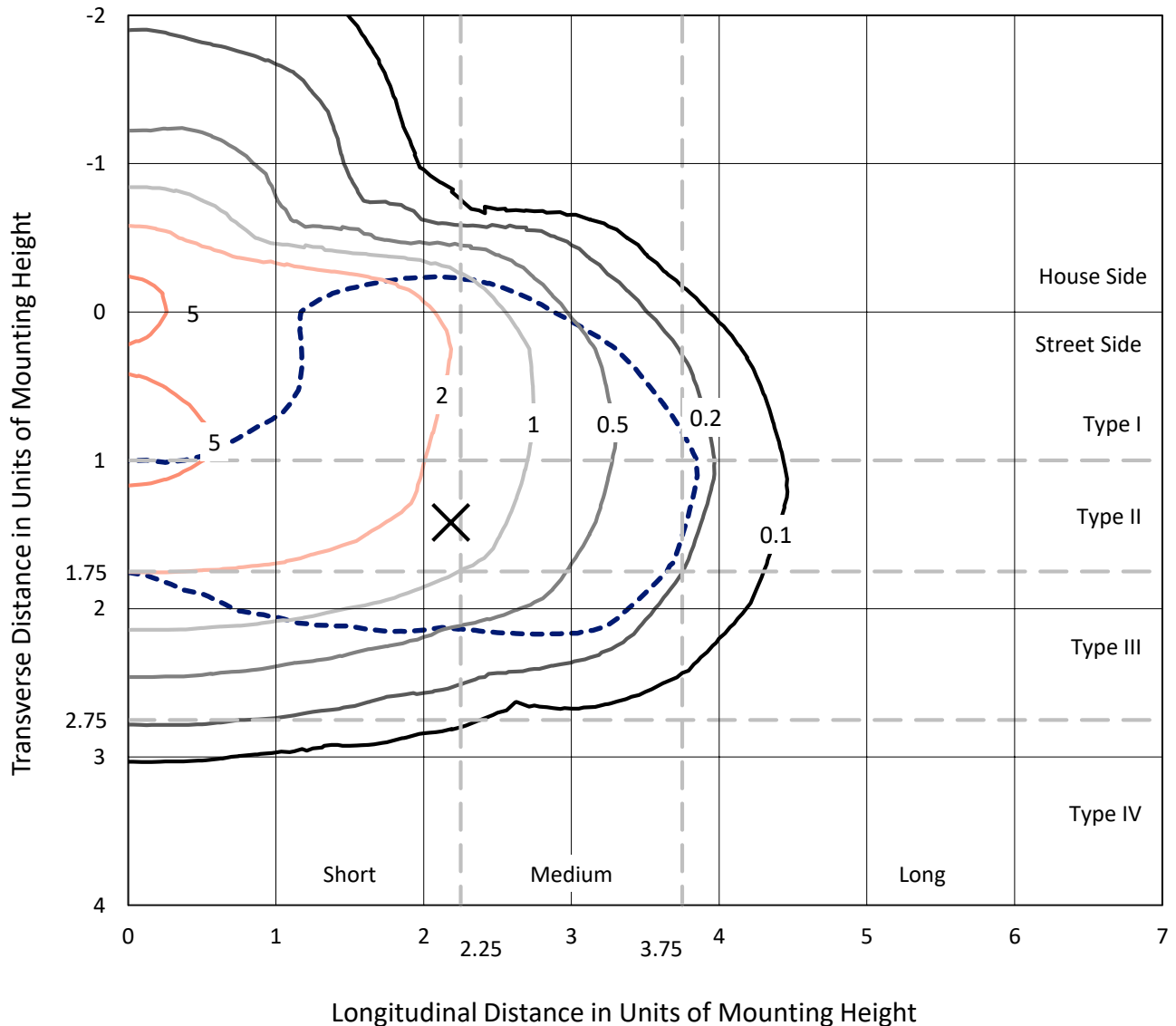
Input Watts (W): 249
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

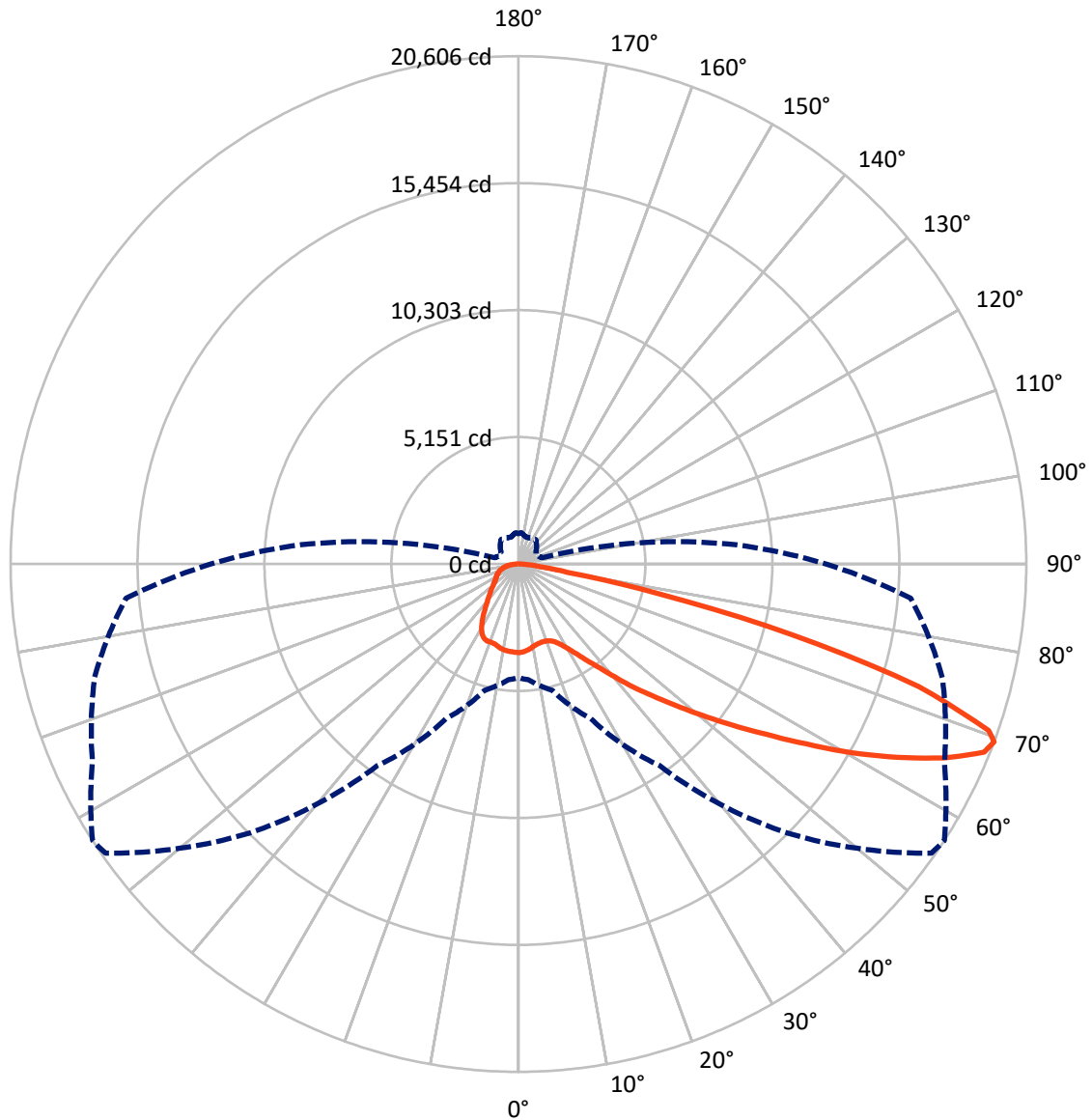
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.9 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 57-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6424.0	0.0	6424.0
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	22688.0	0.0	22688.0
	% Fixture	77.9	0.0	77.9
Total	Lumens	29112.0	0.0	29112.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	336.8	1.2
10°-20°	957.5	3.3
20°-30°	1592.8	5.5
30°-40°	2600.9	8.9
40°-50°	4389.8	15.1
50°-60°	6828.5	23.5
60°-70°	8134.3	27.9
70°-80°	3789.5	13.0
80°-90°	482.0	1.7
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°	29112.0	100.0
0°-180°	29112.0	100.0



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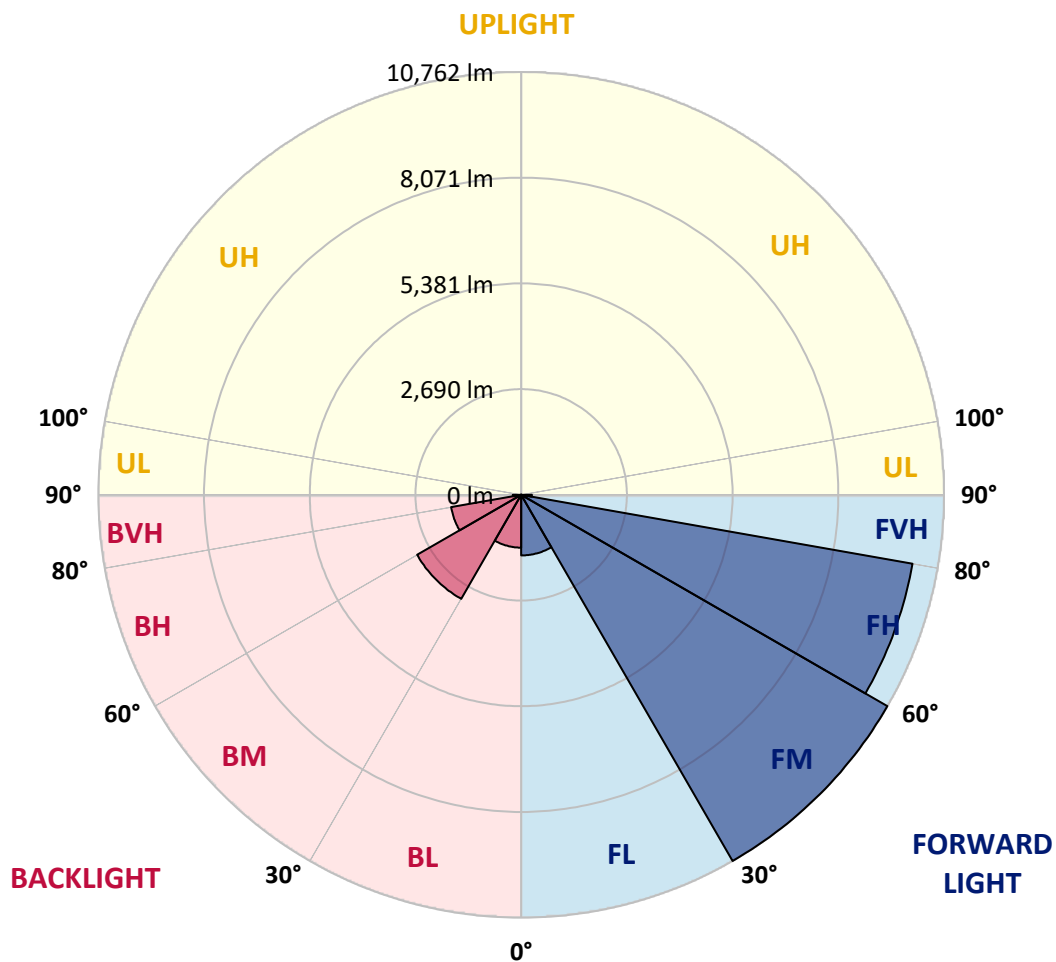
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1541.7	5.3			
FM	(30°-60°)	10761.8	37.0			
FH	(60°-80°)	10113.5	34.7			G4/12000
FVH	(80°-90°)	270.9	0.9			G3/500
BL	(0°-30°)	1345.3	4.6	B3/2500		
BM	(30°-60°)	3057.4	10.5	B3/5000		
BH	(60°-80°)	1810.2	6.2	B3/2500		G3/2500
BVH	(80°-90°)	211.0	0.7			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°	57°	65°	75°	85°
0°	3597.1	3597.1	3597.1	3597.1	3597.1	3597.1	3597.1	3597.1	3597.1	3597.1	3597.1
2.5°	3576.6	3576.6	3585.9	3585.9	3585.9	3582.2	3571.0	3574.7	3567.3	3561.7	3552.3
5°	3503.9	3507.6	3518.8	3522.5	3528.1	3530.0	3530.0	3528.1	3530.0	3530.0	3524.4
