

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: P195344

Luminaire Tested: **NAV-AF-02-D-UNV-T3-7060-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195344
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-T3-7060-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 5700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9844 lumens
Efficiency: N/A
Efficacy: 115.8 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

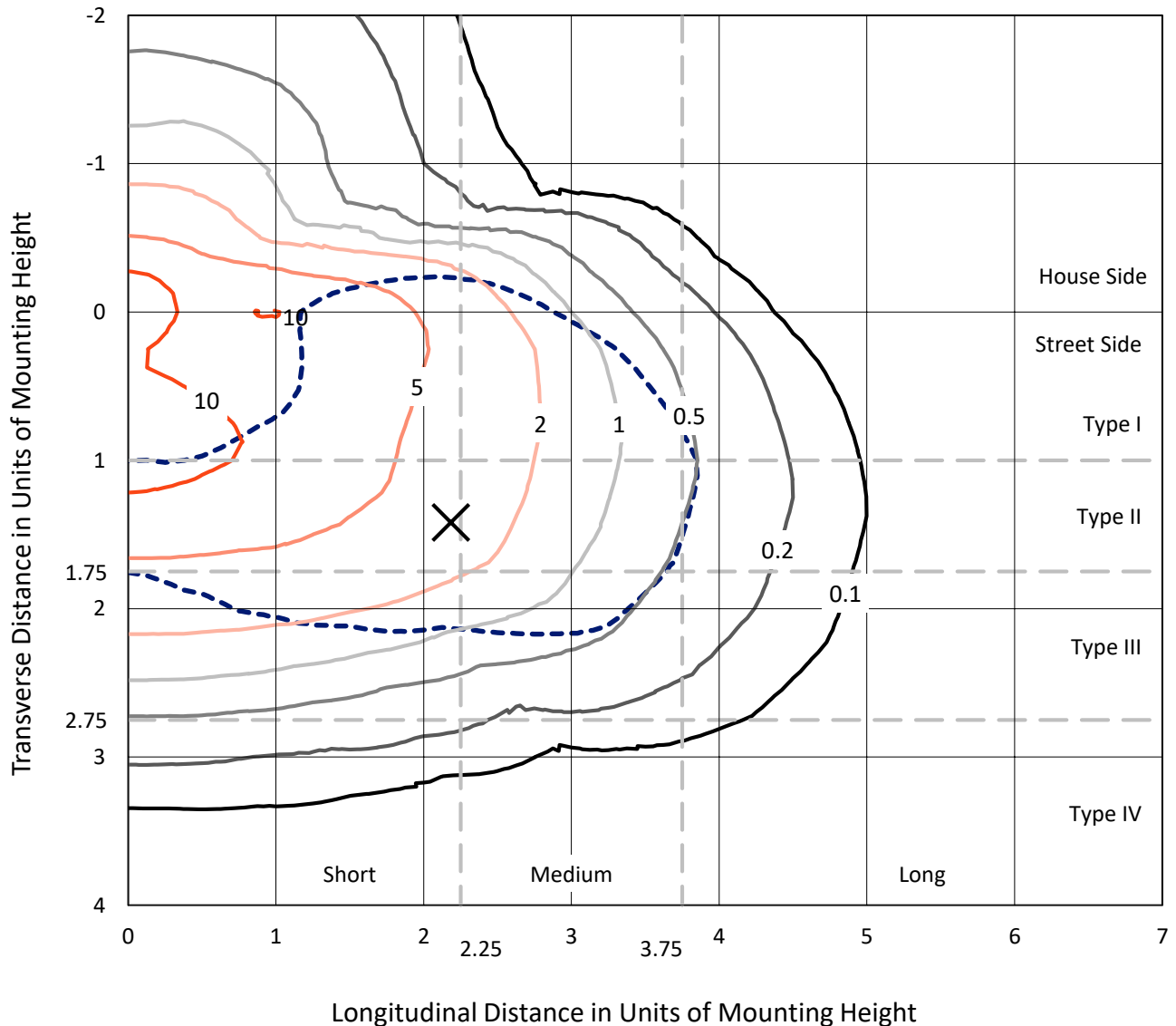
Input Watts (W): 85
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

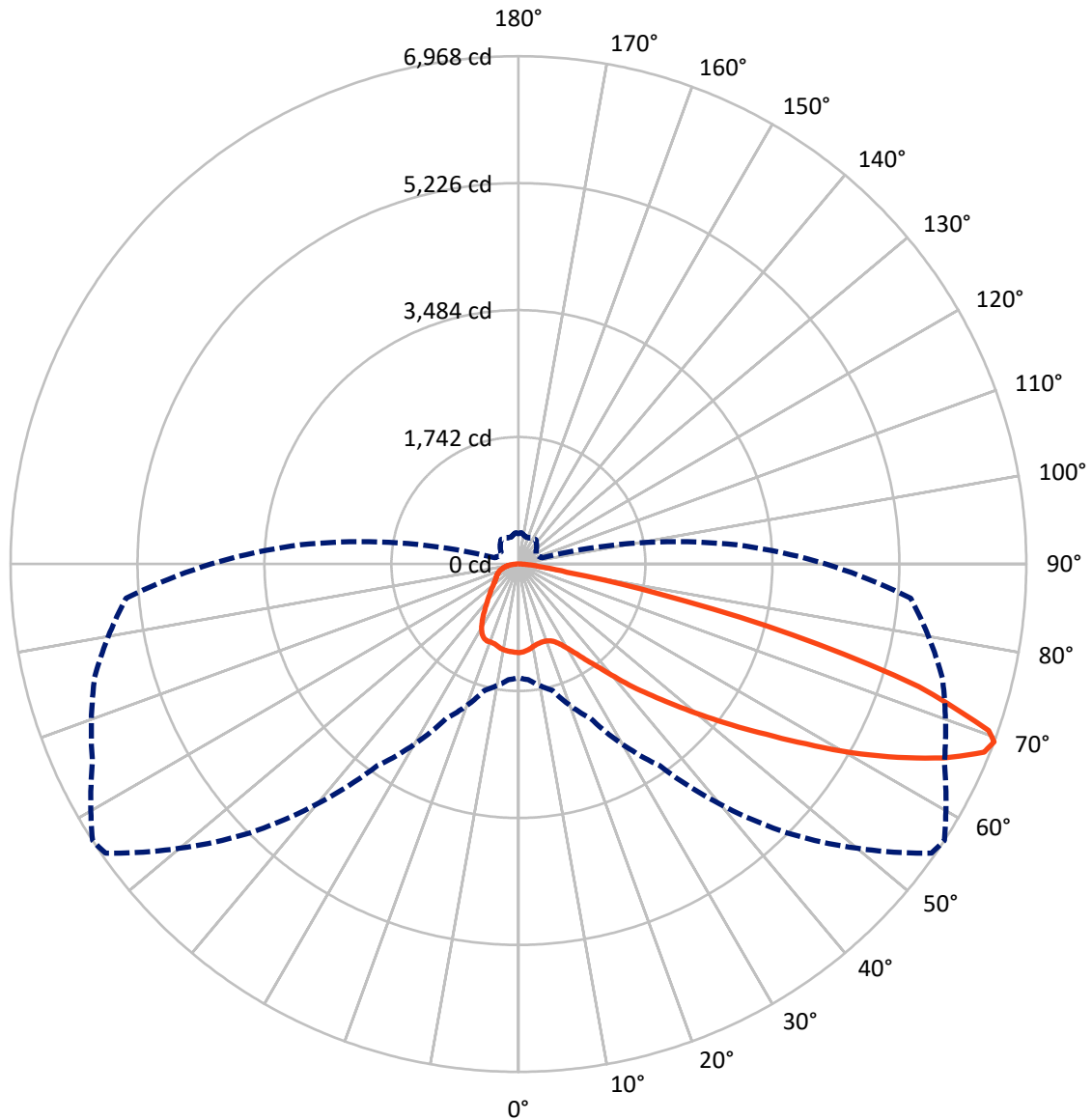
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 12.4 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
House Side	Lumens	2172.2	0.0	2172.2
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	7671.8	0.0	7671.8
	% Fixture	77.9	0.0	77.9
Total	Lumens	9844.0	0.0	9844.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.9	1.2
10°-20°	323.8	3.3
20°-30°	538.6	5.5
30°-40°	879.5	8.9
40°-50°	1484.4	15.1
50°-60°	2309.0	23.5
60°-70°	2750.5	27.9
70°-80°	1281.4	13.0
80°-90°	163.0	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°	9844.0	100.0
0°-180°	9844.0	100.0



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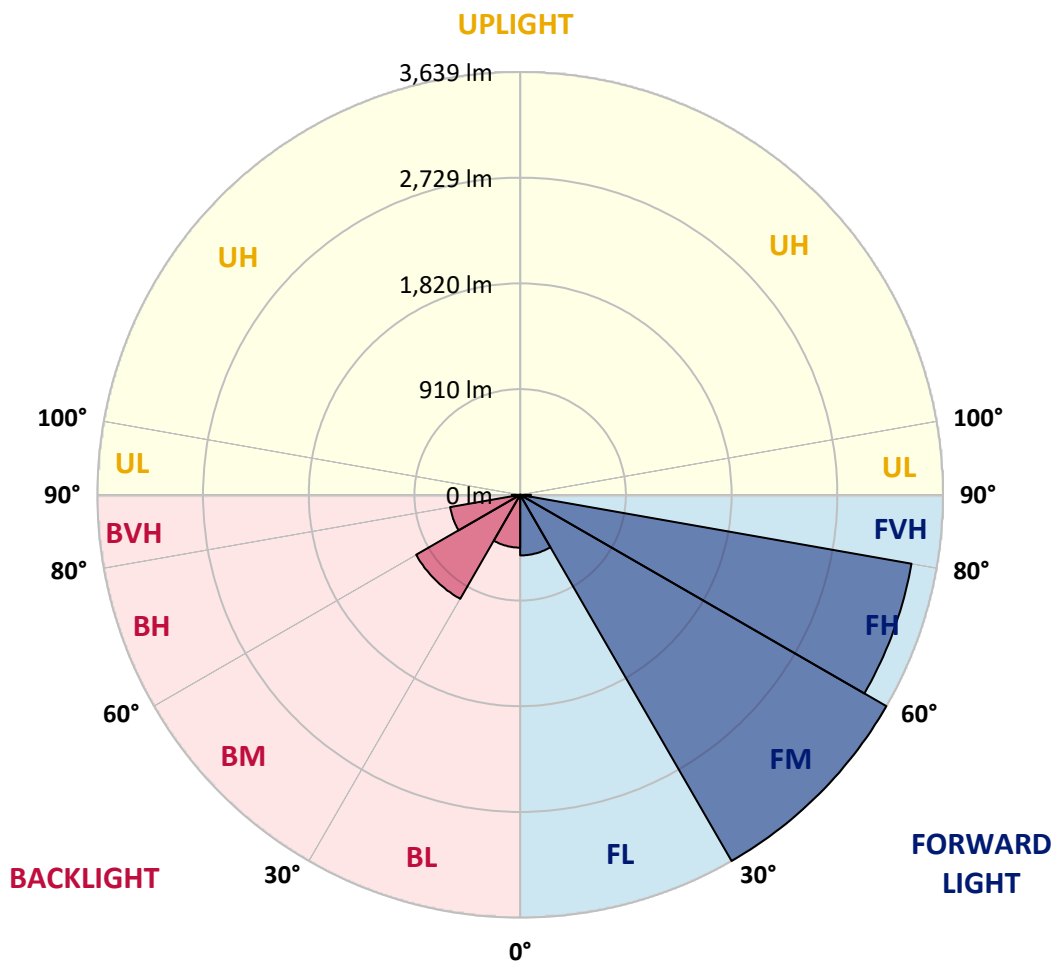
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	521.3	5.3			
