

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: P197214

Luminaire Tested: **NAV-AF-06-D-UNV-T2-8030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197214
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-T2-8030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 80 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: 18956 lumens
Efficiency: N/A
Efficacy: 98.2 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

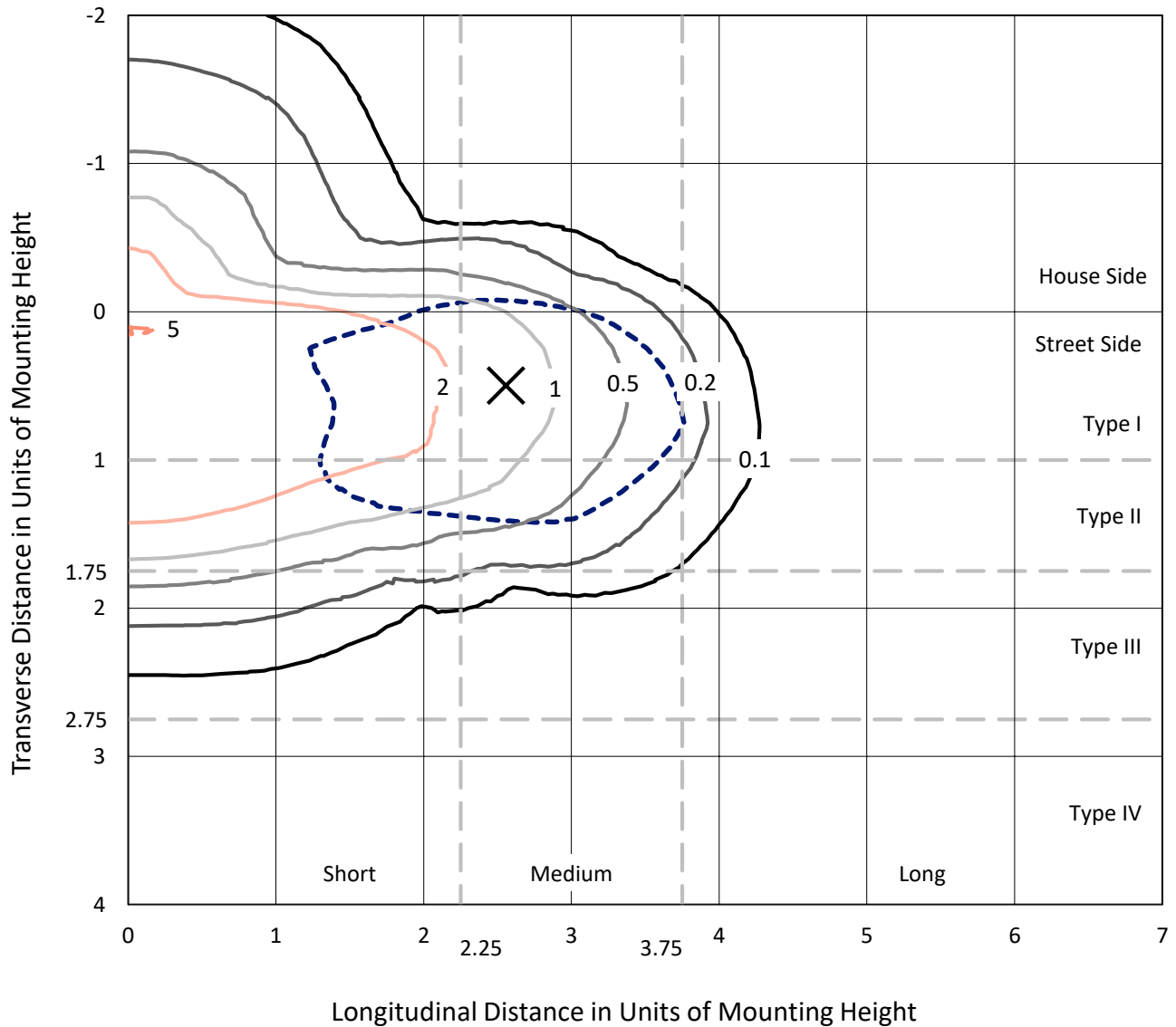
Input Watts (W): 193
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

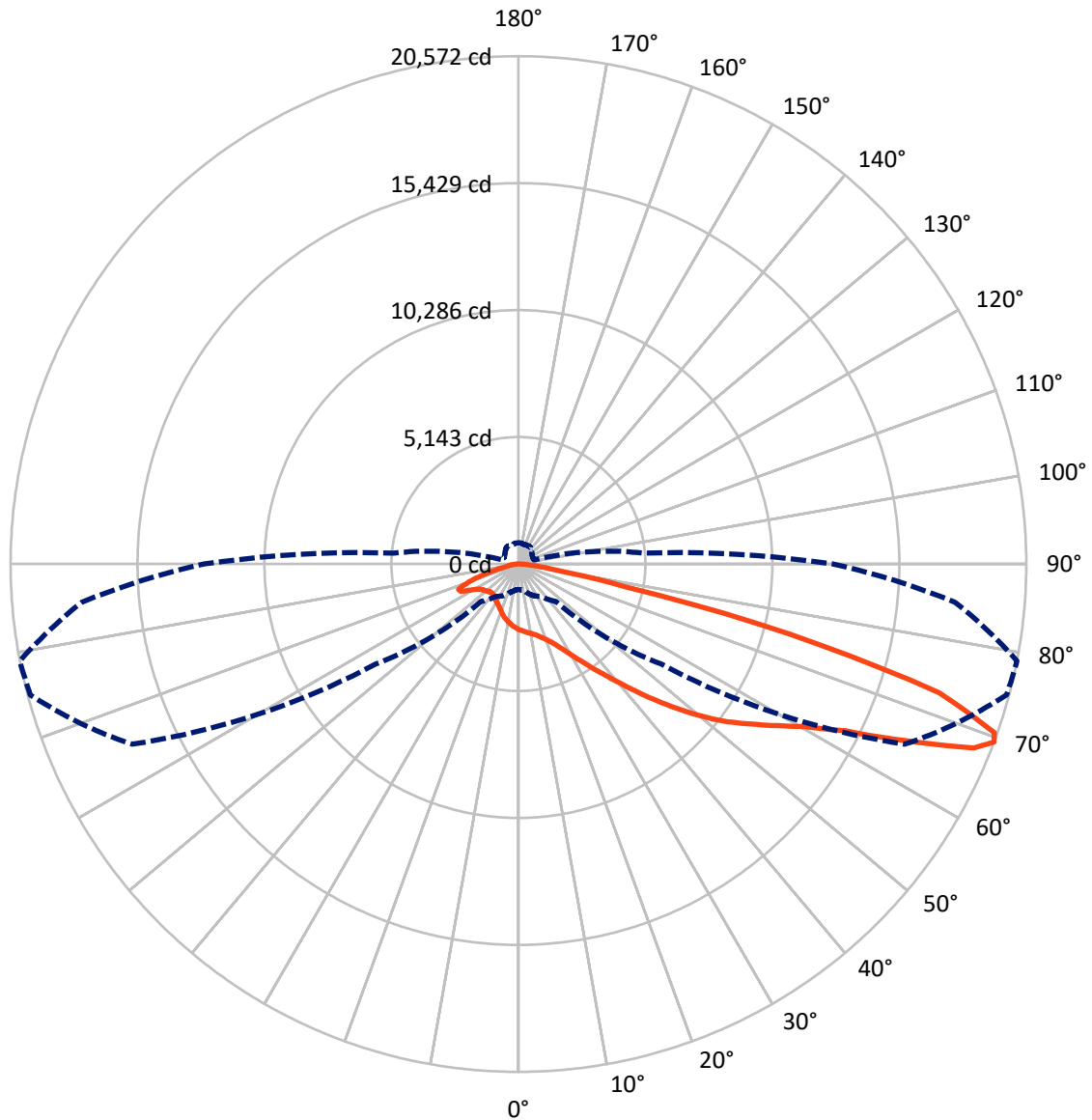
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.1 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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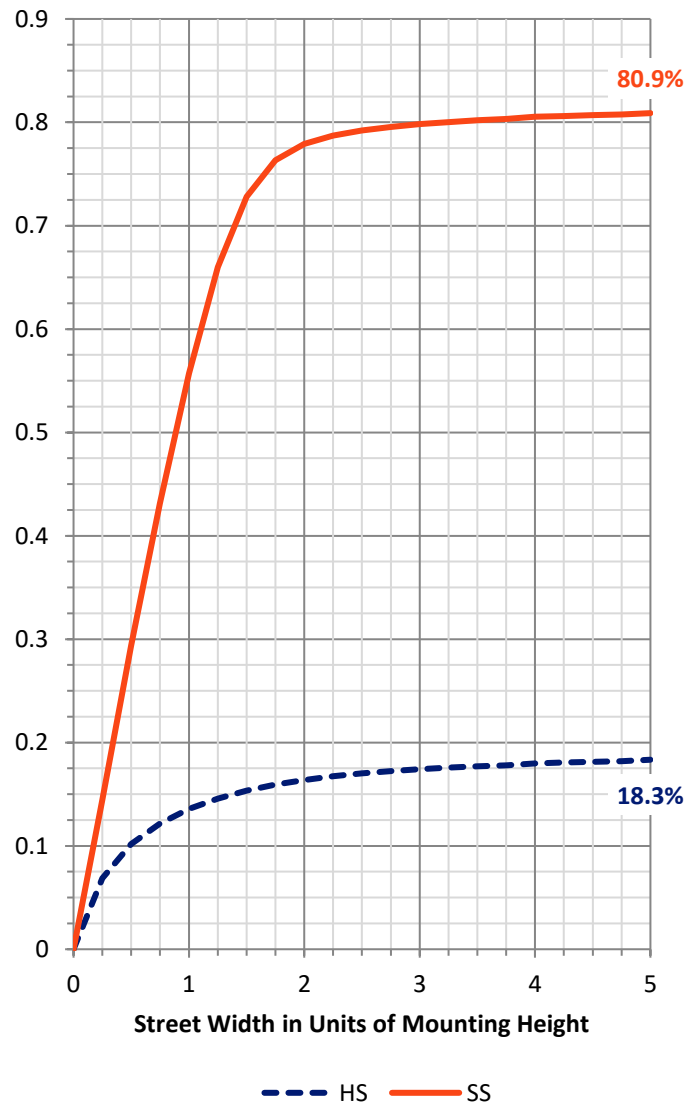
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3566.0	0.0	3566.0
	% Fixture	18.8	0.0	18.8
Street Side	Lumens	15390.0	0.0	15390.0
	% Fixture	81.2	0.0	81.2
Total	Lumens	18956.0	0.0	18956.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	246.6	1.3
10°-20°	707.0	3.7
20°-30°	1168.3	6.2
30°-40°	1891.8	10.0
40°-50°	3022.1	15.9
50°-60°	4327.9	22.8
60°-70°	4822.0	25.4
70°-80°	2412.4	12.7
80°-90°	358.0	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°	18956.0	100.0
0°-180°	18956.0	100.0

