

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: P270399

Luminaire Tested: **NAV-AF-02-D-UNV-T4W-7027-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270399  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24127)  
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-T4W-7027-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 2700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8449.6 lumens  
Efficiency: N/A  
Efficacy: 99.4 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - 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

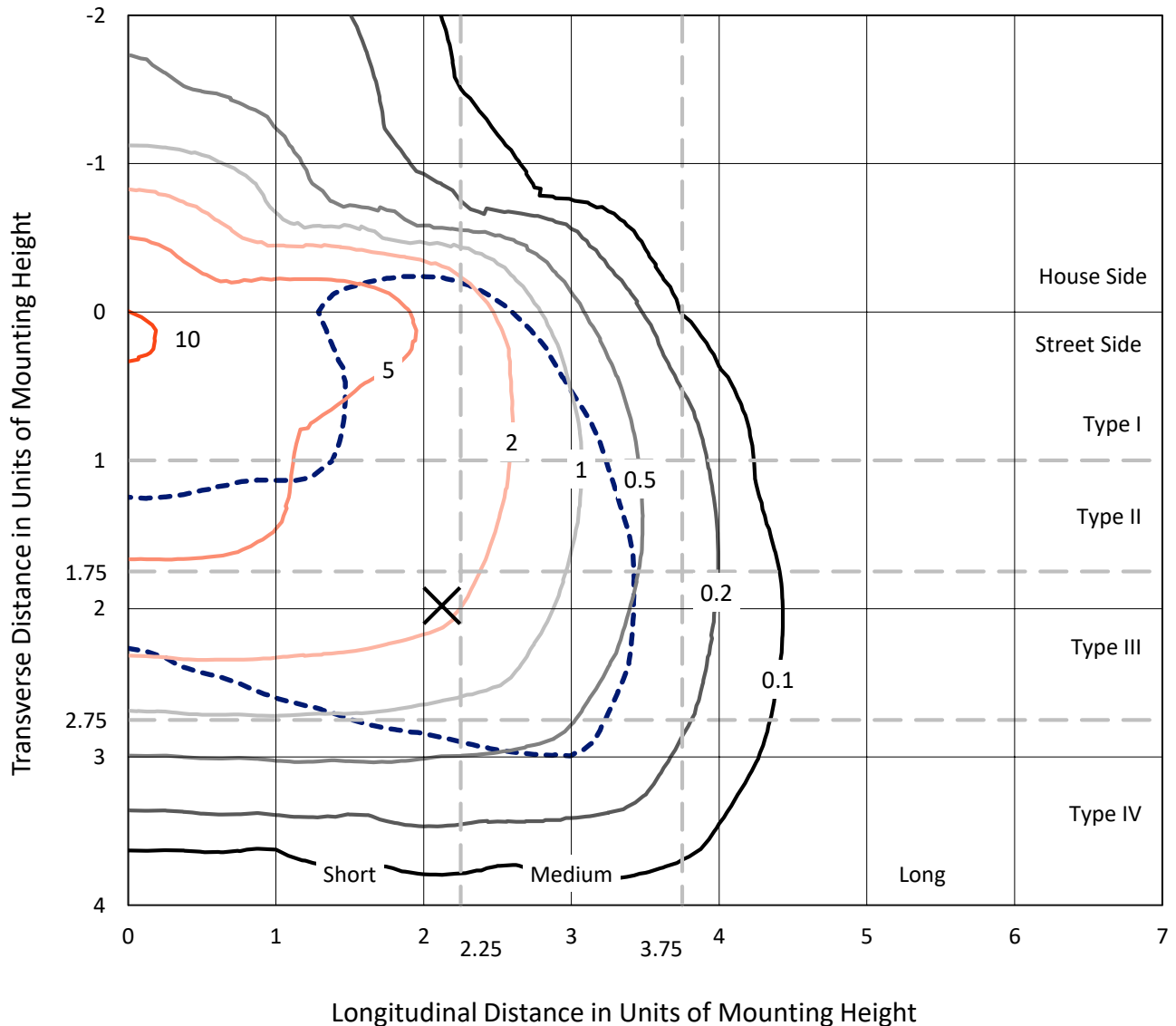


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### Iso-Footcandle Lines of Horizontal Illumination

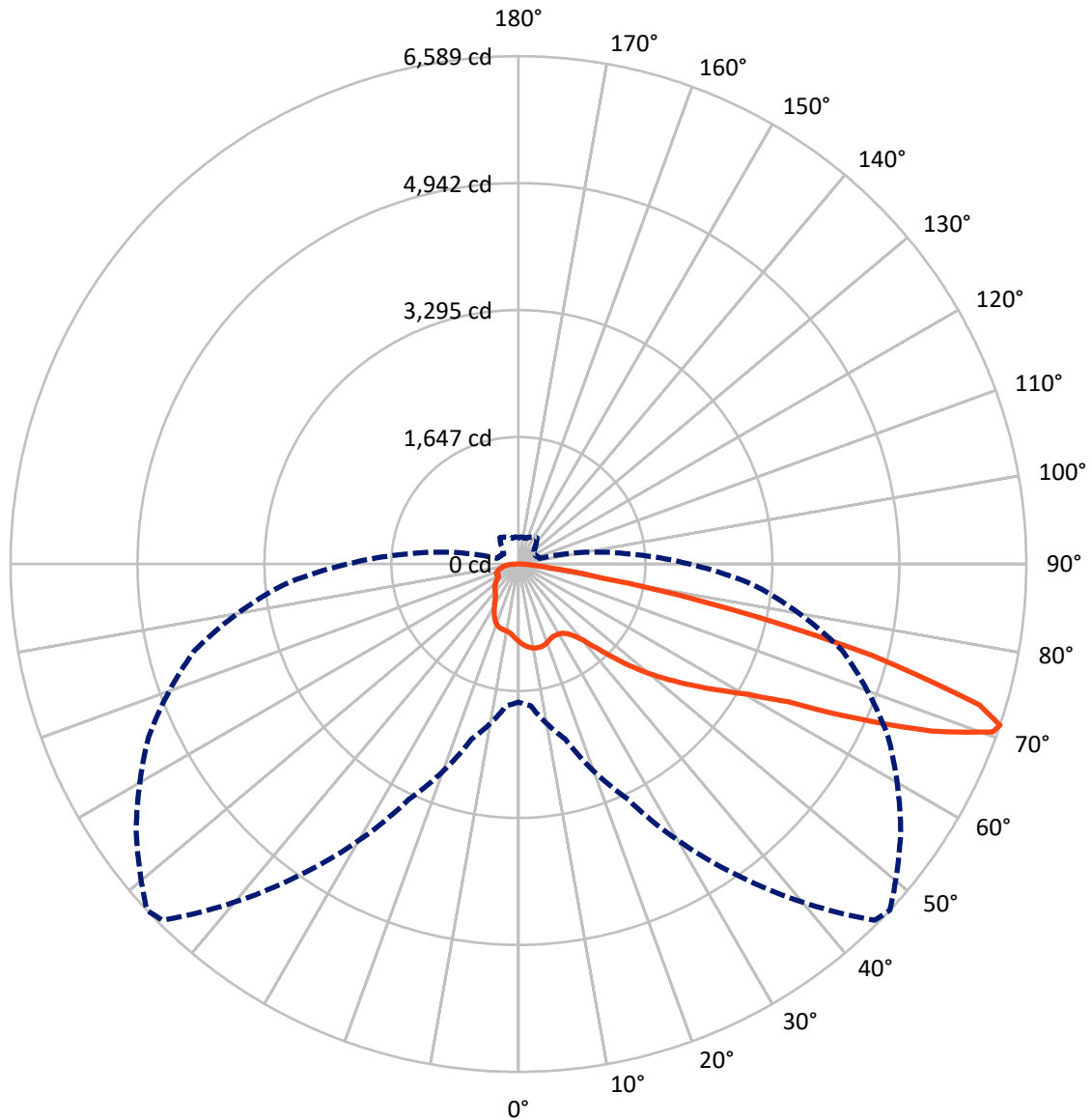
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11.5 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 47-Deg Lateral    - - - Horizontal Cone Through 71-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1810.9	0.0	1810.9
	% Fixture	21.4	0.0	21.4
<b>Street Side</b>	Lumens	6638.7	0.0	6638.7
	% Fixture	78.6	0.0	78.6
<b>Total</b>	Lumens	8449.6	0.0	8449.6
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	95.9	1.1
10°-20°	280.7	3.3
20°-30°	417.1	4.9
30°-40°	598.8	7.1
40°-50°	1061.8	12.6
50°-60°	1816.8	21.5
60°-70°	2579.3	30.5
70°-80°	1412.7	16.7
80°-90°	186.5	2.2
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°	8449.6	100.0
0°-180°	8449.6	100.0

**Coefficient of Utilization**



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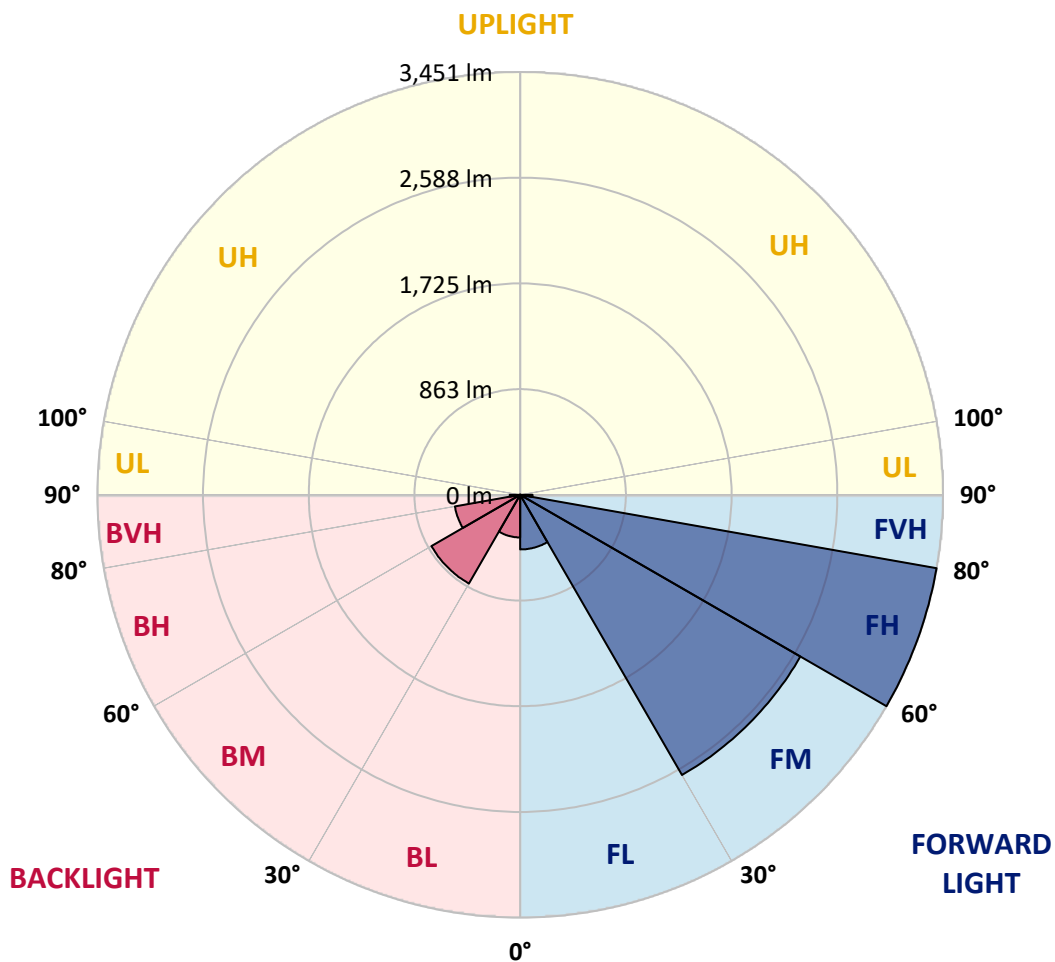
