

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: P197220

Luminaire Tested: **NAV-AF-06-D-UNV-T2-8030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197220
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-T2-8030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 80 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 23245 lumens
Efficiency: N/A
Efficacy: 93.4 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

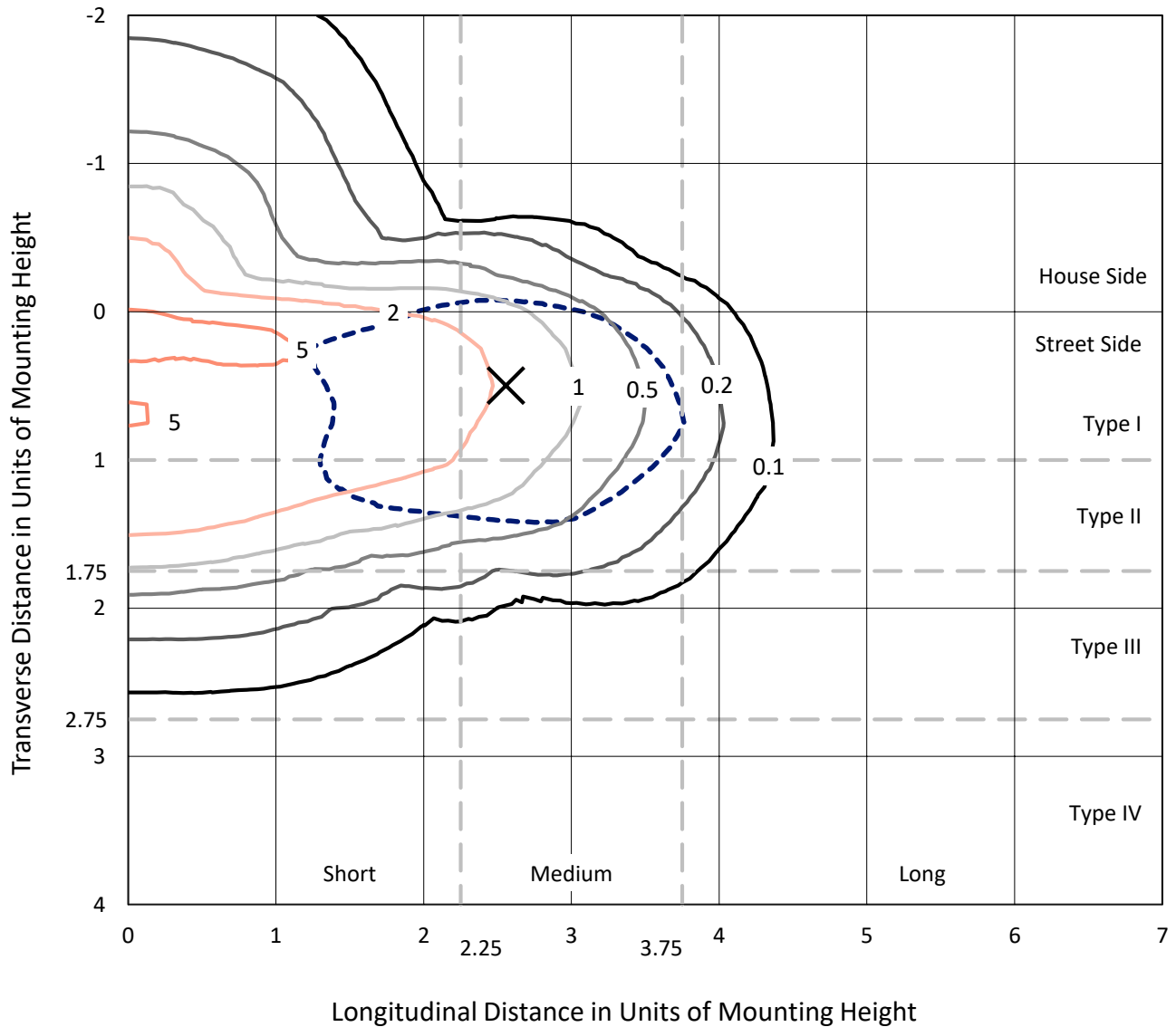
Input Watts (W): 249
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

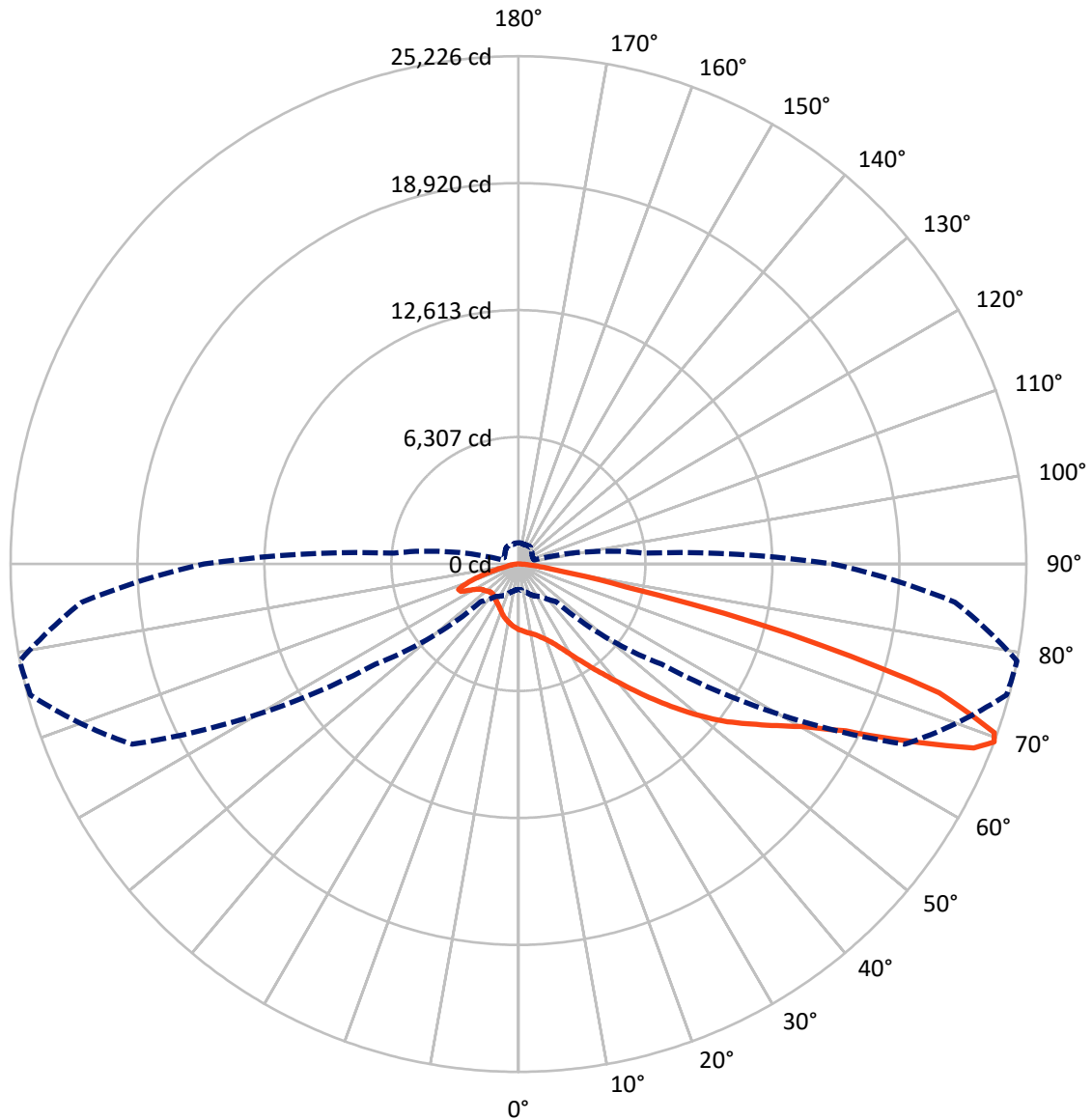
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.3 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	4372.8	0.0	4372.8
	% Fixture	18.8	0.0	18.8
Street Side	Lumens	18872.2	0.0	18872.2
	% Fixture	81.2	0.0	81.2
Total	Lumens	23245.0	0.0	23245.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	302.4	1.3
10°-20°	867.0	3.7
20°-30°	1432.6	6.2
30°-40°	2319.8	10.0
40°-50°	3705.9	15.9
50°-60°	5307.2	22.8
60°-70°	5913.0	25.4
70°-80°	2958.2	12.7
80°-90°	439.0	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°	23245.0	100.0
0°-180°	23245.0	100.0



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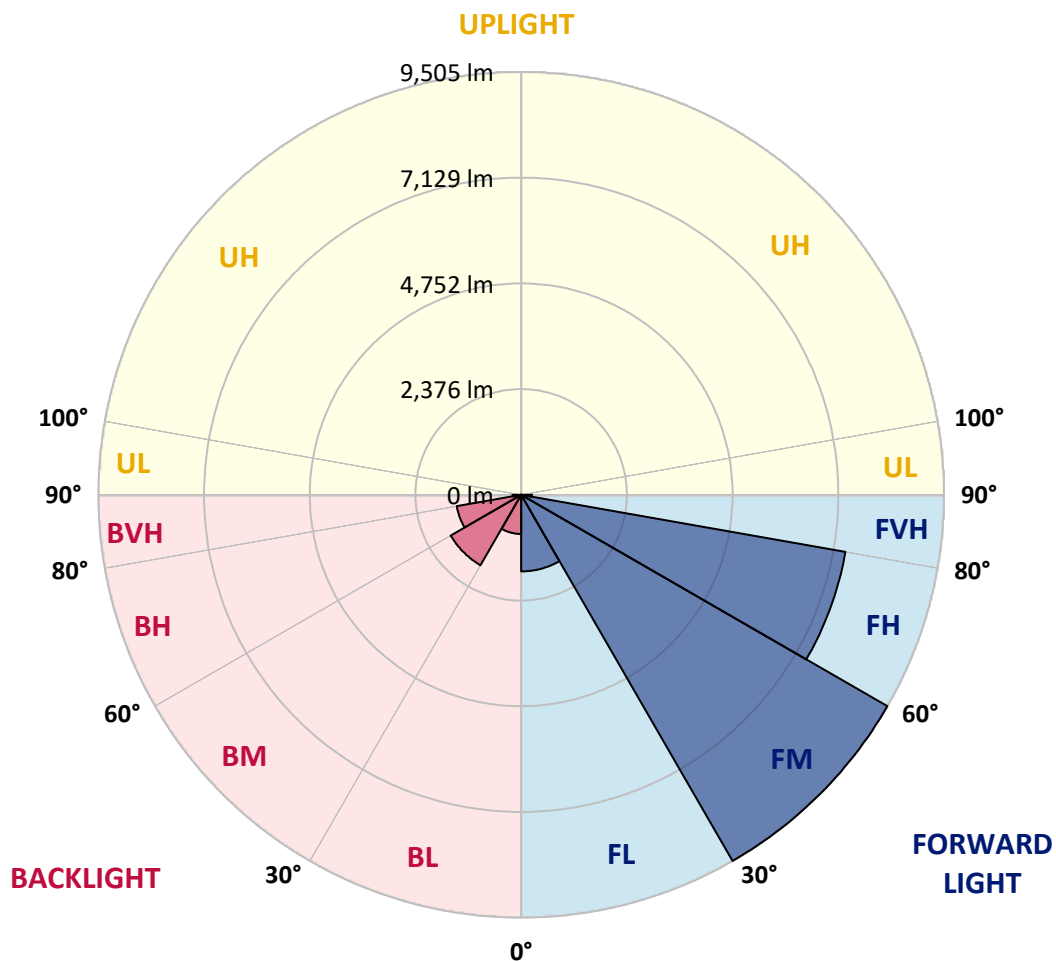
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1721.1	7.4			
FM (30°-60°)	9504.9	40.9			
FH (60°-80°)	7400.9	31.8			G3/7500
FVH (80°-90°)	245.3	1.1			G3/500
BL (0°-30°)	880.9	3.8	B2/1000		
BM (30°-60°)	1827.9	7.9	B2/2500		
BH (60°-80°)	1470.3	6.3	B3/2500		G3/2500