7.5°	3403.2	3407.0	3420.0	3427.5	3444.2	3459.2	3466.6	3466.6	3475.9	3483.4	3485.2
10°	3341.7	3341.7	3349.2	3349.2	3362.2	3369.7	3393.9	3392.1	3418.1	3442.4	3453.6
12.5°	3334.3	3334.3	3330.6	3317.5	3310.1	3308.2	3332.4	3336.1	3375.3	3418.1	3438.7
15°	3358.5	3358.5	3347.3	3321.2	3293.3	3280.2	3304.5	3311.9	3354.8	3405.1	3436.8
17.5°	3436.8	3434.9	3410.7	3358.5	3310.1	3289.5	3297.0	3304.5	3343.6	3401.4	3440.5
20°	3610.1	3610.1	3557.9	3462.9	3379.0	3330.6	3319.4	3325.0	3352.9	3407.0	3457.3
22.5°	3913.9	3919.5	3826.3	3669.8	3526.2	3423.7	3379.0	3384.6	3397.6	3449.8	3505.7
25°	4361.2	4346.3	4214.0	3992.2	3768.5	3593.3	3502.0	3507.6	3507.6	3556.1	3613.8
27.5°	4834.6	4838.3	4648.2	4409.7	4115.2	3854.3	3708.9	3707.0	3705.2	3751.8	3813.3
30°	5369.5	5371.4	5151.5	4875.6	4538.3	4204.7	3986.6	3984.7	3968.0	4025.7	4105.9
32.5°	5954.7	5952.9	5697.5	5386.3	5011.7	4633.3	4350.0	4348.2	4335.1	4413.4	4510.3
35°	6603.3	6603.3	6349.9	5965.9	5561.5	5140.3	4812.2	4810.4	4817.8	4924.1	5015.4
37.5°	7384.2	7401.0	7095.4	6629.4	6187.7	5738.5	5356.5	5345.3	5289.4	5468.3	5619.3
40°	8198.7	8245.3	7928.5	7384.2	6907.1	6443.0	6021.8	6014.4	5965.9	6156.0	6400.2
42.5°	9080.3	9186.5	8834.3	8278.9	7758.9	7257.5	6834.4	6813.9	6627.6	6923.9	7306.0
45°	10235.8	10304.8	9794.1	9290.9	8800.7	8228.5	7725.3	7615.4	7429.0	7809.2	8304.9
47.5°	11022.3	10988.8	10670.1	10332.7	10017.8	9469.8	8696.3	8556.6	8329.2	8832.4	9378.5
50°	11510.6	11534.9	11355.9	11339.2	11322.4	10940.3	9792.2	9624.5	9361.7	9958.1	10595.5
