

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: P270387

Luminaire Tested: **NAV-AF-02-D-UNV-T3-7027-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270387  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (p24135)  
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-T3-7027-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 2700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8552.6 lumens  
Efficiency: N/A  
Efficacy: 100.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Short - Semi-Cutoff  
BUG Rating: B2 - U0 - G2

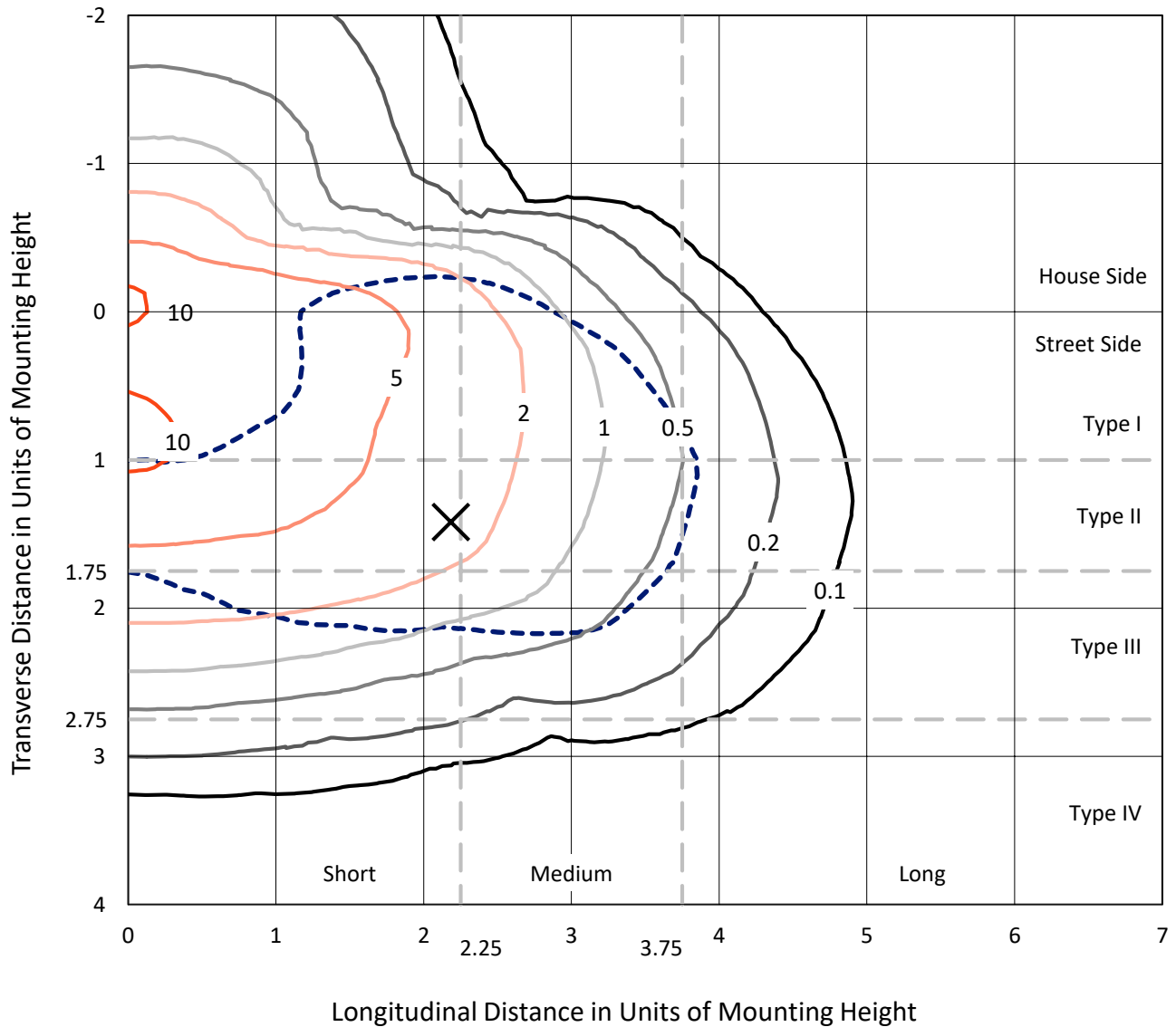
Input Watts (W): 85  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

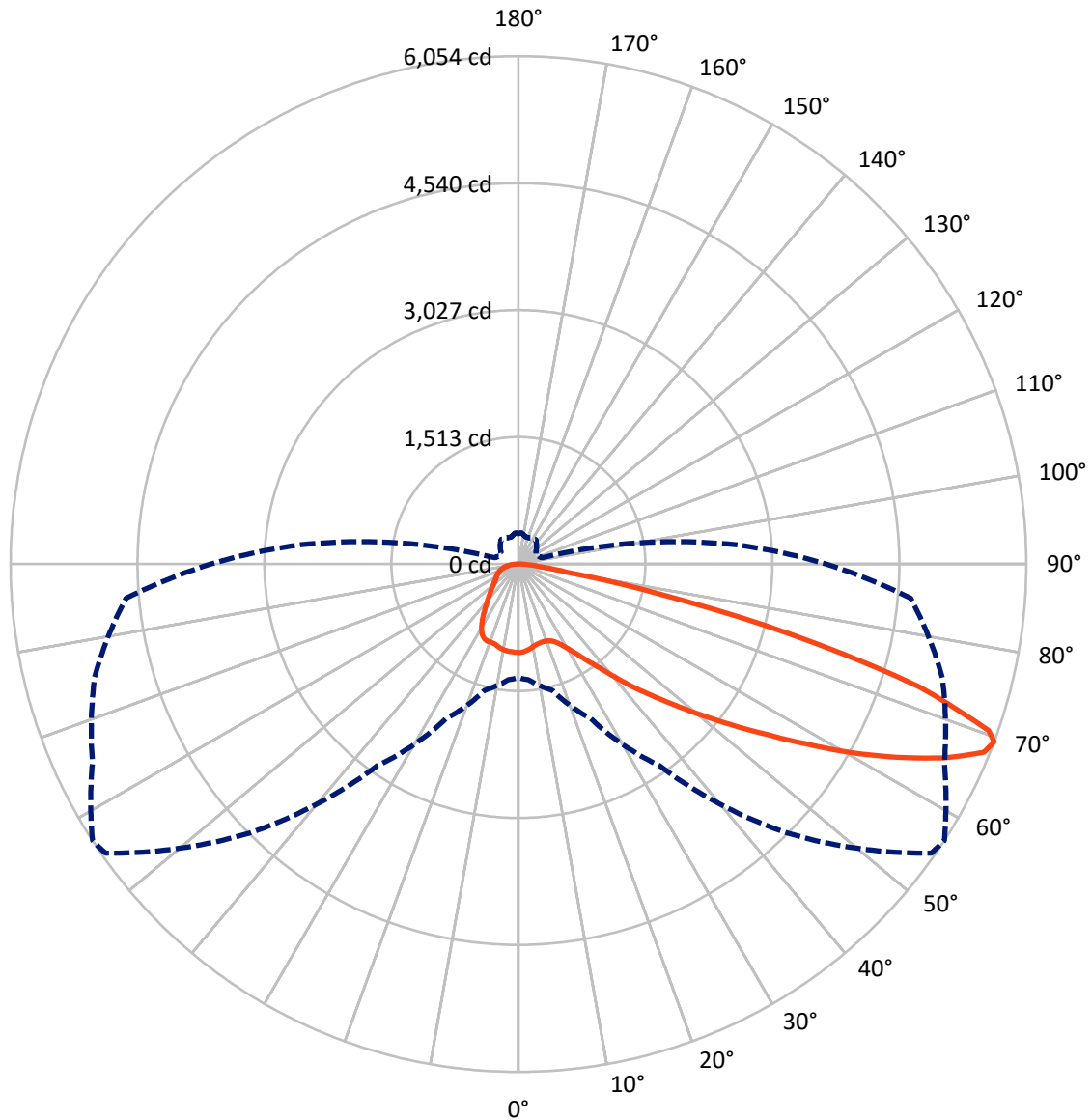
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10.8 fc  
 Type III - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 57-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1887.3	0.0	1887.3
	% Fixture	22.1	0.0	22.1
<b>Street Side</b>	Lumens	6665.4	0.0	6665.4
	% Fixture	77.9	0.0	77.9
<b>Total</b>	Lumens	8552.6	0.0	8552.6
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	98.9	1.2
10°-20°	281.3	3.3
20°-30°	467.9	5.5
30°-40°	764.1	8.9
40°-50°	1289.6	15.1
50°-60°	2006.1	23.5
60°-70°	2389.7	27.9
70°-80°	1113.3	13.0
80°-90°	141.6	1.7
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°	8552.6	100.0
0°-180°	8552.6	100.0



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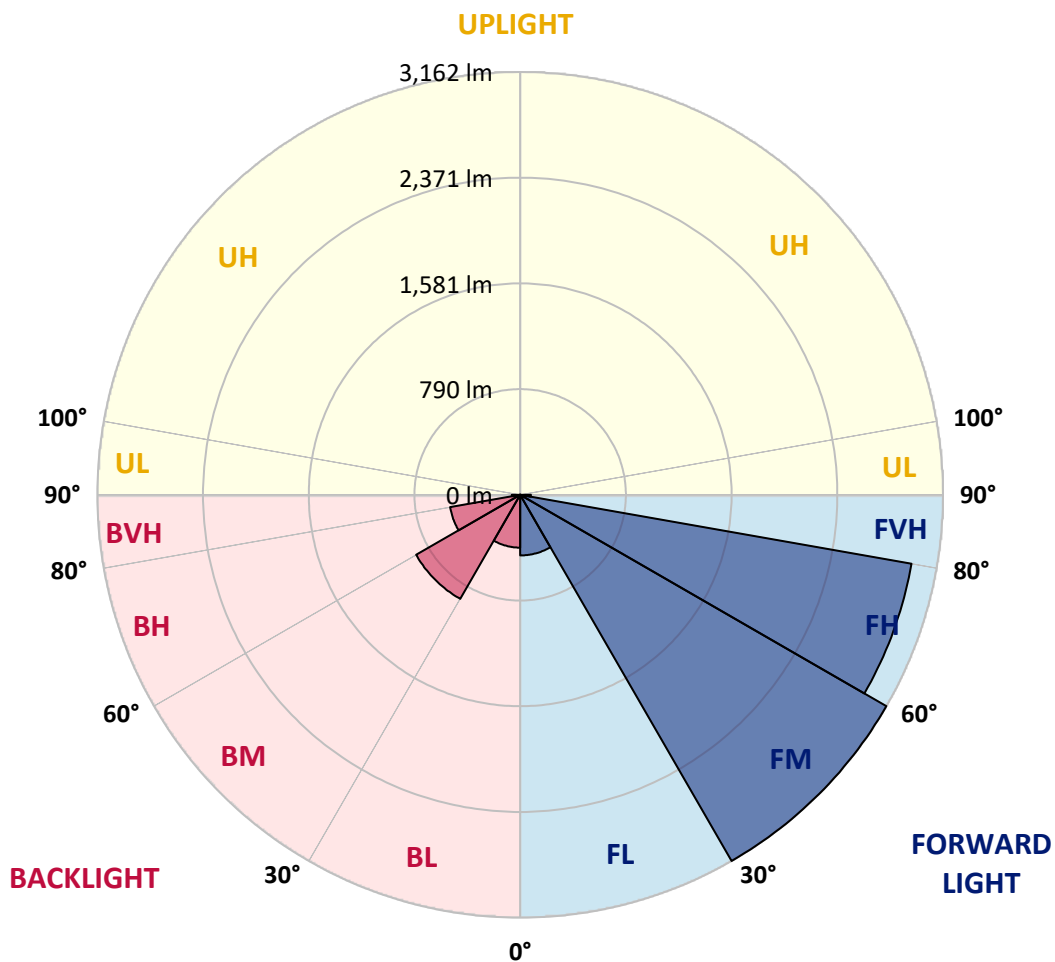
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	452.9	5.3			