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	445.9	5.3			
FM	(30°-60°)	2640.7	31.3			
FH	(60°-80°)	3450.9	40.8			G2/5000
FVH	(80°-90°)	101.1	1.2			G2/225
BL	(0°-30°)	347.7	4.1	B1/500		
BM	(30°-60°)	836.7	9.9	B1/1000		
BH	(60°-80°)	541.1	6.4	B2/1000		G2/1000
BVH	(80°-90°)	85.3	1.0			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 IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	1004.8	1004.8	1004.8	1004.8	1004.8	1004.8	1004.8	1004.8	1004.8	1004.8	1004.8
2.5°	1066.1	1064.0	1065.0	1061.2	1051.8	1042.0	1042.0	1031.7	1020.7	1009.8	997.7
5°	1132.4	1129.1	1126.4	1114.3	1096.2	1076.0	1072.7	1051.8	1029.5	1007.0	985.1
7.5°	1187.6	1184.3	1176.2	1154.3	1128.0	1097.9	1094.0	1066.6	1037.2	1005.9	975.2
10°	1227.2	1224.8	1209.1	1181.1	1150.5	1114.8	1108.2	1080.3	1045.3	1006.5	967.6
12.5°	1249.1	1245.7	1226.5	1193.7	1157.6	1121.4	1114.8	1088.0	1048.1	1005.4	959.8
15°	1240.3	1238.7	1220.5	1187.1	1151.0	1119.7	1114.3	1086.9	1046.4	1001.5	952.8
17.5°	1203.0	1206.9	1192.6	1159.7	1130.2	1108.2	1102.3	1076.4	1038.3	992.2	941.9
20°	1151.5	1155.8	1148.8	1115.4	1098.4	1084.3	1080.9	1060.1	1024.4	978.6	928.7
22.5°	1096.8	1100.7	1101.1	1069.9	1064.5	1059.0	1056.2	1041.5	1012.5	970.3	920.0
25°	1059.0	1063.5	1064.5	1037.2	1040.3	1042.0	1041.5	1031.1	1010.2	970.3	921.0
27.5°	1049.1	1051.3	1050.3	1025.1	1031.1	1040.3	1041.0	1038.7	1019.0	981.3	936.4
30°	1083.0	1084.3	1070.5	1032.7	1038.7	1050.7	1051.3	1050.3	1037.6	1009.8	970.9
32.5°	1229.9	1228.7	1181.7	1084.3	1063.5	1067.7	1069.4	1079.3	1080.3	1056.9	1020.7