BVH (80°-90°)	193.7	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°	3262.0	3262.0	3262.0	3262.0	3262.0	3262.0	3262.0	3262.0	3262.0	3262.0	3262.0
2.5°	3581.4	3573.8	3572.2	3549.4	3537.3	3511.4	3450.6	3388.2	3330.4	3300.0	3268.1
5°	3881.0	3865.7	3858.1	3820.1	3786.7	3728.9	3633.1	3534.2	3430.8	3377.6	3313.7
7.5°	4061.9	4063.4	4063.4	4033.0	3999.6	3929.6	3808.0	3672.6	3519.0	3449.1	3348.7
10°	4077.1	4078.7	4101.5	4109.1	4116.7	4080.2	3967.6	3797.3	3599.6	3508.4	3377.6
12.5°	3926.6	3937.2	3975.2	4030.0	4107.5	4147.1	4098.4	3931.1	3703.0	3592.0	3432.3
15°	3724.3	3735.0	3783.6	3867.3	3992.0	4124.3	4192.7	4084.7	3838.4	3707.6	3512.9
17.5°	3625.5	3637.6	3671.1	3738.0	3859.7	4037.6	4242.9	4249.0	3998.1	3847.5	3608.7
20°	3578.3	3587.4	3630.0	3684.8	3777.5	3947.9	4247.5	4422.3	4188.1	4013.3	3725.8
22.5°	3686.3	3689.3	3710.6	3741.0	3803.4	3934.2	4244.4	4601.8	4425.4	4221.6	3876.4
25°	4002.6	3982.8	3967.6	3929.6	3944.8	4037.6	4293.1	4793.4	4729.5	4495.3	4077.1
27.5°	4376.7	4373.7	4334.1	4245.9	4189.7	4249.0	4431.5	5007.8	5102.1	4843.6	4340.2
30°	4793.4	4794.9	4753.9	4645.9	4531.8	4537.9	4652.0	5255.7	5547.7	5263.3	4664.1
32.5°	5229.9	5257.2	5181.2	5073.2	4934.8	4890.7	4968.3	5555.3	6063.2	5759.1	5039.8
35°	5751.5	5756.0	5672.4	5514.2	5375.9	5305.9	5377.4	5929.4	6657.8	6341.5	5497.5
37.5°	6292.9	6295.9	6209.2	6007.0	5832.1	5786.5	5865.5	6384.1	7287.4	7004.6	6035.9
40°	6735.4	6767.3	6698.9	6508.8	6332.4	6305.0	6419.1	6928.5	8091.9	7789.3	6676.1
42.5°	7237.2	7273.7	7191.6	6993.9	6854.0	6844.9	7022.8	7549.0	8891.8	8697.2	7401.5