FM	(30°-60°)	3161.6	37.0			
FH	(60°-80°)	2971.2	34.7			G2/5000
FVH	(80°-90°)	79.6	0.9			G1/100
BL	(0°-30°)	395.2	4.6	B1/500		
BM	(30°-60°)	898.2	10.5	B1/1000		
BH	(60°-80°)	531.8	6.2	B2/1000		G2/1000
BVH	(80°-90°)	62.0	0.7			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	1056.8	1056.8	1056.8	1056.8	1056.8	1056.8	1056.8	1056.8	1056.8	1056.8	1056.8
2.5°	1050.7	1050.7	1053.5	1053.5	1053.5	1052.4	1049.1	1050.2	1048.1	1046.3	1043.7
5°	1029.4	1030.4	1033.8	1034.8	1036.6	1037.1	1037.1	1036.6	1037.1	1037.1	1035.3
7.5°	999.9	1000.9	1004.8	1006.9	1011.9	1016.3	1018.4	1018.4	1021.2	1023.3	1023.9
10°	981.8	981.8	984.0	984.0	987.7	989.9	997.1	996.5	1004.1	1011.3	1014.5
12.5°	979.5	979.5	978.4	974.7	972.4	971.8	979.1	980.1	991.5	1004.1	1010.2
15°	986.7	986.7	983.4	975.6	967.6	963.7	970.8	973.0	985.6	1000.4	1009.7
17.5°	1009.7	1009.2	1002.0	986.7	972.4	966.4	968.6	970.8	982.2	999.3	1010.8
20°	1060.5	1060.5	1045.3	1017.3	992.6	978.4	975.2	976.7	985.0	1000.9	1015.8
22.5°	1149.8	1151.4	1124.0	1078.1	1035.9	1005.8	992.6	994.3	998.1	1013.5	1029.9
25°	1281.3	1276.9	1238.0	1172.8	1107.2	1055.7	1028.7	1030.4	1030.4	1044.6	1061.6
27.5°	1420.3	1421.4	1365.6	1295.4	1208.9	1132.4	1089.6	1089.0	1088.6	1102.2	1120.2
30°	1577.5	1578.1	1513.5	1432.3	1333.3	1235.3	1171.2	1170.6	1165.7	1182.7	1206.2
32.5°	1749.4	1748.9	1673.8	1582.5	1472.3	1361.2	1278.0	1277.4	1273.5	1296.6	1325.1
35°	1940.0	1940.0	1865.5	1752.8	1633.8	1510.1	1413.8	1413.3	1415.4	1446.6	1473.4
37.5°	2169.3	2174.3	2084.4	1947.6	1817.8	1685.8	1573.7	1570.3	1554.0	1606.4	1650.8
