

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: P270378

Luminaire Tested: **NAV-AF-02-D-UNV-T2-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270378
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-02-D-UNV-T2-7027-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6824.3 lumens
Efficiency: N/A
Efficacy: 103.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B1 - U0 - G2

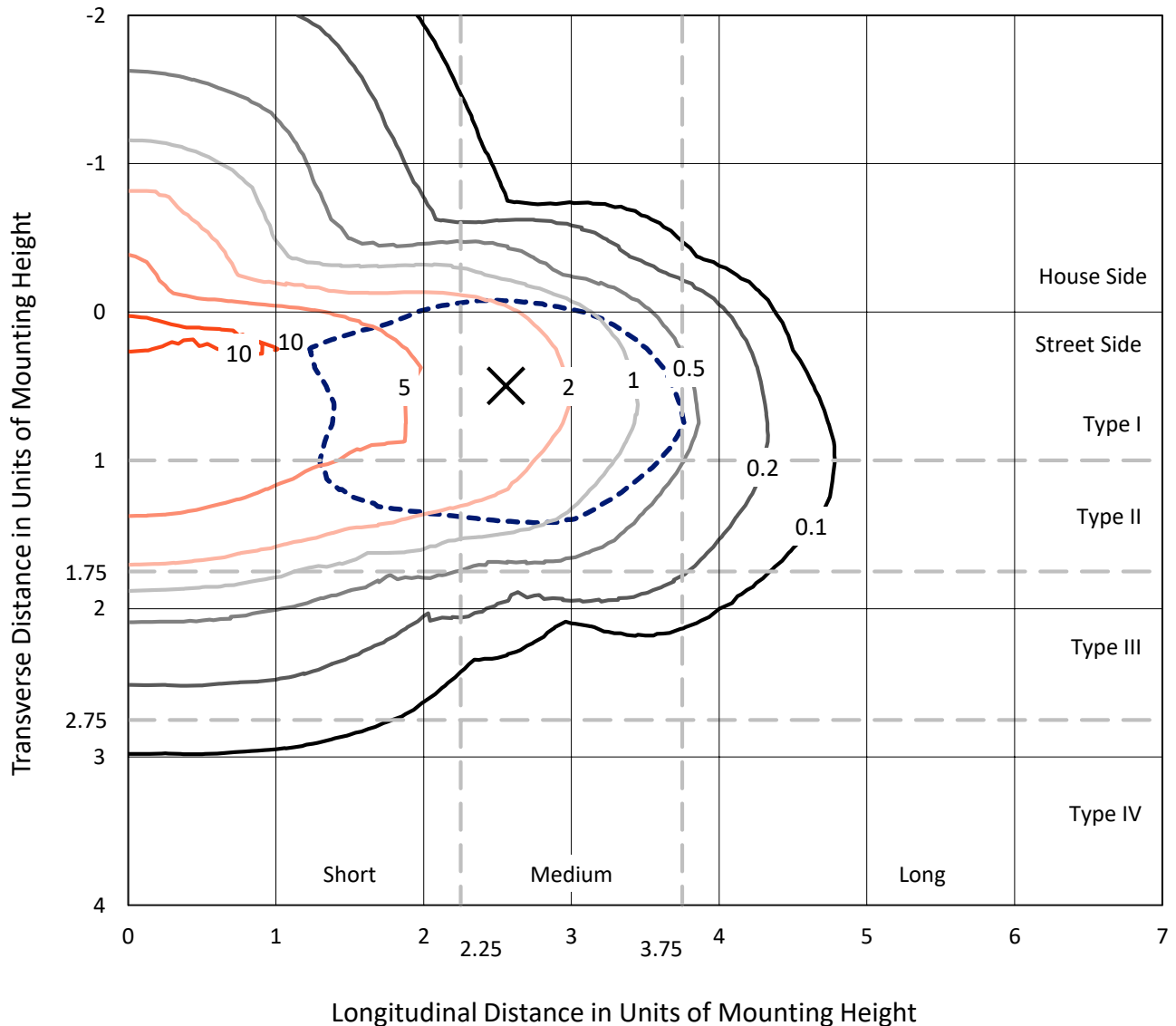
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

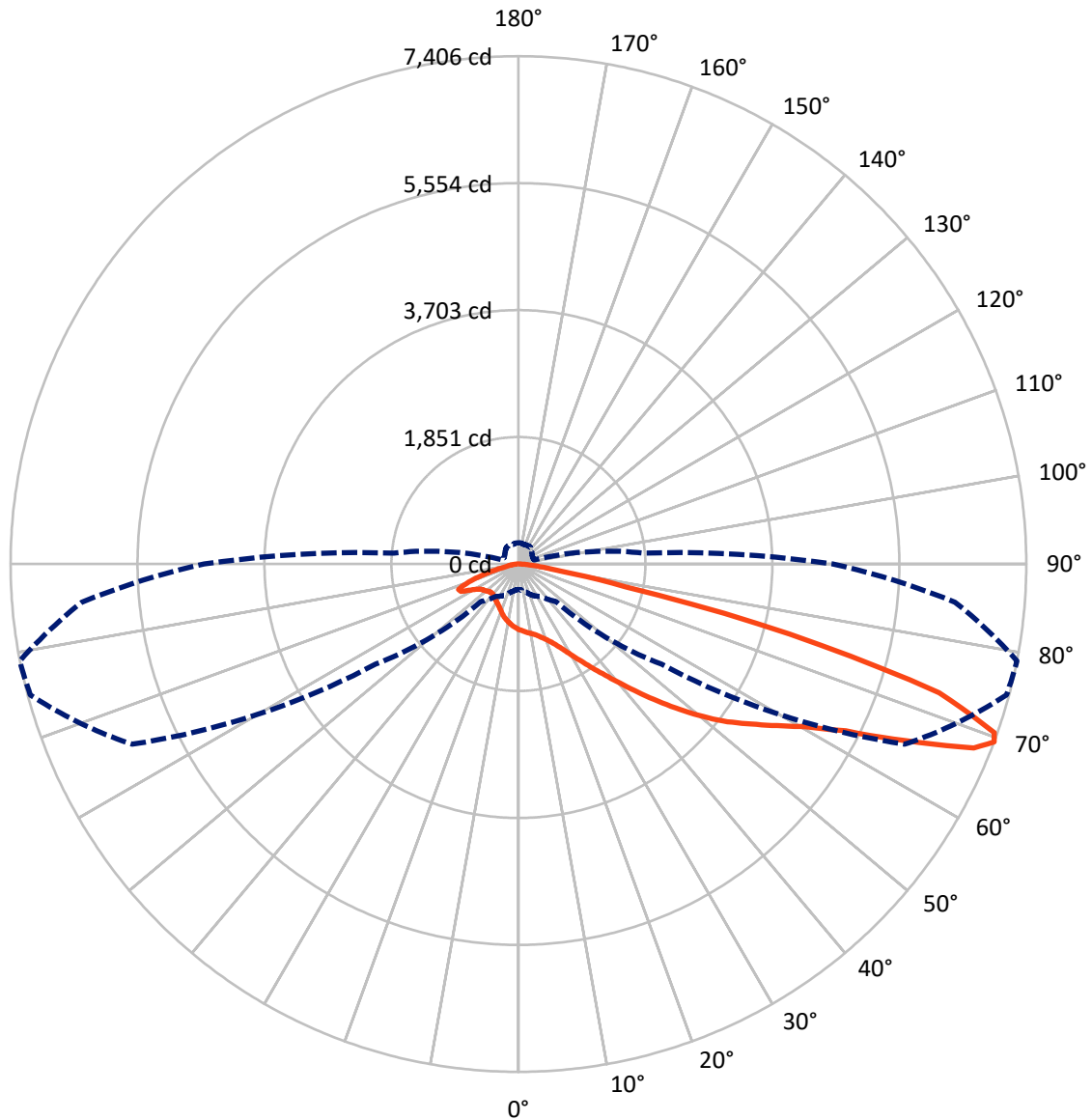
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11.6 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	1283.8	0.0	1283.8
	% Fixture	18.8	0.0	18.8
Street Side	Lumens	5540.5	0.0	5540.5
	% Fixture	81.2	0.0	81.2
Total	Lumens	6824.3	0.0	6824.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.8	1.3
10°-20°	254.5	3.7
20°-30°	420.6	6.2
30°-40°	681.0	10.0
40°-50°	1088.0	15.9
50°-60°	1558.1	22.8
60°-70°	1735.9	25.4
70°-80°	868.5	12.7
80°-90°	128.9	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°	6824.3	100.0
0°-180°	6824.3	100.0

Coefficient of Utilization



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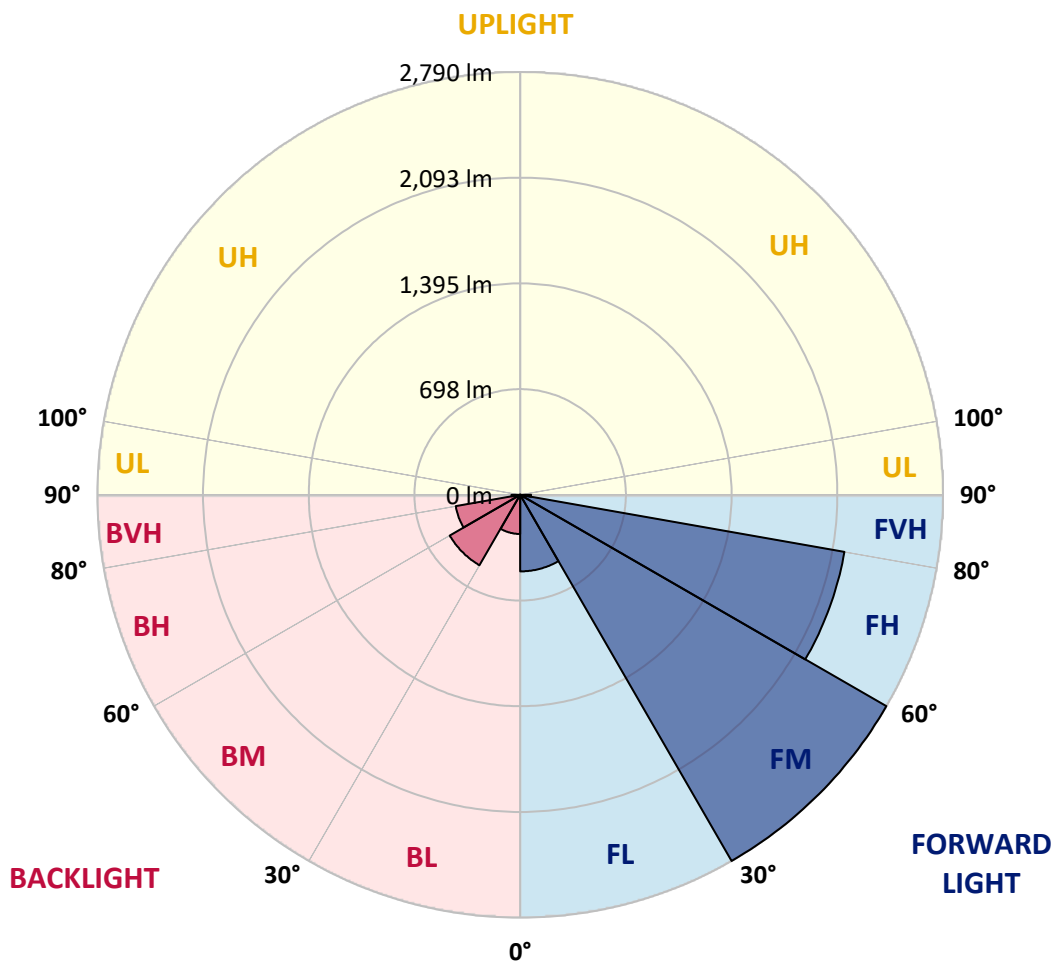
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	505.3	7.4			
FM (30°-60°)	2790.5	40.9			
FH (60°-80°)	2172.8	31.8			G2/5000
FVH (80°-90°)	72.0	1.1			G1/100
BL (0°-30°)	258.6	3.8	B1/500		
BM (30°-60°)	536.6	7.9	B1/1000		
