

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: P196734

Luminaire Tested: **NAV-AF-06-D-UNV-T2-7030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196734
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24136)
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-T2-7030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 22468 lumens
Efficiency: N/A
Efficacy: 116.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B3 - U0 - G3

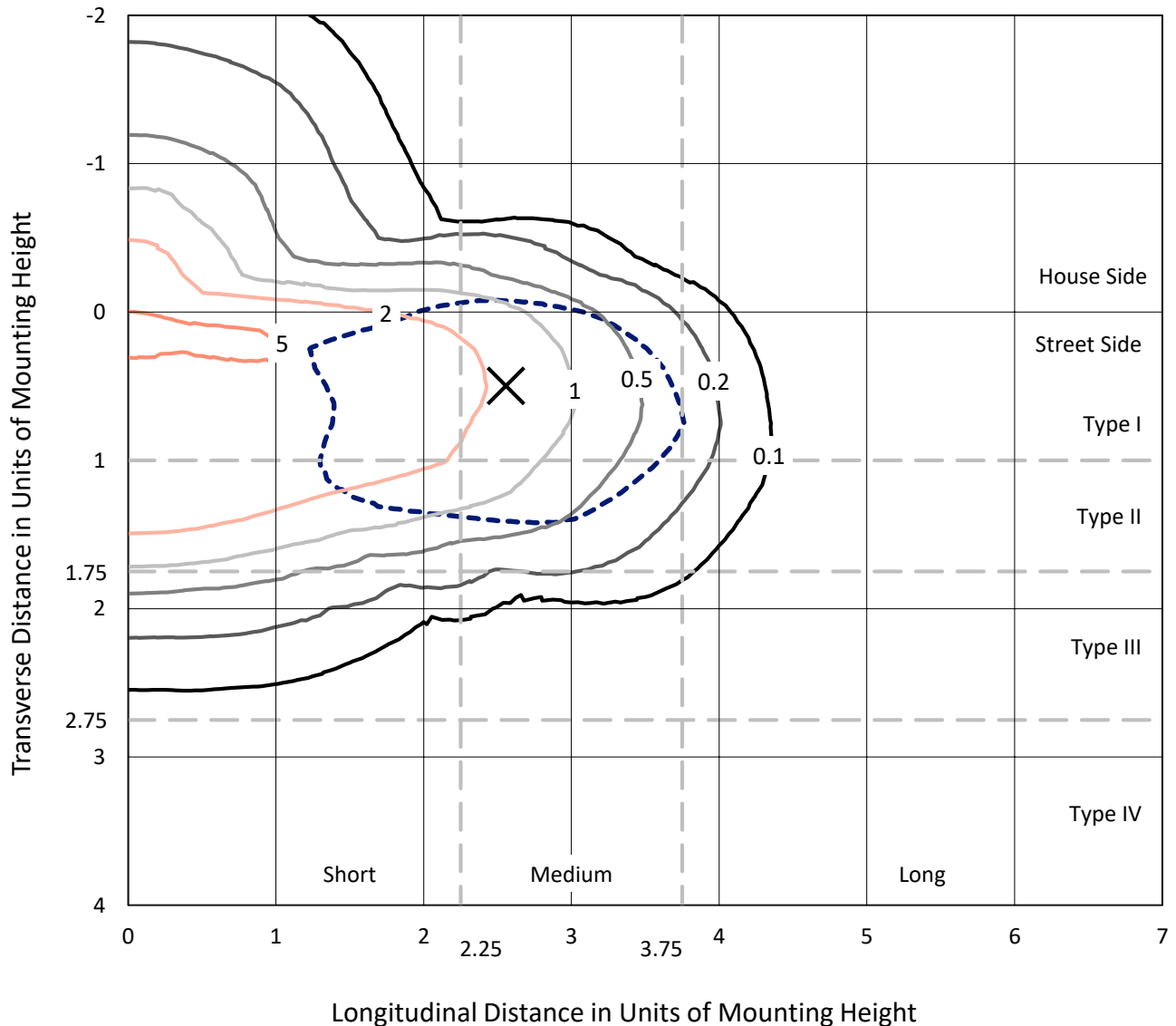
Input Watts (W): 193
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

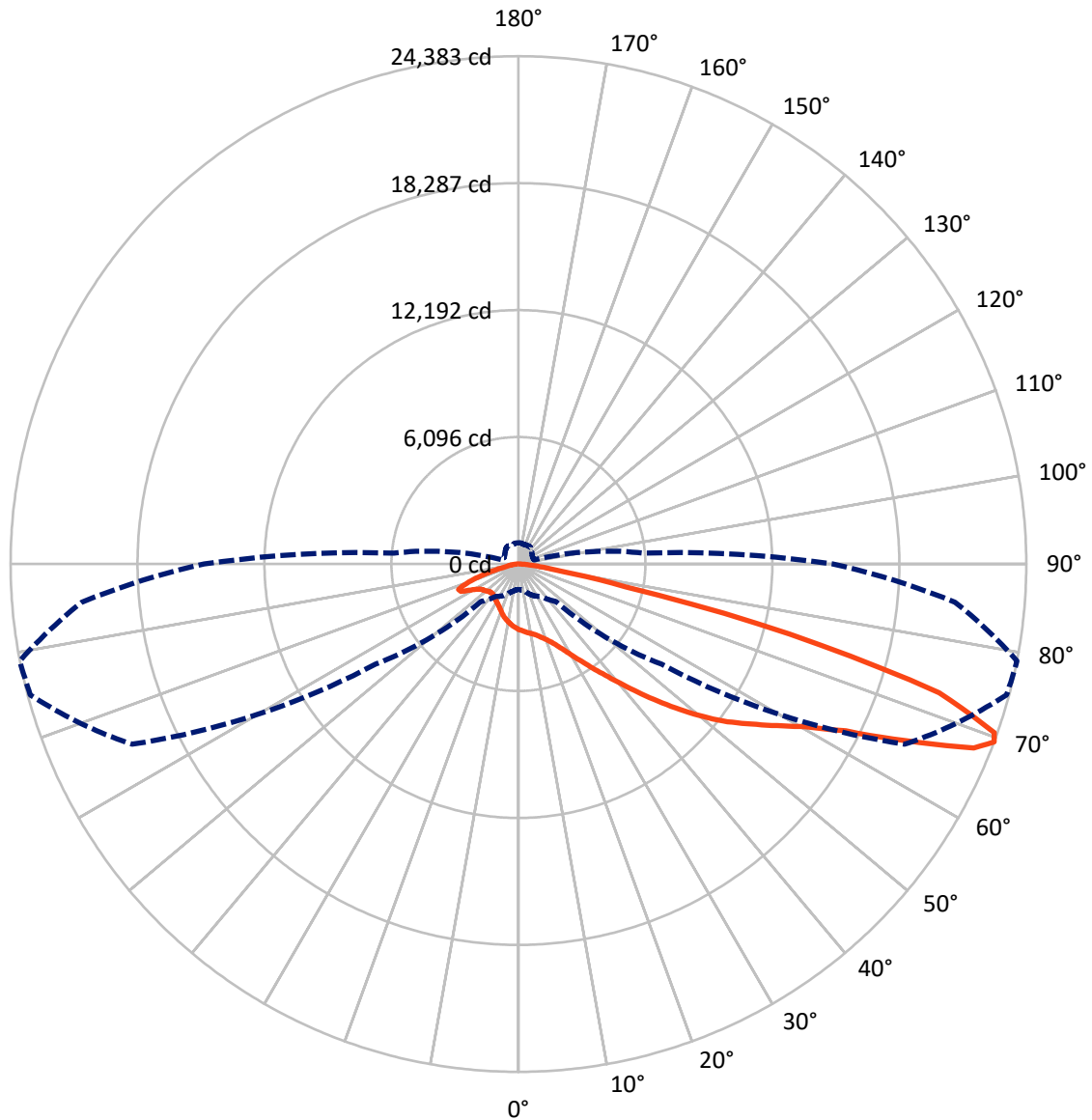
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.1 fc
 Type II - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4226.6	0.0	4226.6
	% Fixture	18.8	0.0	18.8
Street Side	Lumens	18241.4	0.0	18241.4
	% Fixture	81.2	0.0	81.2
Total	Lumens	22468.0	0.0	22468.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	292.3	1.3
10°-20°	838.0	3.7
20°-30°	1384.7	6.2
30°-40°	2242.3	10.0
40°-50°	3582.0	15.9
50°-60°	5129.8	22.8
60°-70°	5715.4	25.4
70°-80°	2859.3	12.7
80°-90°	424.3	1.9
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°	22468.0	100.0
0°-180°	22468.0	100.0



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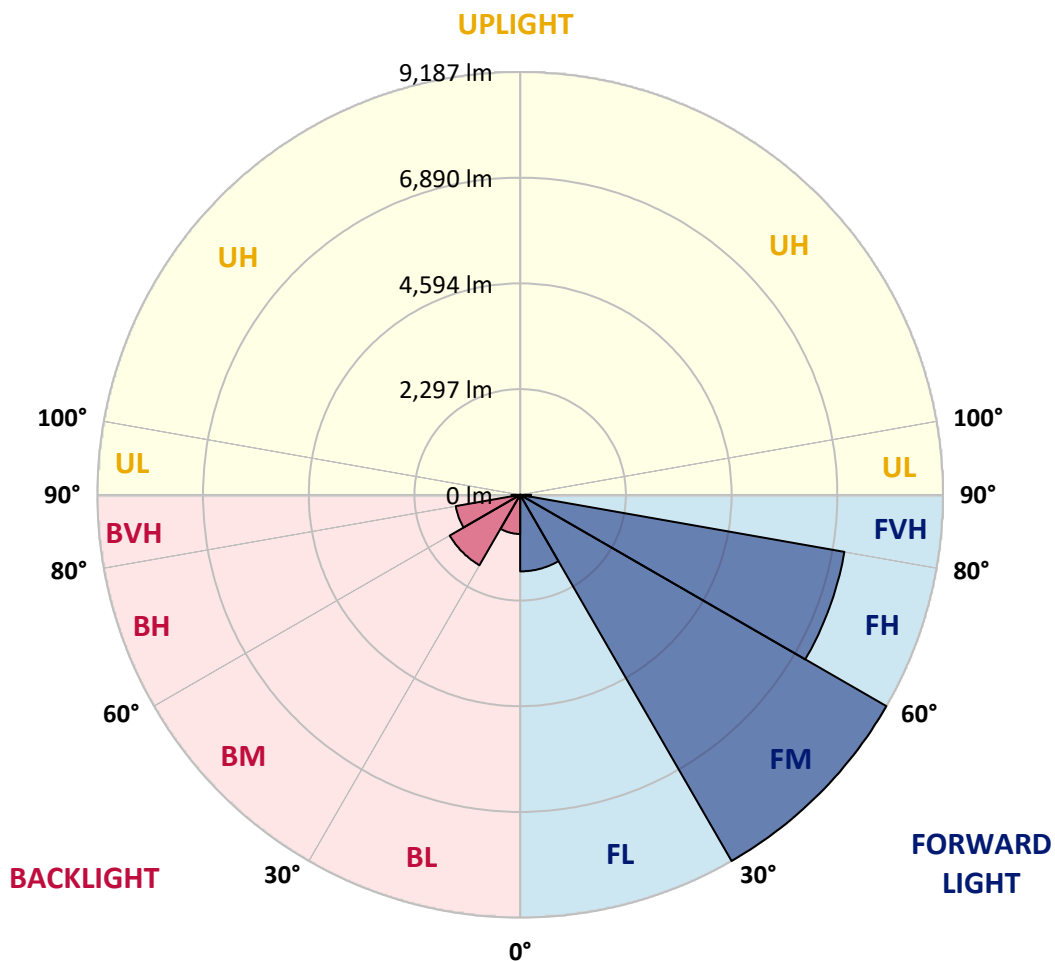
