

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: P197213

Luminaire Tested: **NAV-AF-05-D-UNV-T2-8030-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197213  
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-05-D-UNV-T2-8030-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 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: 15824 lumens  
Efficiency: N/A  
Efficacy: 97.7 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

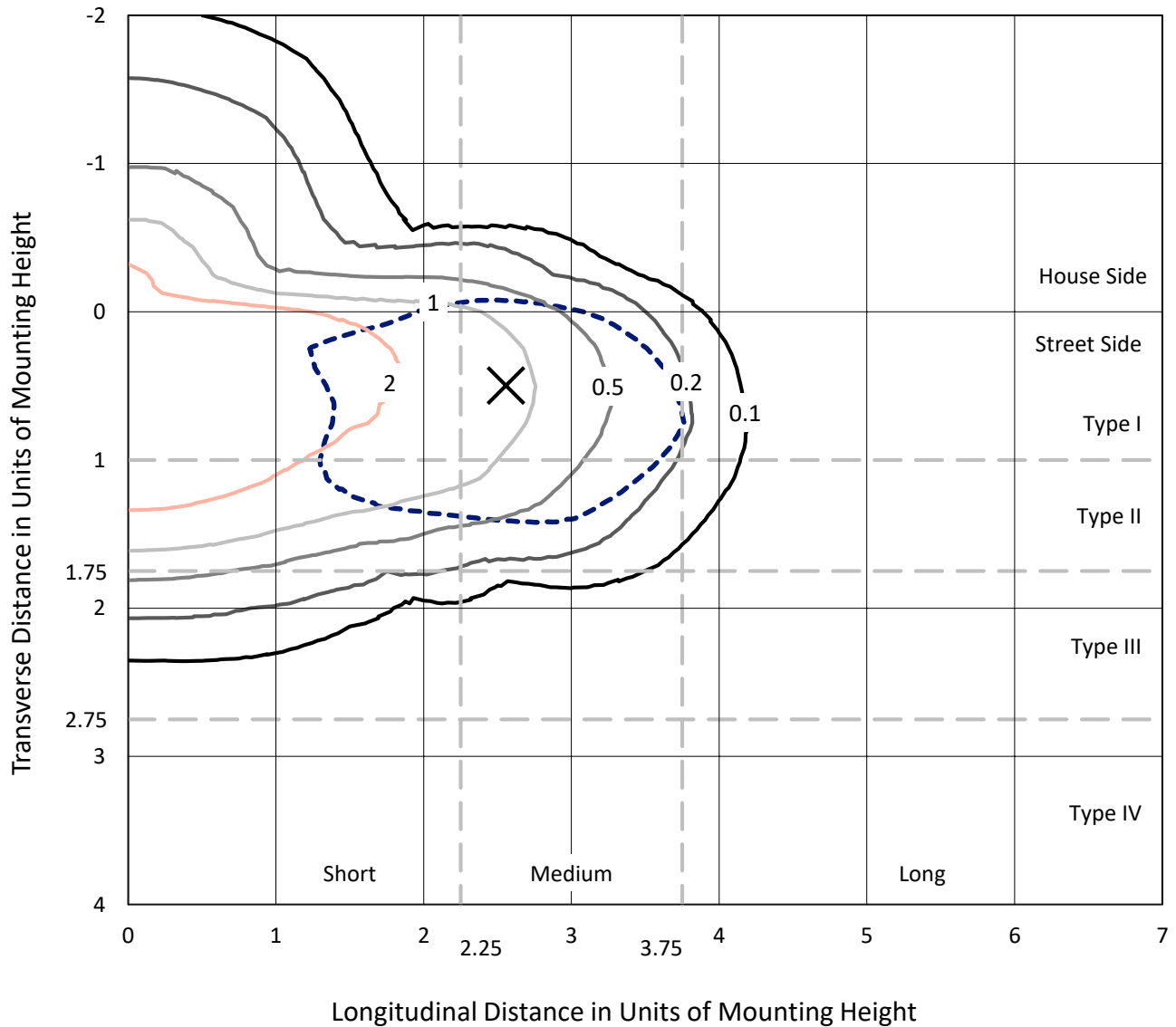
Input Watts (W): 162  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

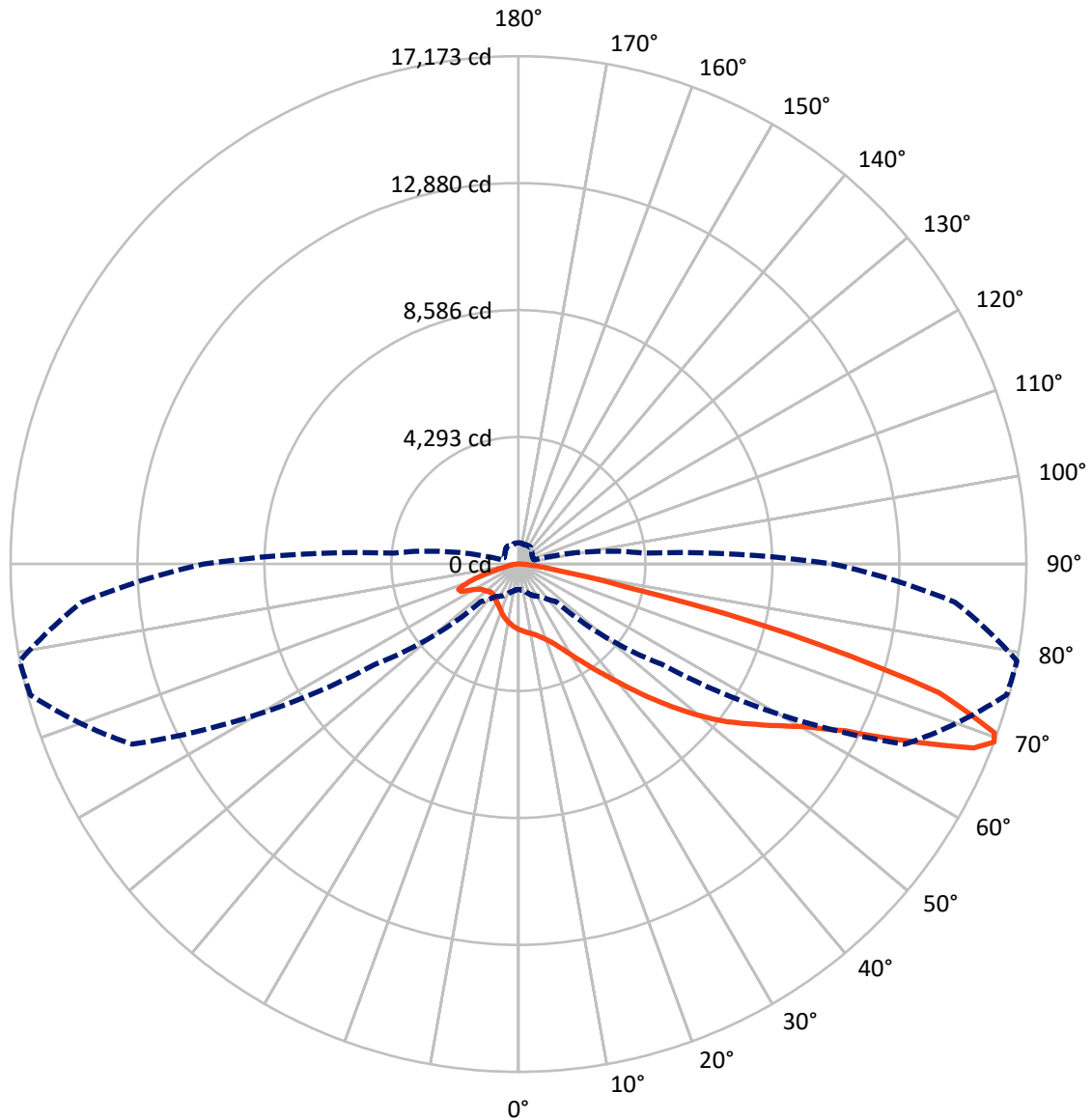
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.3 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
<b>House Side</b>	Lumens	2976.8	0.0	2976.8
	% Fixture	18.8	0.0	18.8
<b>Street Side</b>	Lumens	12847.2	0.0	12847.2
	% Fixture	81.2	0.0	81.2
<b>Total</b>	Lumens	15824.0	0.0	15824.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	205.9	1.3
10°-20°	590.2	3.7
20°-30°	975.3	6.2
30°-40°	1579.2	10.0
40°-50°	2522.8	15.9
50°-60°	3612.9	22.8
60°-70°	4025.3	25.4
70°-80°	2013.8	12.7
80°-90°	298.8	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°	15824.0	100.0
0°-180°	15824.0	100.0



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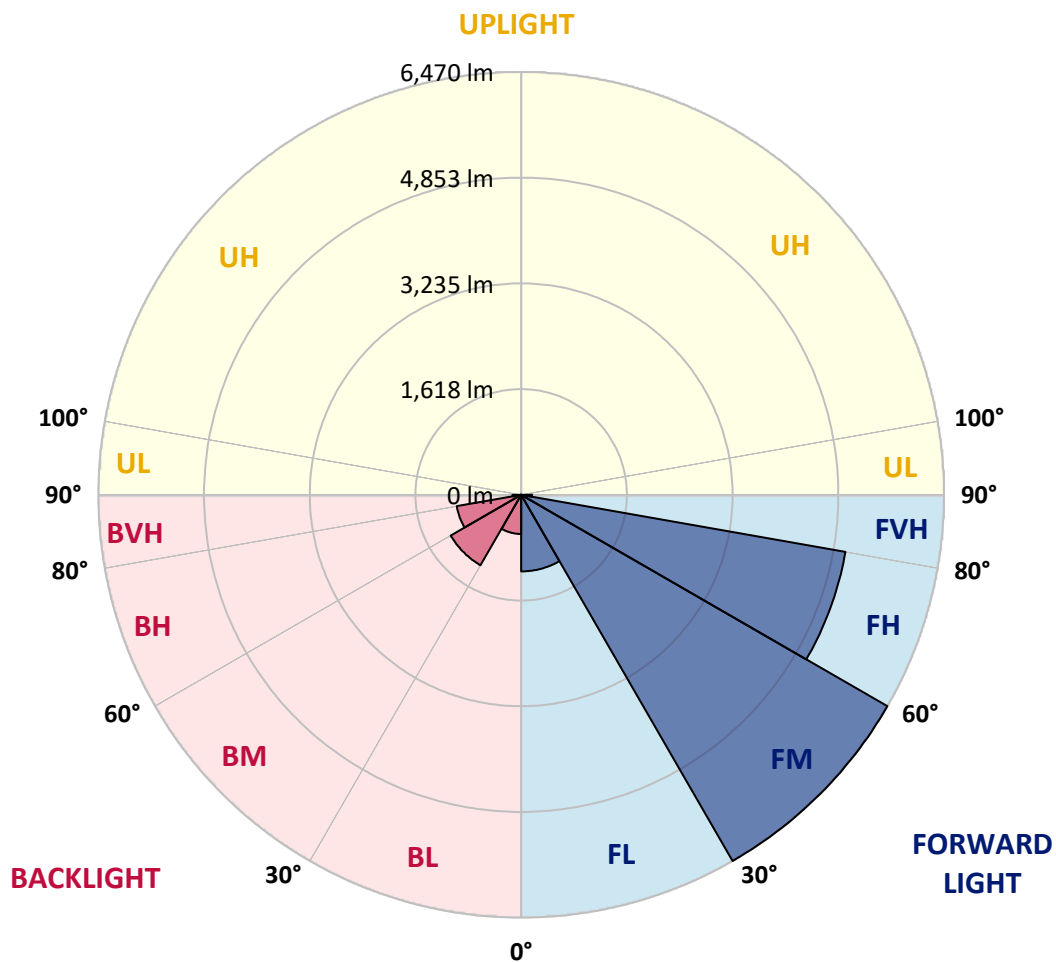
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1171.6	7.4			
FM (30°-60°)	6470.5	40.9			
FH (60°-80°)	5038.1	31.8			G3/7500
FVH (80°-90°)	167.0	1.1			G2/225
BL (0°-30°)	599.7	3.8	B2/1000		