40°	2408.6	2422.3	2329.2	2169.3	2029.2	1892.9	1769.1	1767.0	1752.8	1808.6	1880.2
42.5°	2667.6	2698.9	2595.4	2432.3	2279.4	2132.1	2007.8	2001.9	1947.0	2034.1	2146.4
45°	3007.2	3027.4	2877.4	2729.5	2585.5	2417.3	2269.6	2237.3	2182.5	2294.2	2439.8
47.5°	3238.2	3228.2	3134.6	3035.6	2943.0	2782.1	2554.8	2513.7	2447.0	2594.8	2755.2
50°	3381.6	3388.8	3336.1	3331.3	3326.3	3214.0	2876.8	2827.5	2750.3	2925.5	3112.7
52.5°	3476.4	3444.0	3453.4	3565.1	3700.3	3646.7	3240.9	3186.2	3106.8	3282.0	3493.2
55°	3436.9	3394.2	3480.3	3700.3	4018.4	4030.4	3640.7	3584.2	3516.3	3661.0	3951.0
57.5°	3273.8	3295.2	3430.8	3736.9	4235.8	4374.3	4100.0	4042.6	3909.0	4055.7	4385.9
60°	3044.4	3087.7	3295.2	3679.0	4388.0	4642.1	4604.4	4565.9	4335.9	4440.1	4842.6
62.5°	2798.0	2840.7	3095.7	3579.8	4319.6	4879.1	5099.3	5075.8	4807.4	4810.2	5132.1
65°	2433.9	2451.4	2712.1	3309.4	4129.6	5093.3	5594.9	5574.1	5258.0	5126.1	5213.1
67.5°	1838.1	1860.0	2074.0	2612.4	3551.4	4977.1	5990.6	5987.5	5529.1	5243.2	5020.4
69°	1357.3	1384.2	1558.9	2028.2	2936.5	4534.7	6009.3	6053.7	5602.5	5231.2	4694.6
70°	993.3	1023.9	1185.5	1609.9	2445.8	4046.3	5849.9	5945.3	5574.5	5155.2	4440.6
72.5°	422.2	432.5	511.9	726.5	1240.6	2439.8	4791.6	4992.1	5034.7	4619.1	3469.3
75°	264.6	267.8	299.0	372.8	551.9	1009.2	3102.9	3376.2	3758.9	3583.7	2322.7
77.5°	199.3	202.1	220.2	256.7	342.8	376.7	1439.5	1716.5	2153.0	2108.1	1155.8
80°	152.7	154.4	166.5	186.7	241.5	236.0	467.1	587.0	898.6	792.8	409.0