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1663.6	7.4			
FM (30°-60°)	9187.2	40.9			
FH (60°-80°)	7153.5	31.8			G3/7500
FVH (80°-90°)	237.1	1.1			G3/500
BL (0°-30°)	851.5	3.8	B2/1000		
BM (30°-60°)	1766.8	7.9	B2/2500		
BH (60°-80°)	1421.1	6.3	B3/2500		G3/2500
BVH (80°-90°)	187.2	0.8			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	3153.0	3153.0	3153.0	3153.0	3153.0	3153.0	3153.0	3153.0	3153.0	3153.0	3153.0
2.5°	3461.7	3454.3	3452.8	3430.8	3419.0	3394.0	3335.2	3274.9	3219.1	3189.8	3158.9
5°	3751.2	3736.5	3729.2	3692.4	3660.0	3604.3	3511.6	3416.1	3316.1	3264.6	3202.9
7.5°	3926.1	3927.7	3927.7	3898.3	3865.9	3798.3	3680.7	3549.9	3401.3	3333.8	3236.8
10°	3940.9	3942.3	3964.4	3971.7	3979.1	3943.8	3835.0	3670.3	3479.3	3391.1	3264.6
12.5°	3795.3	3805.6	3842.3	3895.3	3970.3	4008.5	3961.4	3799.7	3579.3	3471.9	3317.6
15°	3599.9	3610.2	3657.1	3738.0	3858.5	3986.5	4052.5	3948.2	3710.1	3583.7	3395.6
17.5°	3504.3	3516.1	3548.4	3613.1	3730.6	3902.6	4101.0	4106.9	3864.4	3718.8	3488.1
20°	3458.7	3467.6	3508.8	3561.7	3651.3	3815.9	4105.5	4274.6	4048.2	3879.1	3601.3
22.5°	3563.1	3566.0	3586.7	3616.1	3676.2	3802.7	4102.5	4448.0	4277.5	4080.5	3746.8
25°	3868.9	3849.7	3835.0	3798.3	3812.9	3902.6	4149.5	4633.1	4571.4	4345.1	3940.9
27.5°	4230.4	4227.5	4189.3	4104.0	4049.5	4106.9	4283.4	4840.4	4931.6	4681.6	4195.1