35°	1453.3	1452.6	1397.9	1231.4	1133.5	1110.5	1112.7	1128.0	1141.7	1125.8	1105.0
37.5°	1699.1	1700.9	1667.3	1441.8	1284.5	1188.7	1186.7	1198.1	1222.8	1228.3	1230.9
40°	1971.8	1980.0	1978.3	1683.2	1496.5	1322.3	1300.4	1287.4	1335.1	1365.2	1404.1
42.5°	2283.4	2281.2	2282.2	1948.2	1738.5	1532.7	1492.2	1430.8	1486.2	1538.2	1623.5
45°	2551.1	2559.9	2566.5	2230.2	2009.6	1773.1	1732.0	1620.3	1670.0	1747.8	1878.1
47.5°	2820.6	2805.1	2817.3	2544.0	2311.2	2047.3	1994.2	1843.7	1890.3	1999.7	2198.0
50°	3134.2	3127.2	3072.5	2953.5	2676.1	2325.5	2256.1	2076.9	2144.9	2291.0	2592.8
52.5°	3415.7	3377.4	3334.7	3275.6	3034.7	2607.1	2518.8	2319.6	2444.4	2625.7	3082.9
55°	3518.8	3493.0	3544.4	3621.1	3414.1	2893.9	2795.3	2602.6	2782.2	3008.3	3659.4
57.5°	3628.3	3637.0	3753.1	3908.0	3773.3	3200.0	3093.3	2937.7	3153.0	3436.6	4303.9
60°	3683.1	3718.1	3949.7	4240.4	4115.0	3535.6	3433.3	3322.7	3564.1	3909.7	4946.7
62.5°	3692.3	3739.4	4067.3	4357.0	4585.4	4049.9	3931.6	3811.7	4077.8	4432.5	5412.2
65°	3521.4	3593.7	4056.9	4500.5	5014.1	4909.0	4834.0	4624.8	4765.5	4893.1	5491.6
67.5°	3019.4	3098.2	3655.7	4441.4	5358.0	5800.4	5786.3	5477.3	5296.6	5071.1	4902.9
70°	2215.9	2279.5	2815.1	3796.9	5208.0	6500.2	6525.4	6029.9	5445.0	4693.3	3645.7
71°	1792.2	1846.9	2351.9	3370.9	4915.5	6536.3	6589.0	6054.4	5290.7	4352.1	3052.3
72.5°	1115.4	1146.1	1561.7	2544.0	4232.8	6164.0	6252.7	5739.1	4804.4	3678.6	2157.4
75°	421.0	433.2	579.3	1122.0	2526.6	4630.9	4738.1	4337.3	3375.2	2100.0	902.9
77.5°	226.2	232.2	287.5	466.5	1012.5	2654.6	2792.7	2473.9	1619.1	734.9	369.1