BM (30°-60°)	1244.4	7.9	B2/2500		
BH (60°-80°)	1000.9	6.3	B3/2500		G3/2500
BVH (80°-90°)	131.9	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°	2220.6	2220.6	2220.6	2220.6	2220.6	2220.6	2220.6	2220.6	2220.6	2220.6	2220.6
2.5°	2438.0	2432.8	2431.8	2416.3	2408.0	2390.4	2349.0	2306.5	2267.2	2246.5	2224.7
5°	2642.0	2631.6	2626.4	2600.5	2577.8	2538.4	2473.2	2405.9	2335.5	2299.3	2255.8
7.5°	2765.1	2766.2	2766.2	2745.5	2722.7	2675.1	2592.3	2500.1	2395.6	2347.9	2279.6
10°	2775.5	2776.5	2792.1	2797.2	2802.4	2777.6	2701.0	2585.0	2450.4	2388.3	2299.3
12.5°	2673.0	2680.3	2706.1	2743.4	2796.2	2823.1	2790.0	2676.1	2520.8	2445.3	2336.6
15°	2535.3	2542.6	2575.7	2632.6	2717.5	2807.6	2854.2	2780.7	2613.0	2523.9	2391.4
17.5°	2468.0	2476.3	2499.1	2544.6	2627.5	2748.6	2888.3	2892.5	2721.7	2619.2	2456.6
20°	2435.9	2442.2	2471.1	2508.4	2571.6	2687.5	2891.4	3010.5	2851.1	2732.0	2536.4
22.5°	2509.4	2511.5	2526.0	2546.7	2589.2	2678.2	2889.4	3132.7	3012.6	2873.8	2638.8
25°	2724.8	2711.3	2701.0	2675.1	2685.4	2748.6	2922.5	3263.1	3219.6	3060.2	2775.5
27.5°	2979.4	2977.4	2950.5	2890.4	2852.1	2892.5	3016.7	3409.1	3473.3	3297.3	2954.6
30°	3263.1	3264.1	3236.2	3162.7	3085.0	3089.2	3166.8	3577.8	3776.6	3583.0	3175.1
32.5°	3560.2	3578.9	3527.1	3453.6	3359.4	3329.4	3382.2	3781.8	4127.5	3920.5	3430.8
35°	3915.3	3918.4	3861.5	3753.8	3659.6	3612.0	3660.6	4036.4	4532.3	4317.0	3742.4
37.5°	4283.9	4285.9	4226.9	4089.2	3970.2	3939.1	3993.0	4346.0	4960.9	4768.4	4108.9
40°	4585.1	4606.9	4560.3	4430.9	4310.8	4292.1	4369.8	4716.6	5508.6	5302.5	4544.7