30°	4633.1	4634.7	4595.0	4490.5	4380.3	4386.2	4496.4	5080.0	5362.2	5087.4	4508.2
32.5°	5055.1	5081.5	5008.0	4903.7	4769.9	4727.3	4802.3	5369.6	5860.5	5566.5	4871.4
35°	5559.2	5563.7	5482.8	5329.8	5196.2	5128.5	5197.7	5731.2	6435.3	6129.6	5313.8
37.5°	6082.6	6085.5	6001.7	5806.1	5637.1	5593.1	5669.5	6170.8	7043.8	6770.5	5834.1
40°	6510.3	6541.2	6475.0	6291.2	6120.7	6094.3	6204.5	6696.9	7821.5	7528.9	6453.0
42.5°	6995.4	7030.7	6951.3	6760.2	6624.9	6616.0	6788.1	7296.7	8594.7	8406.5	7154.1
45°	7542.1	7592.1	7481.8	7267.3	7152.6	7346.7	7357.0	7961.0	9485.5	9388.4	7943.4
47.5°	8138.9	8180.1	8090.4	7859.7	7734.7	8015.5	7914.0	8679.9	10448.3	10440.9	8797.4
50°	8599.0	8644.6	8653.5	8552.0	8421.1	8456.4	8525.5	9435.4	11408.1	11522.7	9680.9
52.5°	8515.2	8559.4	8757.7	9023.8	9234.0	9143.0	9226.7	10238.0	12335.6	12578.2	10520.2
55°	7839.2	7862.7	8234.6	8866.6	9761.8	10196.8	10202.7	11111.1	13217.5	13557.1	11317.0
57.5°	6620.6	6623.6	7107.1	8039.0	9454.5	10880.4	11743.1	12207.6	14137.7	14639.0	12304.7
60°	4684.6	4696.4	5259.4	6478.0	8353.5	10798.1	13399.8	14170.1	15203.4	15854.6	13577.6
62.5°	2781.0	2807.5	3232.3	4209.9	6204.5	9739.7	14378.7	17661.1	16773.3	17637.6	15615.0
65°	1809.5	1831.5	2085.9	2576.8	3665.9	7086.4	14056.9	21041.9	19744.0	20442.2	18543.1