80°	151.6	155.4	198.7	276.5	465.4	1010.9	1125.8	993.3	606.1	419.5	262.8
82.5°	98.1	100.3	135.3	181.7	300.7	355.4	405.8	423.8	378.4	300.7	158.8
85°	64.6	66.3	89.2	116.2	186.2	175.2	179.7	234.8	258.0	198.3	81.0
87.5°	37.2	38.4	53.7	59.6	83.8	65.7	71.1	111.7	153.3	129.3	46.5
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°	1004.8	1004.8	1004.8	1004.8	1004.8	1004.8	1004.8	1004.8	1004.8	1004.8	1004.8
2.5°	992.2	987.9	978.0	972.0	969.2	968.2	967.0	969.2	969.2	968.2	965.9
5°	974.1	965.9	949.5	938.0	932.0	930.4	932.5	935.2	936.9	936.9	935.2
7.5°	960.9	948.9	927.1	911.2	901.9	899.2	905.1	915.1	921.7	924.9	925.4
10°	950.0	933.6	909.5	893.0	885.4	884.3	891.9	904.7	918.2	924.3	925.4
12.5°	940.2	921.7	895.3	880.0	874.5	877.3	887.6	899.2	915.1	923.7	924.3
15°	930.9	911.7	883.8	867.9	866.9	871.1	881.1	890.4	902.3	913.3	913.3
17.5°	920.0	899.2	870.1	855.2	855.2	859.1	865.6	870.6	878.4	888.8	888.2
20°	906.7	885.4	855.8	840.5	837.2	835.1	835.1	836.1	842.7	852.0	853.7
22.5°	896.9	874.9	843.8	825.3	810.5	796.2	790.1	788.0	794.0	802.7	804.9
25°	896.9	874.9	839.9	808.7	772.6	745.2	733.7	730.4	736.5	744.7	748.0
27.5°	911.7	889.9	848.8	794.0	727.7	683.9	670.2	667.5	673.0	679.6	682.8
30°	946.3	924.9	874.0	777.0	678.0	620.4	605.1	602.4	605.1	607.9	611.7
32.5°	1003.6	985.6	915.1	761.7	627.6	562.9	544.4	539.9	541.0	541.6	544.8
35°	1097.3	1089.1	969.7	743.5	579.9	515.7	496.7	487.9	487.3	490.0	493.9
37.5°	1240.7	1245.7	1040.3	717.3	540.5	482.4	463.3	454.5	450.1	455.6	459.9
40°	1443.3	1455.0	1122.0	681.8	508.1	462.6	442.4	434.2	428.2	426.5	428.8