42.5°	4926.7	4951.6	4895.7	4761.1	4665.9	4659.7	4780.8	5139.0	6053.1	5920.6	5038.6
45°	5311.9	5347.1	5269.4	5118.3	5037.5	5174.2	5181.4	5606.9	6680.5	6612.1	5594.5
47.5°	5732.2	5761.2	5698.0	5535.5	5447.5	5645.2	5573.8	6113.1	7358.5	7353.4	6196.0
50°	6056.2	6088.3	6094.5	6023.1	5930.9	5955.8	6004.4	6645.3	8034.6	8115.3	6818.1
52.5°	5997.2	6028.2	6168.0	6355.4	6503.4	6439.2	6498.3	7210.5	8687.8	8858.6	7409.3
55°	5521.0	5537.5	5799.5	6244.6	6875.1	7181.5	7185.7	7825.4	9309.0	9548.1	7970.4
57.5°	4662.8	4664.8	5005.4	5661.8	6658.7	7662.9	8270.6	8597.7	9957.0	10310.0	8666.1
60°	3299.3	3307.6	3704.1	4562.3	5883.3	7604.9	9437.3	9979.8	10707.6	11166.2	9562.6
62.5°	1958.7	1977.3	2276.5	2965.0	4369.8	6859.6	10126.8	12438.5	11813.2	12421.9	10997.4
65°	1274.4	1289.9	1469.0	1814.8	2581.9	4990.9	9900.1	14819.6	13905.5	14397.2	13059.7
67.5°	981.4	993.8	1134.6	1343.8	1583.9	2697.9	7915.5	15318.6	16452.2	16605.4	14799.9
69°	862.4	872.7	976.2	1177.1	1333.4	1785.8	5898.8	14412.7	17088.8	17172.7	14821.6
70°	799.2	807.5	904.8	1078.7	1224.7	1425.5	4514.7	13360.9	16855.9	17070.2	14394.1
72.5°	658.4	665.7	735.0	868.6	1001.1	1015.6	2000.1	9756.2	14193.3	14878.6	12180.7
75°	549.7	553.9	599.4	696.7	810.6	808.5	1021.8	5526.2	8660.9	9477.7	7521.1
77.5°	458.6	461.7	491.7	551.8	639.8	636.7	719.5	2385.2	3824.2	3689.6	2589.2
80°	404.8	406.9	422.4	437.9	493.8	490.7	533.2	1095.3	1556.0	1438.0	979.3
82.5°	307.5	311.6	390.3	397.5	383.0	369.6	371.7	637.7	797.1	725.7	525.9
85°	173.9	175.0	250.5	293.0	333.3	250.5	241.2	329.2	393.4	344.7	229.8