BH (60°-80°)	431.6	6.3	B1/500		G1/500
BVH (80°-90°)	56.9	0.8			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	957.7	957.7	957.7	957.7	957.7	957.7	957.7	957.7	957.7	957.7	957.7
2.5°	1051.5	1049.2	1048.7	1042.0	1038.5	1030.8	1013.0	994.8	977.7	968.8	959.4
5°	1139.4	1134.9	1132.7	1121.5	1111.7	1094.8	1066.6	1037.5	1007.2	991.5	972.9
7.5°	1192.5	1192.9	1192.9	1184.1	1174.2	1153.7	1117.9	1078.1	1033.1	1012.6	983.1
10°	1196.9	1197.4	1204.1	1206.3	1208.6	1197.9	1164.8	1114.7	1056.8	1029.9	991.5
12.5°	1152.7	1155.8	1167.1	1183.1	1205.9	1217.6	1203.2	1154.1	1087.0	1054.5	1007.7
15°	1093.3	1096.6	1110.8	1135.4	1172.0	1210.7	1230.9	1199.1	1126.8	1088.4	1031.3
17.5°	1064.3	1067.9	1077.7	1097.4	1133.1	1185.4	1245.6	1247.3	1173.7	1129.6	1059.5
20°	1050.5	1053.3	1065.7	1081.7	1109.0	1159.1	1246.9	1298.3	1229.5	1178.1	1093.9
22.5°	1082.2	1083.0	1089.4	1098.3	1116.7	1155.0	1246.0	1351.1	1299.2	1239.4	1138.1
25°	1175.2	1169.2	1164.8	1153.7	1158.2	1185.4	1260.3	1407.3	1388.5	1319.7	1196.9
27.5°	1284.9	1283.9	1272.4	1246.5	1230.0	1247.3	1300.9	1470.2	1497.8	1421.9	1274.2
30°	1407.3	1407.6	1395.6	1363.9	1330.5	1332.2	1365.8	1543.0	1628.6	1545.3	1369.2
32.5°	1535.4	1543.4	1521.1	1489.4	1448.7	1435.9	1458.6	1631.0	1780.0	1690.7	1479.6
35°	1688.5	1689.8	1665.3	1618.8	1578.2	1557.8	1578.7	1740.7	1954.6	1861.7	1614.0
37.5°	1847.5	1848.4	1822.9	1763.6	1712.2	1698.8	1722.1	1874.3	2139.5	2056.4	1771.9
40°	1977.3	1986.7	1966.7	1910.9	1859.0	1851.0	1884.6	2034.1	2375.6	2286.7	1959.9