67.5°	1393.5	1411.1	1611.0	1908.0	2249.0	3830.6	11239.1	21750.5	23359.9	23577.5	21014.0
69°	1224.5	1239.1	1386.2	1671.3	1893.3	2535.6	8375.6	20464.3	24264.0	24383.1	21044.9
70°	1134.7	1146.5	1284.7	1531.7	1739.0	2024.0	6410.3	18970.8	23933.2	24237.5	20437.8
72.5°	934.8	945.2	1043.7	1233.2	1421.5	1442.0	2839.8	13852.6	20152.7	21125.8	17295.0
75°	780.5	786.4	851.1	989.3	1150.9	1148.0	1450.9	7846.5	12297.3	13457.1	10679.0
77.5°	651.1	655.5	698.1	783.5	908.4	904.0	1021.6	3386.7	5429.8	5238.8	3676.2
80°	574.7	577.7	599.8	621.8	701.1	696.7	757.0	1555.2	2209.3	2041.7	1390.6
82.5°	436.6	442.5	554.2	564.5	543.9	524.8	527.7	905.4	1131.8	1030.5	746.7
85°	246.9	248.4	355.7	415.9	473.3	355.7	342.5	467.4	558.6	489.5	326.3
87.5°	110.3	114.6	170.6	197.0	255.7	208.6	195.5	198.5	241.0	200.0	129.4
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°	3153.0	3153.0	3153.0	3153.0	3153.0	3153.0	3153.0	3153.0	3153.0	3153.0	3153.0
2.5°	3129.5	3104.5	3045.7	2985.4	2925.1	2886.9	2847.2	2810.4	2795.8	2794.3	2766.5
5°	3142.8	3083.9	2950.1	2803.1	2663.5	2554.7	2463.6	2404.8	2347.4	2337.2	2312.2
7.5°	3147.1	3051.5	2833.9	2598.8	2385.6	2235.8	2144.6	2104.9	2077.0	2069.7	2060.8
10°	3145.7	3010.4	2704.6	2382.7	2140.2	2027.0	1993.2	2002.0	2013.7	2019.6	2019.6