82.5°	120.0	120.5	130.9	134.7	168.6	158.8	234.4	261.1	363.1	301.7	199.9
85°	106.2	107.8	118.2	98.5	107.8	95.8	128.6	139.6	192.7	181.7	75.5
87.5°	54.2	57.0	99.2	84.4	54.2	45.5	56.5	60.7	78.3	84.9	36.7
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°	1056.8	1056.8	1056.8	1056.8	1056.8	1056.8	1056.8	1056.8	1056.8	1056.8	1056.8
2.5°	1044.2	1044.6	1046.3	1049.1	1053.5	1058.9	1065.5	1072.0	1075.9	1078.7	1077.5
5°	1035.3	1035.9	1039.2	1044.2	1049.6	1057.8	1068.9	1077.0	1083.0	1086.9	1086.3
7.5°	1024.4	1026.1	1032.7	1038.1	1045.7	1052.4	1061.2	1068.9	1074.8	1078.7	1078.1
10°	1016.3	1017.9	1026.1	1033.2	1039.8	1040.9	1039.2	1037.1	1036.6	1039.2	1038.1
12.5°	1012.4	1015.8	1023.3	1028.3	1025.5	1015.2	1003.0	998.1	996.5	1002.0	1002.6
15°	1013.5	1016.3	1022.8	1019.5	1004.8	987.1	980.7	984.5	987.7	991.1	991.5
17.5°	1016.3	1017.9	1019.5	1007.4	986.7	975.2	973.0	969.1	959.3	953.8	953.3
20°	1021.2	1023.3	1020.7	1001.5	982.8	967.6	941.2	917.7	895.3	883.3	878.3
22.5°	1038.1	1039.8	1031.6	1013.0	984.5	934.6	881.5	841.1	806.6	788.0	780.7
25°	1071.6	1074.4	1062.8	1039.2	964.8	877.7	802.6	748.0	704.7	682.3	676.2
27.5°	1130.2	1132.9	1120.2	1058.9	918.7	801.6	710.6	656.5	619.3	600.1	597.4
30°	1217.7	1221.5	1210.0	1058.5	848.7	704.7	620.9	589.2	567.8	554.7	554.2
32.5°	1339.4	1353.6	1306.5	1039.8	762.2	606.6	553.0	542.0	531.6	523.0	523.0
35°	1493.7	1527.1	1401.7	1000.9	666.9	539.9	515.3	504.8	491.7	482.4	481.3
37.5°	1678.3	1730.2	1469.5	931.9	584.7	507.6	492.2	475.3	454.5	436.3	432.1
40°	1931.7	1943.8	1503.0	819.7	523.4	490.0	470.9	449.5	423.2	403.0	400.9