Coefficient of Utilization



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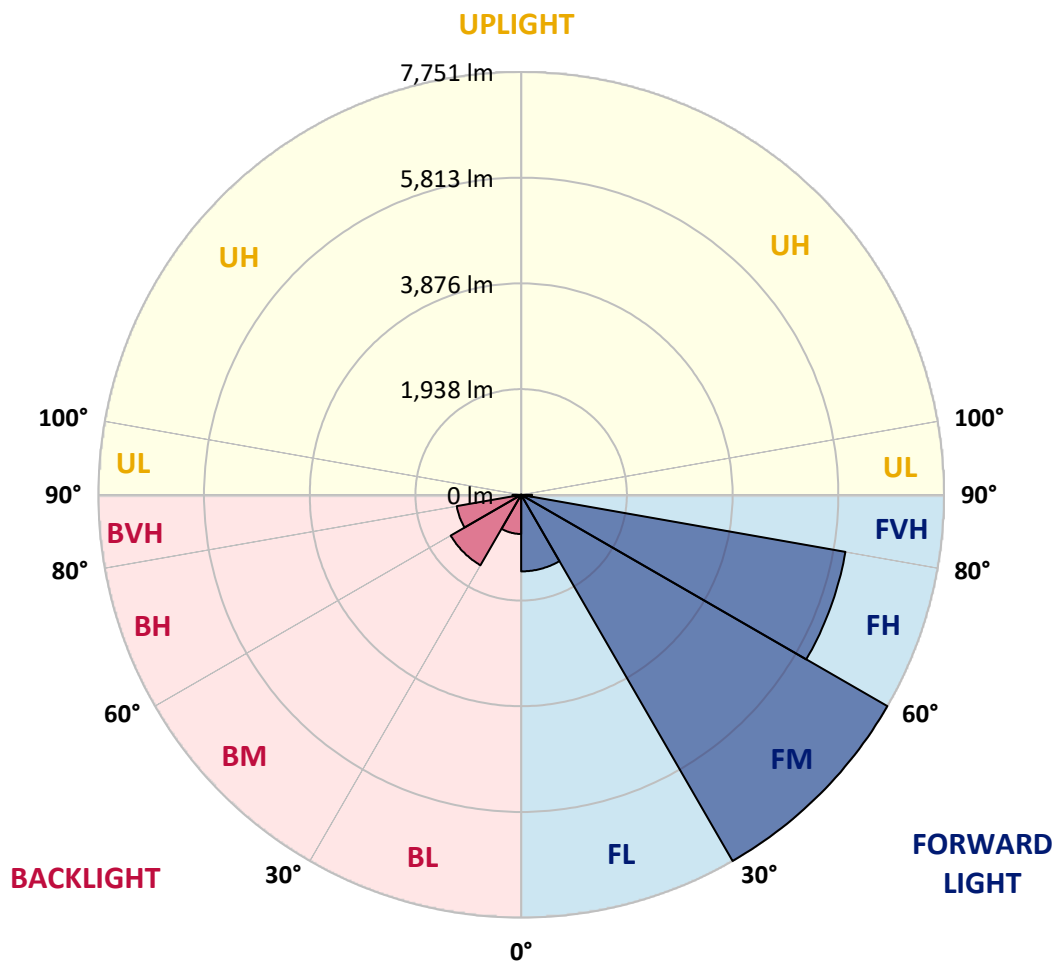
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1403.5	7.4			
FM (30°-60°)	7751.1	40.9			
FH (60°-80°)	6035.3	31.8			G3/7500
FVH (80°-90°)	200.0	1.1			G2/225
BL (0°-30°)	718.4	3.8	B2/1000		
BM (30°-60°)	1490.6	7.9	B2/2500		
BH (60°-80°)	1199.0	6.3	B3/2500		G3/2500
BVH (80°-90°)	158.0	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°	2660.1	2660.1	2660.1	2660.1	2660.1	2660.1	2660.1	2660.1	2660.1	2660.1	2660.1
2.5°	2920.6	2914.4	2913.1	2894.5	2884.6	2863.5	2813.9	2763.1	2715.9	2691.1	2665.1
5°	3164.9	3152.5	3146.3	3115.3	3088.0	3040.9	2962.7	2882.1	2797.8	2754.4	2702.3
7.5°	3312.4	3313.7	3313.7	3288.9	3261.6	3204.6	3105.3	2995.0	2869.7	2812.7	2730.8
10°	3324.8	3326.1	3344.7	3350.9	3357.1	3327.3	3235.6	3096.7	2935.4	2861.0	2754.4
12.5°	3202.1	3210.8	3241.8	3286.4	3349.7	3381.9	3342.2	3205.8	3019.8	2929.2	2799.0
15°	3037.1	3045.8	3085.5	3153.7	3255.4	3363.3	3419.1	3331.0	3130.1	3023.5	2864.8
17.5°	2956.5	2966.4	2993.7	3048.3	3147.5	3292.6	3460.0	3465.0	3260.4	3137.6	2942.9
20°	2918.1	2925.5	2960.2	3004.9	3080.5	3219.4	3463.7	3606.4	3415.4	3272.8	3038.4
22.5°	3006.1	3008.6	3026.0	3050.8	3101.6	3208.3	3461.3	3752.7	3608.8	3442.7	3161.1