12.5°	3169.2	2991.3	2575.3	2179.9	1981.4	1927.2	1953.5	1999.1	2034.4	2049.0	2052.0
15°	3211.7	2979.5	2432.7	2003.5	1869.8	1883.0	1947.6	2013.7	2063.8	2085.9	2091.7
17.5°	3264.6	2963.3	2268.1	1858.0	1805.1	1850.7	1934.4	2018.2	2078.4	2106.4	2110.8
20°	3323.4	2939.8	2097.6	1749.2	1747.7	1805.1	1888.9	1982.9	2047.6	2078.4	2077.0
22.5°	3402.9	2917.8	1938.8	1669.8	1684.6	1737.4	1806.5	1891.9	1952.0	1980.0	1974.1
25°	3508.8	2897.2	1796.2	1599.2	1612.5	1647.7	1696.2	1760.9	1803.6	1818.3	1808.0
27.5°	3651.3	2881.0	1684.6	1534.5	1533.1	1549.3	1578.7	1614.0	1634.5	1630.1	1614.0
30°	3826.3	2864.9	1602.2	1477.3	1456.7	1455.3	1468.5	1488.9	1502.2	1475.8	1462.6
32.5°	4021.8	2836.9	1528.7	1427.3	1390.6	1377.3	1383.2	1411.1	1465.5	1439.1	1428.8
35°	4252.5	2804.5	1455.3	1373.0	1345.0	1320.0	1324.4	1384.7	1549.3	1530.1	1519.9
37.5°	4530.3	2775.1	1387.6	1314.1	1312.6	1281.7	1278.9	1350.9	1571.3	1530.1	1521.3
40°	4864.0	2769.2	1327.4	1249.4	1273.0	1261.2	1250.9	1295.0	1449.4	1365.5	1349.4
42.5°	5266.8	2795.8	1283.2	1187.6	1227.4	1255.3	1236.2	1246.5	1309.7	1234.7	1221.5
45°	5737.1	2867.8	1250.9	1133.3	1178.9	1250.9	1228.8	1220.0	1230.4	1189.2	1180.3
47.5°	6285.3	2995.7	1228.8	1087.7	1133.3	1239.1	1225.9	1208.3	1203.8	1180.3	1174.4
50°	6871.9	3167.7	1214.2	1046.6	1092.1	1218.6	1224.5	1199.4	1192.1	1181.8	1178.9