FM	(30°-60°)	3639.0	37.0			
FH	(60°-80°)	3419.8	34.7			G2/5000
FVH	(80°-90°)	91.6	0.9			G1/100
BL	(0°-30°)	454.9	4.6	B1/500		
BM	(30°-60°)	1033.8	10.5	B2/2500		
BH	(60°-80°)	612.1	6.2	B2/1000		G2/1000
BVH	(80°-90°)	71.4	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°	1216.3	1216.3	1216.3	1216.3	1216.3	1216.3	1216.3	1216.3	1216.3	1216.3	1216.3
2.5°	1209.4	1209.4	1212.5	1212.5	1212.5	1211.3	1207.5	1208.8	1206.2	1204.3	1201.2
5°	1184.8	1186.1	1189.9	1191.1	1193.0	1193.6	1193.6	1193.0	1193.6	1193.6	1191.7
7.5°	1150.8	1152.0	1156.5	1159.0	1164.6	1169.7	1172.2	1172.2	1175.4	1177.9	1178.5
10°	1130.0	1130.0	1132.5	1132.5	1136.9	1139.4	1147.6	1147.0	1155.8	1164.0	1167.8
12.5°	1127.5	1127.5	1126.2	1121.8	1119.3	1118.6	1126.8	1128.1	1141.3	1155.8	1162.8
15°	1135.7	1135.7	1131.9	1123.0	1113.6	1109.2	1117.4	1119.9	1134.4	1151.4	1162.1
17.5°	1162.1	1161.5	1153.3	1135.7	1119.3	1112.3	1114.9	1117.4	1130.6	1150.1	1163.4
20°	1220.7	1220.7	1203.1	1170.9	1142.6	1126.2	1122.4	1124.3	1133.8	1152.0	1169.1
22.5°	1323.5	1325.4	1293.8	1240.9	1192.4	1157.7	1142.6	1144.5	1148.9	1166.5	1185.4
25°	1474.7	1469.7	1424.9	1349.9	1274.3	1215.1	1184.2	1186.1	1186.1	1202.5	1222.0
27.5°	1634.8	1636.0	1571.8	1491.1	1391.5	1303.3	1254.1	1253.5	1252.9	1268.6	1289.4
30°	1815.7	1816.3	1741.9	1648.7	1534.6	1421.8	1348.0	1347.4	1341.7	1361.3	1388.4