45°	7803.0	7854.7	7740.6	7518.6	7400.0	7600.7	7611.4	8236.4	9813.4	9713.0	8218.1
47.5°	8420.4	8463.0	8370.2	8131.4	8002.2	8292.6	8187.7	8980.0	10809.5	10801.9	9101.7
50°	8896.4	8943.5	8952.7	8847.7	8712.4	8748.9	8820.3	9761.7	11802.5	11921.2	10015.7
52.5°	8809.7	8855.3	9060.6	9335.9	9553.3	9459.1	9545.7	10592.0	12762.1	13013.1	10884.0
55°	8110.2	8134.5	8519.2	9173.2	10099.3	10549.4	10555.5	11495.3	13674.6	14025.9	11708.3
57.5°	6849.5	6852.5	7352.8	8317.0	9781.5	11256.6	12149.3	12629.8	14626.6	15145.1	12730.2
60°	4846.6	4858.8	5441.2	6701.9	8642.4	11171.4	13863.2	14660.0	15729.1	16402.8	14047.2
62.5°	2877.3	2904.6	3344.1	4355.4	6419.1	10076.5	14876.0	18271.8	17353.3	18247.5	16154.9
65°	1872.0	1894.9	2157.9	2665.9	3792.7	7331.5	14542.9	21769.5	20426.7	21149.1	19184.3
67.5°	1441.7	1459.9	1666.7	1973.9	2326.7	3963.1	11627.7	22502.5	24167.8	24392.8	21740.6
69°	1266.8	1282.0	1434.1	1729.1	1958.7	2623.3	8665.2	21171.9	25103.0	25226.2	21772.6
70°	1174.0	1186.2	1329.1	1584.6	1799.0	2094.1	6632.0	19626.8	24760.8	25075.6	21144.5
72.5°	967.2	977.8	1079.7	1275.9	1470.6	1491.9	2938.1	14331.5	20849.5	21856.2	17893.1
75°	807.5	813.6	880.5	1023.5	1190.7	1187.7	1501.0	8117.8	12722.6	13922.5	11048.2
77.5°	673.7	678.3	722.4	810.6	939.8	935.3	1056.9	3503.8	5617.6	5420.0	3803.4
80°	594.6	597.7	620.5	643.3	725.4	720.8	783.2	1609.0	2285.7	2112.3	1438.6
82.5°	451.7	457.7	573.3	584.0	562.7	542.9	545.9	936.8	1171.0	1066.0	772.5
85°	255.5	257.0	368.0	430.4	489.7	368.0	354.3	483.6	577.9	506.4	337.6
87.5°	114.1	118.6	176.4	203.8	264.6	215.9	202.3	205.3	249.4	206.8	133.8