52.5°	7454.0	3354.4	1196.5	1011.3	1058.4	1193.5	1225.9	1190.6	1180.3	1174.4	1171.5
55°	8033.1	3548.4	1164.1	980.4	1033.4	1164.1	1224.5	1178.9	1167.1	1167.1	1167.1
57.5°	8784.2	3843.8	1121.5	955.5	1001.1	1125.9	1205.3	1165.7	1149.5	1150.9	1152.4
60°	9869.1	4339.2	1074.6	927.5	958.4	1081.8	1175.9	1142.1	1122.9	1128.8	1130.4
62.5°	11681.5	5205.0	1009.9	887.8	914.3	1034.8	1137.7	1109.7	1092.1	1102.4	1103.9
65°	14098.0	6253.0	924.6	837.9	868.7	981.9	1089.2	1071.7	1052.5	1077.4	1075.9
67.5°	15572.4	6560.3	835.0	784.9	824.6	926.1	1028.9	1021.6	1008.4	1052.5	1049.6
69°	15088.7	6004.7	783.5	751.1	793.8	887.8	990.8	987.8	977.6	1020.2	1017.2
70°	14337.6	5485.8	751.1	729.1	777.6	864.4	965.8	965.8	955.5	992.2	984.9
72.5°	11516.8	4068.7	676.2	673.2	721.7	799.7	898.1	905.4	899.6	912.9	905.4
75°	6761.6	2451.8	602.7	611.6	654.1	730.5	823.2	829.1	823.2	821.7	823.2
77.5°	2344.4	1099.4	532.1	545.3	582.2	660.0	740.9	752.6	743.7	733.4	736.4
80°	917.2	639.3	455.7	474.7	505.7	580.6	658.5	665.8	652.6	651.1	639.3
82.5°	551.2	389.5	354.2	385.1	423.4	504.2	568.9	566.0	555.6	615.9	539.4
85°	239.6	216.2	258.7	289.5	308.6	377.8	480.6	467.4	442.5	389.5	380.7
87.5°	97.0	111.7	142.6	172.0	185.2	243.9	329.3	317.5	321.9	264.6	263.1
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)