52.5°	11833.1	11723.1	11754.8	12135.0	12595.3	12412.7	11031.6	10845.3	10575.0	11171.4	11890.8
55°	11698.9	11553.5	11846.1	12595.3	13678.2	13719.2	12392.2	12200.2	11969.1	12461.2	13448.9
57.5°	11143.5	11216.2	11678.4	12720.2	14418.1	14889.6	13955.9	13760.2	13305.4	13804.9	14928.8
60°	10362.5	10509.8	11216.2	12522.7	14936.2	15801.0	15672.4	15542.0	14759.2	15113.3	16483.2
62.5°	9523.9	9669.2	10537.7	12185.3	14703.3	16608.0	17357.3	17277.1	16363.9	16373.2	17469.1
65°	8284.4	8344.1	9231.2	11264.6	14056.5	17336.8	19044.0	18973.2	17897.8	17448.6	17744.9
67.5°	6256.7	6331.2	7060.0	8892.0	12088.4	16941.6	20391.5	20380.3	18820.3	17847.4	17088.9
69°	4620.3	4711.6	5306.1	6903.4	9995.4	15435.7	20454.8	20605.8	19070.1	17806.4	15979.9
70°	3380.9	3485.2	4035.1	5479.5	8325.4	13773.2	19912.5	20236.8	18975.0	17547.4	15115.2
72.5°	1437.0	1472.4	1742.6	2473.2	4223.3	8304.9	16309.8	16992.0	17137.3	15722.7	11808.8
75°	900.2	911.4	1017.6	1269.2	1878.7	3434.9	10562.0	11492.0	12794.8	12198.4	7906.1
77.5°	678.4	687.7	749.2	874.1	1166.7	1282.3	4899.8	5842.9	7328.3	7175.5	3934.4
80°	520.0	525.6	566.6	635.5	821.9	803.3	1589.8	1998.0	3058.4	2698.7	1392.2
82.5°	408.2	410.0	445.4	458.5	574.0	540.5	797.7	889.0	1235.7	1026.9	680.3
85°	361.6	367.2	402.6	335.5	367.2	326.2	438.0	475.3	656.0	618.8	257.2
87.5°	184.5	193.8	337.3	287.0	184.5	154.7	192.0	206.9	266.5	288.9	124.9
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°	3597.1	3597.1	3597.1	3597.1	3597.1	3597.1	3597.1	3597.1	3597.1	3597.1	3597.1