25°	3264.1	3248.0	3235.6	3204.6	3217.0	3292.6	3500.9	3909.0	3856.9	3665.9	3324.8
27.5°	3569.2	3566.7	3534.4	3462.5	3416.6	3465.0	3613.8	4083.8	4160.7	3949.9	3539.4
30°	3909.0	3910.2	3876.7	3788.7	3695.7	3700.6	3793.6	4286.0	4524.1	4292.2	3803.5
32.5°	4264.9	4287.2	4225.2	4137.1	4024.3	3988.3	4051.6	4530.3	4944.5	4696.5	4109.9
35°	4690.3	4694.0	4625.8	4496.8	4383.9	4326.9	4385.2	4835.4	5429.4	5171.4	4483.1
37.5°	5131.7	5134.2	5063.5	4898.6	4756.0	4718.8	4783.3	5206.2	5942.8	5712.1	4922.2
40°	5492.6	5518.7	5462.9	5307.9	5164.0	5141.7	5234.7	5650.1	6598.8	6352.1	5444.3
42.5°	5901.9	5931.6	5864.7	5703.5	5589.4	5581.9	5727.0	6156.1	7251.2	7092.4	6035.8
45°	6363.2	6405.4	6312.4	6131.3	6034.6	6198.3	6207.0	6716.7	8002.7	7920.9	6701.8
47.5°	6866.7	6901.4	6825.8	6631.1	6525.7	6762.5	6677.0	7323.1	8815.0	8808.8	7422.3
50°	7254.9	7293.3	7300.8	7215.2	7104.8	7134.6	7192.9	7960.5	9624.8	9721.6	8167.6
52.5°	7184.2	7221.4	7388.8	7613.3	7790.6	7713.7	7784.4	8637.7	10407.4	10612.0	8875.8
55°	6613.7	6633.6	6947.3	7480.6	8235.8	8602.9	8607.9	9374.3	11151.4	11437.9	9547.9
57.5°	5585.6	5588.1	5996.1	6782.4	7976.7	9179.6	9907.6	10299.5	11927.8	12350.7	10381.3
60°	3952.4	3962.3	4437.3	5465.3	7047.8	9110.2	11305.2	11955.1	12826.9	13376.3	11455.3
62.5°	2346.4	2368.7	2727.1	3551.8	5234.7	8217.2	12131.2	14900.4	14151.4	14880.6	13174.1