32.5°	2013.5	2012.9	1926.6	1821.3	1694.7	1566.7	1470.9	1470.3	1465.9	1492.4	1525.1
35°	2232.9	2232.9	2147.2	2017.3	1880.6	1738.1	1627.2	1626.6	1629.1	1665.0	1695.9
37.5°	2496.9	2502.6	2399.2	2241.7	2092.3	1940.4	1811.2	1807.5	1788.6	1849.1	1900.1
40°	2772.3	2788.1	2681.0	2496.9	2335.6	2178.7	2036.2	2033.7	2017.3	2081.6	2164.2
42.5°	3070.4	3106.3	2987.2	2799.4	2623.6	2454.1	2311.0	2304.1	2241.1	2341.3	2470.5
45°	3461.2	3484.5	3311.8	3141.6	2975.9	2782.4	2612.3	2575.1	2512.1	2640.6	2808.3
47.5°	3727.1	3715.8	3608.0	3493.9	3387.4	3202.1	2940.6	2893.3	2816.4	2986.6	3171.3
50°	3892.2	3900.4	3839.9	3834.3	3828.6	3699.4	3311.2	3254.4	3165.6	3367.3	3582.8
52.5°	4001.3	3964.1	3974.8	4103.4	4259.0	4197.3	3730.3	3667.2	3575.9	3777.5	4020.8
55°	3955.9	3906.7	4005.7	4259.0	4625.2	4639.0	4190.3	4125.4	4047.3	4213.6	4547.7
57.5°	3768.1	3792.7	3949.0	4301.2	4875.4	5034.8	4719.1	4652.9	4499.1	4668.0	5048.1
60°	3504.0	3553.8	3792.7	4234.4	5050.6	5343.0	5299.5	5255.4	4990.7	5110.4	5573.7
62.5°	3220.4	3269.6	3563.3	4120.4	4971.8	5615.9	5869.2	5842.1	5533.3	5536.5	5907.0
65°	2801.3	2821.5	3121.5	3809.0	4753.1	5862.3	6439.6	6415.6	6052.0	5900.1	6000.3
67.5°	2115.6	2140.9	2387.3	3006.8	4087.6	5728.7	6895.2	6891.4	6363.9	6035.0	5778.5
69°	1562.3	1593.2	1794.2	2334.3	3379.9	5219.5	6916.7	6967.7	6448.4	6021.1	5403.5