87.5°	77.6	80.7	120.1	138.7	180.1	147.0	137.7	139.8	169.8	140.8	91.1
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°	2220.6	2220.6	2220.6	2220.6	2220.6	2220.6	2220.6	2220.6	2220.6	2220.6	2220.6
2.5°	2204.0	2186.4	2145.0	2102.6	2060.1	2033.2	2005.3	1979.4	1969.0	1968.0	1948.3
5°	2213.4	2172.0	2077.7	1974.2	1875.9	1799.3	1735.1	1693.7	1653.3	1646.0	1628.4
7.5°	2216.5	2149.2	1996.0	1830.3	1680.2	1574.6	1510.4	1482.5	1462.8	1457.6	1451.4
10°	2215.4	2120.2	1904.9	1678.1	1507.3	1427.6	1403.8	1410.0	1418.3	1422.4	1422.4
12.5°	2232.0	2106.7	1813.8	1535.3	1395.5	1357.2	1375.8	1407.9	1432.8	1443.1	1445.2
15°	2262.0	2098.4	1713.3	1411.0	1316.8	1326.2	1371.7	1418.3	1453.5	1469.0	1473.2
17.5°	2299.3	2087.1	1597.4	1308.6	1271.3	1303.4	1362.4	1421.4	1463.8	1483.5	1486.6
20°	2340.7	2070.5	1477.3	1231.9	1230.9	1271.3	1330.3	1396.5	1442.1	1463.8	1462.8
22.5°	2396.6	2055.0	1365.5	1176.0	1186.4	1223.7	1272.3	1332.4	1374.8	1394.5	1390.3
25°	2471.1	2040.5	1265.1	1126.3	1135.7	1160.5	1194.7	1240.2	1270.2	1280.6	1273.4
27.5°	2571.6	2029.1	1186.4	1080.8	1079.8	1091.2	1111.9	1136.7	1151.2	1148.1	1136.7
30°	2694.8	2017.7	1128.4	1040.4	1025.9	1024.9	1034.2	1048.7	1058.0	1039.4	1030.1
32.5°	2832.4	1998.0	1076.7	1005.2	979.3	970.0	974.2	993.8	1032.1	1013.5	1006.3
35°	2995.0	1975.3	1024.9	966.9	947.3	929.7	932.8	975.2	1091.2	1077.7	1070.4
37.5°	3190.6	1954.5	977.3	925.5	924.5	902.7	900.7	951.4	1106.7	1077.7	1071.5
40°	3425.6	1950.4	934.8	880.0	896.5	888.2	881.0	912.1	1020.8	961.7	950.4