65°	1526.6	1545.2	1759.8	2174.0	3092.9	5978.8	11859.6	17752.8	16657.7	17246.8	15644.5
67.5°	1175.7	1190.5	1359.2	1609.7	1897.4	3231.8	9482.2	18350.5	19708.5	19892.0	17729.2
69°	1033.0	1045.4	1169.5	1410.1	1597.3	2139.3	7066.4	17265.4	20471.2	20571.6	17755.3
70°	957.4	967.3	1083.9	1292.2	1467.1	1707.7	5408.3	16005.4	20192.2	20448.9	17243.1
72.5°	788.7	797.4	880.5	1040.5	1199.2	1216.6	2396.0	11687.2	17002.5	17823.5	14591.6
75°	658.5	663.5	718.0	834.6	971.0	968.6	1224.0	6619.9	10375.1	11353.6	9009.7
77.5°	549.4	553.1	589.1	661.0	766.4	762.7	861.9	2857.3	4581.1	4419.9	3101.6
80°	484.9	487.4	506.0	524.6	591.6	587.8	638.7	1312.1	1863.9	1722.6	1173.2
82.5°	368.3	373.3	467.5	476.2	458.9	442.7	445.2	763.9	954.9	869.3	630.0
85°	208.3	209.6	300.1	351.0	399.3	300.1	289.0	394.4	471.3	413.0	275.3
87.5°	93.0	96.7	143.9	166.2	215.8	176.1	164.9	167.4	203.4	168.7	109.1
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°	2660.1	2660.1	2660.1	2660.1	2660.1	2660.1	2660.1	2660.1	2660.1	2660.1	2660.1
2.5°	2640.3	2619.2	2569.6	2518.7	2467.9	2435.7	2402.2	2371.2	2358.8	2357.5	2334.0
5°	2651.4	2601.8	2489.0	2365.0	2247.2	2155.4	2078.5	2028.9	1980.5	1971.8	1950.8
7.5°	2655.2	2574.6	2391.0	2192.6	2012.8	1886.3	1809.4	1775.9	1752.3	1746.1	1738.7