42.5°	2186.4	2146.9	1496.4	699.2	488.4	474.1	449.1	425.4	401.9	385.0	385.0
45°	2476.0	2324.4	1446.6	578.1	456.7	456.1	428.8	406.3	388.2	375.6	372.8
47.5°	2753.0	2483.6	1360.7	488.9	423.8	438.1	415.6	397.5	381.2	369.1	366.9
50°	3089.2	2668.1	1269.2	426.5	392.0	422.2	410.0	400.9	385.0	364.2	361.9
52.5°	3423.3	2883.9	1198.6	379.4	364.2	409.5	413.4	414.5	399.7	359.2	356.4
55°	3781.9	3114.5	1124.0	342.8	341.1	403.6	421.0	420.0	412.9	360.3	355.9
57.5°	4123.0	3346.0	1013.0	317.0	323.0	397.5	422.7	405.1	392.6	365.8	358.7
60°	4405.6	3537.6	849.7	299.0	307.7	385.5	411.8	385.5	364.2	364.6	358.2
62.5°	4543.0	3591.3	650.0	278.1	295.2	365.8	395.9	370.7	351.0	366.9	363.1
65°	4438.3	3438.6	463.3	259.0	279.8	342.8	386.6	358.2	344.4	377.7	373.4
67.5°	4062.8	3022.4	336.1	242.1	265.0	319.2	369.1	346.6	337.9	386.0	376.2
69°	3663.6	2609.5	291.3	232.1	254.6	306.6	357.5	340.5	332.9	374.6	360.3
70°	3331.9	2291.4	268.9	226.2	245.9	299.6	348.8	336.8	328.1	360.8	343.8
72.5°	2389.0	1481.1	226.2	208.0	222.9	283.7	329.6	322.5	309.3	325.7	314.9
75°	1443.3	773.1	192.1	189.5	198.7	261.8	307.2	298.3	285.3	286.9	281.3
77.5°	663.0	356.9	160.9	167.5	173.6	234.4	279.8	269.9	258.0	253.5	254.1
80°	290.7	208.6	134.7	142.9	146.2	210.8	250.2	239.3	226.2	249.6	231.7
82.5°	157.2	121.0	105.1	110.6	120.0	183.4	217.4	203.1	190.5	221.7	179.0
85°	63.5	61.9	71.1	76.6	83.3	132.0	181.7	167.1	151.6	135.9	132.5
87.5°	27.4	29.6	35.0	37.2	44.3	82.1	122.1	106.8	107.3	91.9	90.3
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)