42.5°	2124.8	2135.5	2111.2	2053.3	2012.3	2009.5	2061.8	2216.2	2610.5	2553.3	2172.9
45°	2290.8	2305.9	2272.5	2207.2	2172.6	2231.4	2234.5	2418.1	2881.0	2851.5	2412.7
47.5°	2472.0	2484.5	2457.4	2387.2	2349.2	2434.5	2403.8	2636.3	3173.4	3171.1	2672.1
50°	2611.8	2625.7	2628.4	2597.4	2557.7	2568.4	2589.5	2865.9	3465.0	3499.7	2940.4
52.5°	2586.3	2599.8	2660.1	2740.8	2804.7	2777.0	2802.4	3109.7	3746.7	3820.3	3195.4
55°	2381.0	2388.1	2501.2	2693.1	2964.9	3097.0	3098.9	3374.8	4014.5	4117.7	3437.3
57.5°	2010.9	2011.8	2158.6	2441.8	2871.6	3304.7	3566.8	3707.8	4294.1	4446.3	3737.3
60°	1422.8	1426.5	1597.5	1967.6	2537.3	3279.7	4070.0	4303.9	4617.7	4815.5	4123.9
62.5°	844.6	852.8	981.8	1278.6	1884.6	2958.3	4367.3	5364.1	5094.6	5357.1	4742.7
65°	549.7	556.3	633.6	782.7	1113.4	2152.3	4269.6	6391.1	5996.8	6208.9	5632.2
67.5°	423.2	428.6	489.3	579.4	683.2	1163.5	3413.6	6606.2	7095.2	7161.2	6382.5
69°	371.9	376.4	421.0	507.6	575.0	770.1	2543.9	6215.6	7369.8	7405.8	6392.0
70°	344.7	348.3	390.3	465.2	528.2	614.8	1946.9	5762.0	7269.3	7361.7	6207.6
72.5°	284.0	287.1	317.0	374.6	431.7	438.0	862.6	4207.4	6121.1	6416.6	5253.1
75°	237.1	238.9	258.5	300.5	349.6	348.7	440.7	2383.3	3735.2	4087.4	3243.5
77.5°	197.7	199.2	212.1	238.1	275.9	274.6	310.3	1028.6	1649.2	1591.2	1116.7
80°	174.6	175.4	182.1	188.9	213.0	211.6	230.0	472.4	671.0	620.1	422.4
82.5°	132.6	134.3	168.3	171.4	165.2	159.4	160.3	275.1	343.8	313.0	226.8