10°	2653.9	2539.8	2281.9	2010.3	1805.7	1710.2	1681.6	1689.1	1699.0	1704.0	1704.0
12.5°	2673.8	2523.7	2172.7	1839.1	1671.7	1625.8	1648.2	1686.6	1716.4	1728.8	1731.3
15°	2709.7	2513.8	2052.5	1690.3	1577.5	1588.6	1643.2	1699.0	1741.2	1759.8	1764.7
17.5°	2754.4	2500.1	1913.6	1567.6	1522.9	1561.4	1632.0	1702.7	1753.6	1777.1	1780.9
20°	2804.0	2480.3	1769.7	1475.8	1474.5	1522.9	1593.6	1673.0	1727.5	1753.6	1752.3
22.5°	2871.0	2461.7	1635.8	1408.8	1421.2	1465.9	1524.1	1596.1	1646.9	1670.5	1665.5
25°	2960.2	2444.3	1515.5	1349.3	1360.4	1390.2	1431.1	1485.7	1521.7	1534.1	1525.4
27.5°	3080.5	2430.7	1421.2	1294.7	1293.5	1307.1	1331.9	1361.7	1379.0	1375.3	1361.7
30°	3228.1	2417.1	1351.8	1246.4	1229.0	1227.8	1238.9	1256.3	1267.4	1245.1	1234.0
32.5°	3393.1	2393.5	1289.8	1204.2	1173.2	1162.0	1167.0	1190.5	1236.4	1214.1	1205.4
35°	3587.8	2366.2	1227.8	1158.3	1134.7	1113.7	1117.4	1168.2	1307.1	1291.0	1282.3
37.5°	3822.1	2341.4	1170.7	1108.7	1107.5	1081.4	1078.9	1139.7	1325.7	1291.0	1283.6
40°	4103.7	2336.4	1119.9	1054.1	1074.0	1064.1	1055.4	1092.6	1222.8	1152.1	1138.5
42.5°	4443.5	2358.8	1082.7	1002.0	1035.5	1059.1	1043.0	1051.6	1105.0	1041.7	1030.6
45°	4840.3	2419.5	1055.4	956.2	994.6	1055.4	1036.8	1029.3	1038.0	1003.3	995.8
47.5°	5302.9	2527.4	1036.8	917.7	956.2	1045.4	1034.3	1019.4	1015.7	995.8	990.9