2.5°	3554.2	3556.1	3561.7	3571.0	3585.9	3604.5	3626.9	3649.3	3662.3	3671.6	3667.9
5°	3524.4	3526.2	3537.4	3554.2	3572.8	3600.8	3638.1	3666.0	3686.5	3699.6	3697.7
7.5°	3487.1	3492.7	3515.1	3533.7	3559.8	3582.2	3612.0	3638.1	3658.6	3671.6	3669.8
10°	3459.2	3464.7	3492.7	3516.9	3539.3	3543.0	3537.4	3530.0	3528.1	3537.4	3533.7
12.5°	3446.1	3457.3	3483.4	3500.2	3490.8	3455.4	3414.4	3397.6	3392.1	3410.7	3412.6
15°	3449.8	3459.2	3481.5	3470.3	3420.0	3360.4	3338.0	3351.1	3362.2	3373.4	3375.3
17.5°	3459.2	3464.7	3470.3	3429.3	3358.5	3319.4	3311.9	3298.9	3265.3	3246.7	3244.8
20°	3475.9	3483.4	3474.1	3408.8	3345.5	3293.3	3203.8	3123.7	3047.3	3006.3	2989.5
22.5°	3533.7	3539.3	3511.3	3448.0	3351.1	3181.5	3000.7	2862.7	2745.3	2682.0	2657.7
25°	3647.4	3656.7	3617.6	3537.4	3284.0	2987.6	2732.3	2545.9	2398.7	2322.3	2301.8
27.5°	3846.8	3856.1	3813.3	3604.5	3127.4	2728.6	2419.2	2234.7	2107.9	2042.7	2033.4
30°	4145.0	4158.1	4118.9	3602.7	2888.8	2398.7	2113.5	2005.4	1932.7	1888.0	1886.1
32.5°	4558.8	4607.2	4446.9	3539.3	2594.4	2065.1	1882.4	1845.1	1809.7	1779.9	1779.9
35°	5084.4	5198.0	4771.2	3407.0	2270.1	1837.7	1753.8	1718.4	1673.7	1642.0	1638.3
37.5°	5712.4	5889.5	5002.4	3172.1	1990.5	1727.7	1675.5	1617.8	1546.9	1485.4	1470.5
40°	6575.4	6616.4	5116.0	2790.1	1781.8	1668.1	1602.8	1530.2	1440.7	1371.7	1364.3
42.5°	7442.0	7307.8	5093.7	2380.0	1662.5	1614.0	1528.3	1448.1	1368.0	1310.2	1310.2
45°	8428.0	7911.7	4924.1	1968.1	1554.4	1552.5	1459.3	1382.9	1321.4	1278.5	1269.2