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°	3262.0	3262.0	3262.0	3262.0	3262.0	3262.0	3262.0	3262.0	3262.0	3262.0	3262.0
2.5°	3237.7	3211.8	3151.0	3088.6	3026.3	2986.8	2945.7	2907.7	2892.5	2890.9	2862.1
5°	3251.4	3190.5	3052.1	2900.1	2755.6	2643.1	2548.8	2487.9	2428.6	2418.0	2392.1
7.5°	3255.9	3157.1	2932.0	2688.7	2468.2	2313.1	2218.8	2177.7	2148.8	2141.2	2132.1
10°	3254.4	3114.5	2798.2	2465.1	2214.2	2097.1	2062.1	2071.3	2083.4	2089.5	2089.5
12.5°	3278.7	3094.7	2664.4	2255.3	2050.0	1993.7	2021.1	2068.2	2104.7	2119.9	2123.0
15°	3322.8	3082.6	2516.8	2072.8	1934.4	1948.1	2015.0	2083.4	2135.1	2157.9	2164.0
17.5°	3377.6	3065.8	2346.5	1922.2	1867.5	1914.6	2001.3	2088.0	2150.3	2179.2	2183.8
20°	3438.4	3041.5	2170.1	1809.7	1808.2	1867.5	1954.2	2051.5	2118.4	2150.3	2148.8
22.5°	3520.5	3018.7	2005.9	1727.6	1742.8	1797.5	1869.0	1957.2	2019.6	2048.4	2042.4
25°	3630.0	2997.4	1858.4	1654.6	1668.3	1704.8	1754.9	1821.9	1866.0	1881.2	1870.5
27.5°	3777.5	2980.7	1742.8	1587.7	1586.1	1602.9	1633.3	1669.8	1691.1	1686.5	1669.8
30°	3958.5	2963.9	1657.6	1528.4	1507.1	1505.5	1519.2	1540.5	1554.2	1526.8	1513.1
32.5°	4160.8	2935.0	1581.6	1476.6	1438.6	1424.9	1431.0	1459.9	1516.2	1488.8	1478.2
35°	4399.5	2901.6	1505.5	1420.4	1391.5	1365.6	1370.2	1432.5	1602.9	1583.1	1572.5
37.5°	4687.0	2871.2	1435.6	1359.6	1358.0	1326.1	1323.1	1397.6	1625.7	1583.1	1574.0
40°	5032.2	2865.1	1373.2	1292.6	1317.0	1304.8	1294.2	1339.8	1499.5	1412.8	1396.0
42.5°	5448.8	2892.5	1327.6	1228.8	1269.8	1298.7	1279.0	1289.6	1355.0	1277.4	1263.7