85°	75.0	75.5	108.1	126.3	143.8	108.1	104.1	142.0	169.7	148.7	99.2
87.5°	33.4	34.9	51.8	59.8	77.7	63.4	59.4	60.2	73.2	60.7	39.3
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°	957.7	957.7	957.7	957.7	957.7	957.7	957.7	957.7	957.7	957.7	957.7
2.5°	950.4	943.0	925.1	906.7	888.5	876.8	864.8	853.6	849.2	848.7	840.3
5°	954.4	936.7	896.1	851.5	809.0	776.0	748.3	730.4	713.0	709.9	702.2
7.5°	955.8	926.8	860.8	789.3	724.7	679.1	651.5	639.4	630.9	628.6	625.8
10°	955.4	914.4	821.5	723.8	650.1	615.7	605.4	608.2	611.7	613.5	613.5
12.5°	962.5	908.5	782.2	662.1	601.9	585.3	593.3	607.2	617.9	622.3	623.2
15°	975.5	905.0	738.9	608.5	567.9	572.0	591.5	611.7	626.8	633.6	635.3
17.5°	991.5	900.0	688.9	564.3	548.2	562.1	587.5	613.1	631.2	639.8	641.1
20°	1009.4	892.9	637.1	531.3	530.9	548.2	573.7	602.3	621.9	631.2	630.9
22.5°	1033.6	886.2	588.8	507.2	511.7	527.8	548.8	574.6	592.9	601.3	599.6
25°	1065.7	880.0	545.6	485.8	489.8	500.4	515.2	534.9	547.7	552.3	549.1
27.5°	1109.0	875.0	511.7	466.1	465.6	470.5	479.4	490.3	496.5	495.1	490.3
30°	1162.1	870.2	486.6	448.8	442.4	442.0	446.0	452.2	456.2	448.3	444.2
32.5°	1221.5	861.7	464.3	433.5	422.4	418.3	420.0	428.6	445.1	437.0	433.9
35°	1291.7	851.9	442.0	417.1	408.5	401.0	402.4	420.5	470.5	464.8	461.5
37.5°	1376.1	842.9	421.5	399.1	398.7	389.3	388.3	410.3	477.3	464.8	462.1
40°	1477.4	841.2	403.2	379.5	386.6	383.0	380.0	393.4	440.2	414.7	409.8
42.5°	1599.6	849.2	389.8	360.7	372.7	381.3	375.5	378.5	397.8	375.0	371.0