47.5°	9371.0	8454.0	4631.5	1664.3	1442.6	1491.0	1414.6	1353.1	1297.2	1256.2	1248.7
50°	10515.4	9082.1	4320.2	1451.9	1334.5	1437.0	1396.0	1364.3	1310.2	1239.4	1232.0
52.5°	11652.3	9816.5	4079.8	1291.6	1239.4	1394.1	1407.1	1410.9	1360.6	1222.6	1213.3
55°	12873.0	10601.1	3826.3	1166.7	1161.1	1373.6	1433.2	1429.5	1405.3	1226.4	1211.4
57.5°	14034.2	11389.5	3448.0	1079.1	1099.6	1353.1	1438.8	1379.2	1336.3	1245.0	1220.8
60°	14995.9	12041.8	2892.6	1017.6	1047.4	1312.1	1401.6	1312.1	1239.4	1241.3	1218.9
62.5°	15463.7	12224.5	2212.3	946.8	1004.6	1245.0	1347.5	1261.8	1194.7	1248.7	1235.7
65°	15107.7	11704.5	1576.7	881.6	952.4	1166.7	1315.8	1218.9	1172.3	1286.0	1271.1
67.5°	13829.2	10288.0	1144.4	823.8	902.1	1086.6	1256.2	1179.8	1149.9	1314.0	1280.4
69°	12470.5	8882.7	991.5	790.2	866.7	1043.7	1217.0	1159.3	1133.2	1274.8	1226.4
70°	11341.0	7799.9	915.1	769.7	836.8	1019.5	1187.2	1146.2	1116.4	1228.2	1170.4
72.5°	8131.6	5041.5	769.7	708.2	758.6	965.4	1122.0	1097.8	1053.0	1108.9	1071.7
75°	4912.9	2631.6	654.2	644.9	676.5	890.9	1045.6	1015.8	971.0	976.6	958.0
77.5°	2257.0	1215.2	547.9	570.3	590.8	797.7	952.4	918.8	877.8	862.9	864.8
80°	989.7	710.1	458.5	486.4	497.6	717.6	851.7	814.5	769.7	849.9	788.4
82.5°	534.9	411.9	357.8	376.5	408.2	624.4	739.9	691.5	648.6	754.8	609.5
85°	216.2	210.6	242.3	260.9	283.3	449.2	618.8	568.4	516.3	462.2	451.0
87.5°	93.2	100.6	119.3	126.7	151.0	279.6	415.6	363.4	365.3	313.1	307.5
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)