45°	5935.5	2967.0	1294.2	1172.5	1219.6	1294.2	1271.3	1262.2	1272.9	1230.3	1221.2
47.5°	6502.7	3099.3	1271.3	1125.4	1172.5	1282.0	1268.3	1250.1	1245.5	1221.2	1215.1
50°	7109.5	3277.2	1256.1	1082.8	1129.9	1260.7	1266.8	1240.9	1233.3	1222.7	1219.6
52.5°	7711.7	3470.4	1237.9	1046.3	1094.9	1234.8	1268.3	1231.8	1221.2	1215.1	1212.0
55°	8310.9	3671.1	1204.4	1014.3	1069.1	1204.4	1266.8	1219.6	1207.5	1207.5	1207.5
57.5°	9088.0	3976.8	1160.3	988.5	1035.6	1164.9	1247.0	1206.0	1189.2	1190.7	1192.3
60°	10210.3	4489.3	1111.7	959.6	991.5	1119.3	1216.6	1181.6	1161.9	1167.9	1169.5
62.5°	12085.4	5385.0	1044.8	918.5	945.9	1070.6	1177.1	1148.2	1129.9	1140.6	1142.1
65°	14585.5	6469.3	956.6	866.8	898.8	1015.9	1126.9	1108.6	1088.9	1114.7	1113.2
67.5°	16110.8	6787.1	863.8	812.1	853.1	958.1	1064.5	1056.9	1043.2	1088.9	1085.8
69°	15610.5	6212.3	810.6	777.1	821.2	918.5	1025.0	1021.9	1011.3	1055.4	1052.4
70°	14833.4	5675.4	777.1	754.3	804.5	894.2	999.1	999.1	988.5	1026.5	1018.9
72.5°	11915.1	4209.4	699.5	696.5	746.7	827.3	929.2	936.8	930.7	944.4	936.8
75°	6995.4	2536.6	623.5	632.6	676.7	755.8	851.6	857.7	851.6	850.1	851.6
77.5°	2425.6	1137.5	550.5	564.2	602.2	682.8	766.5	778.6	769.5	758.9	761.9
80°	948.9	661.5	471.4	491.2	523.1	600.7	681.3	688.9	675.2	673.7	661.5
82.5°	570.3	403.0	366.5	398.4	438.0	521.6	588.5	585.5	574.8	637.2	558.1
85°	247.9	223.6	267.7	299.6	319.4	390.8	497.3	483.6	457.7	403.0	393.9
87.5°	100.4	115.6	147.5	177.9	191.6	252.4	340.6	328.5	333.0	273.7	272.2
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)