45°	1742.5	871.0	380.0	344.2	358.1	380.0	373.2	370.6	373.6	361.2	358.6
47.5°	1909.1	910.0	373.2	330.3	344.2	376.4	372.3	367.0	365.6	358.6	356.7
50°	2087.2	962.2	368.8	317.9	331.7	370.1	371.9	364.4	362.0	359.0	358.1
52.5°	2264.0	1018.8	363.5	307.2	321.5	362.6	372.3	361.7	358.6	356.7	355.8
55°	2439.8	1077.7	353.7	297.8	313.9	353.7	371.9	358.1	354.6	354.6	354.6
57.5°	2668.1	1167.4	340.6	290.2	304.0	342.0	366.1	354.0	349.1	349.6	350.0
60°	2997.6	1318.0	326.4	281.7	291.1	328.6	357.2	346.8	341.0	343.0	343.3
62.5°	3548.0	1580.8	306.7	269.6	277.7	314.2	345.6	337.0	331.7	334.9	335.2
65°	4282.0	1899.2	280.8	254.5	263.8	298.2	330.8	325.5	319.6	327.3	326.9
67.5°	4729.8	1992.5	253.6	238.4	250.4	281.3	312.5	310.3	306.3	319.6	318.8
69°	4583.0	1823.7	238.1	228.1	241.0	269.6	300.9	300.0	296.9	309.8	308.9
70°	4354.8	1666.1	228.1	221.4	236.2	262.6	293.3	293.3	290.2	301.3	299.1
72.5°	3498.0	1235.8	205.4	204.5	219.1	242.9	272.7	275.1	273.3	277.2	275.1
75°	2053.7	744.7	183.1	185.7	198.6	221.9	250.0	251.9	250.0	249.5	250.0
77.5°	712.0	334.0	161.7	165.6	176.7	200.4	225.0	228.6	226.0	222.8	223.7
80°	278.6	194.3	138.3	144.2	153.6	176.3	200.1	202.3	198.3	197.7	194.3
82.5°	167.4	118.2	107.5	117.0	128.5	153.2	172.7	171.8	168.7	187.0	163.9
85°	72.8	65.7	78.6	87.9	93.8	114.8	146.0	142.0	134.3	118.2	115.6
87.5°	29.5	34.0	43.3	52.2	56.2	74.1	100.0	96.5	97.7	80.4	79.9
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)