42.5°	1706.8	1703.5	1205.2	636.3	473.0	449.5	428.2	419.5	409.5	397.1	394.3
45°	2018.9	1971.8	1274.8	580.5	433.2	436.9	415.0	403.0	387.7	369.1	366.9
47.5°	2387.4	2257.6	1317.5	520.7	396.0	420.5	400.3	381.7	359.2	347.1	345.5
50°	2831.5	2592.1	1347.5	459.9	362.5	399.7	379.4	354.8	332.9	329.7	329.0
52.5°	3357.1	2987.0	1384.7	405.1	336.2	372.8	358.7	333.5	315.9	317.6	317.6
55°	3916.3	3395.6	1385.9	361.9	313.1	341.6	343.3	323.1	309.3	314.9	316.6
57.5°	4425.9	3752.5	1276.9	331.3	291.3	317.0	338.4	327.0	316.6	335.6	337.4
60°	4870.7	4027.5	1042.6	306.1	273.3	307.7	349.4	350.5	348.3	400.3	404.1
62.5°	5033.4	4030.2	740.4	284.8	263.5	313.1	372.3	374.0	374.0	422.2	429.3
65°	4805.6	3694.5	492.8	272.1	256.8	325.2	390.9	383.8	366.9	400.3	392.6
67.5°	4002.8	2875.8	360.3	263.9	247.6	325.8	407.4	389.3	360.3	388.7	375.6
70°	2751.0	1829.9	301.7	256.2	236.6	311.5	416.2	387.7	350.5	362.5	344.9
71°	2214.4	1460.4	286.4	253.5	232.2	303.4	417.3	385.6	345.5	353.2	337.4
72.5°	1458.8	899.7	267.8	247.6	225.7	289.2	414.5	380.5	338.9	339.5	329.0
75°	575.5	372.8	240.9	233.7	207.0	266.1	402.5	370.1	326.4	315.5	311.1
77.5°	290.7	243.7	211.9	214.7	185.1	242.6	385.6	353.2	308.8	294.0	290.7
80°	212.4	185.1	181.3	186.2	160.4	219.5	364.2	330.1	286.4	301.7	295.2
82.5°	129.3	112.7	141.8	153.9	134.1	196.0	338.9	303.4	258.0	237.6	230.0
85°	61.4	66.3	102.3	113.4	99.2	156.7	309.9	273.9	225.0	194.5	197.6
87.5°	30.2	36.7	58.6	67.9	65.1	115.1	233.7	212.4	177.4	146.2	142.9
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)