50°	5797.7	2672.5	1024.4	883.0	921.4	1028.1	1033.0	1012.0	1005.8	997.1	994.6
52.5°	6288.8	2830.0	1009.5	853.2	892.9	1007.0	1034.3	1004.5	995.8	990.9	988.4
55°	6777.4	2993.7	982.2	827.2	871.8	982.2	1033.0	994.6	984.7	984.7	984.7
57.5°	7411.1	3243.0	946.2	806.1	844.5	950.0	1016.9	983.4	969.8	971.0	972.3
60°	8326.4	3660.9	906.6	782.5	808.6	912.8	992.1	963.6	947.5	952.4	953.7
62.5°	9855.5	4391.4	852.0	749.1	771.4	873.1	959.9	936.3	921.4	930.1	931.4
65°	11894.3	5275.6	780.1	706.9	732.9	828.4	919.0	904.1	887.9	909.0	907.8
67.5°	13138.2	5534.8	704.4	662.2	695.7	781.3	868.1	861.9	850.7	887.9	885.5
69°	12730.2	5066.0	661.0	633.7	669.7	749.1	835.9	833.4	824.7	860.7	858.2
70°	12096.4	4628.2	633.7	615.1	656.0	729.2	814.8	814.8	806.1	837.1	830.9
72.5°	9716.6	3432.7	570.5	568.0	608.9	674.6	757.7	763.9	759.0	770.1	763.9
75°	5704.7	2068.6	508.5	515.9	551.9	616.4	694.5	699.4	694.5	693.2	694.5
77.5°	1978.0	927.6	448.9	460.1	491.1	556.8	625.0	635.0	627.5	618.8	621.3
80°	773.9	539.5	384.4	400.6	426.6	489.9	555.6	561.8	550.6	549.4	539.5
82.5°	465.1	328.6	298.9	324.9	357.2	425.4	479.9	477.5	468.8	519.6	455.1
85°	202.1	182.3	218.3	244.3	260.4	318.7	405.5	394.4	373.3	328.6	321.2
87.5°	81.9	94.3	120.3	145.1	156.3	205.9	277.8	267.9	271.6	223.2	222.0
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)