42.5°	3709.3	1969.0	903.8	836.5	864.4	884.1	870.6	877.9	922.4	869.6	860.3
45°	4040.6	2019.8	881.0	798.2	830.3	881.0	865.5	859.3	866.5	837.5	831.3
47.5°	4426.7	2109.8	865.5	766.1	798.2	872.7	863.4	851.0	847.9	831.3	827.2
50°	4839.8	2231.0	855.1	737.1	769.2	858.2	862.4	844.8	839.6	832.3	830.3
52.5°	5249.7	2362.4	842.7	712.3	745.4	840.6	863.4	838.6	831.3	827.2	825.1
55°	5657.6	2499.1	819.9	690.5	727.8	819.9	862.4	830.3	822.0	822.0	822.0
57.5°	6186.6	2707.2	789.9	672.9	705.0	793.0	848.9	821.0	809.6	810.6	811.6
60°	6950.7	3056.1	756.8	653.2	675.0	761.9	828.2	804.4	790.9	795.1	796.1
62.5°	8227.1	3665.8	711.2	625.3	643.9	728.8	801.3	781.6	769.2	776.4	777.5
65°	9929.1	4403.9	651.2	590.1	611.8	691.5	767.1	754.7	741.2	758.8	757.8
67.5°	10967.4	4620.3	588.0	552.8	580.8	652.2	724.7	719.5	710.2	741.2	739.2
69°	10626.8	4229.0	551.8	529.0	559.0	625.3	697.8	695.7	688.4	718.5	716.4
70°	10097.8	3863.5	529.0	513.5	547.6	608.7	680.2	680.2	672.9	698.8	693.6
72.5°	8111.2	2865.6	476.2	474.1	508.3	563.2	632.5	637.7	633.6	642.9	637.7
75°	4762.1	1726.8	424.5	430.7	460.7	514.5	579.7	583.9	579.7	578.7	579.7
77.5°	1651.2	774.4	374.8	384.1	410.0	464.8	521.8	530.0	523.8	516.6	518.7
80°	646.0	450.3	320.9	334.4	356.1	408.9	463.8	469.0	459.7	458.6	450.3
82.5°	388.2	274.3	249.5	271.2	298.2	355.1	400.6	398.6	391.3	433.8	379.9
85°	168.7	152.2	182.2	203.9	217.4	266.1	338.5	329.2	311.6	274.3	268.1
87.5°	68.3	78.7	100.4	121.1	130.4	171.9	231.9	223.6	226.7	186.3	185.3
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)