70°	1143.2	1178.5	1364.4	1852.8	2815.2	4657.3	6733.3	6842.9	6416.3	5933.5	5111.1
72.5°	485.9	497.9	589.3	836.3	1428.1	2808.3	5515.0	5745.7	5794.9	5316.5	3993.1
75°	304.4	308.2	344.1	429.2	635.3	1161.5	3571.4	3885.9	4326.5	4124.8	2673.4
77.5°	229.4	232.6	253.3	295.6	394.5	433.6	1656.8	1975.7	2478.0	2426.3	1330.4
80°	175.8	177.7	191.6	214.9	277.9	271.6	537.6	675.6	1034.2	912.6	470.8
82.5°	138.0	138.6	150.6	155.0	194.1	182.8	269.7	300.6	417.8	347.3	230.0
85°	122.3	124.2	136.1	113.4	124.2	110.3	148.1	160.7	221.8	209.2	87.0
87.5°	62.4	65.5	114.1	97.1	62.4	52.3	64.9	70.0	90.1	97.7	42.2
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°	1216.3	1216.3	1216.3	1216.3	1216.3	1216.3	1216.3	1216.3	1216.3	1216.3	1216.3
2.5°	1201.8	1202.5	1204.3	1207.5	1212.5	1218.8	1226.4	1234.0	1238.4	1241.5	1240.3
5°	1191.7	1192.4	1196.2	1201.8	1208.1	1217.6	1230.2	1239.6	1246.6	1251.0	1250.4
7.5°	1179.1	1181.0	1188.6	1194.9	1203.7	1211.3	1221.4	1230.2	1237.1	1241.5	1240.9
10°	1169.7	1171.6	1181.0	1189.2	1196.8	1198.0	1196.2	1193.6	1193.0	1196.2	1194.9
12.5°	1165.3	1169.1	1177.9	1183.6	1180.4	1168.4	1154.6	1148.9	1147.0	1153.3	1153.9
15°	1166.5	1169.7	1177.2	1173.5	1156.5	1136.3	1128.7	1133.1	1136.9	1140.7	1141.3
17.5°	1169.7	1171.6	1173.5	1159.6	1135.7	1122.4	1119.9	1115.5	1104.1	1097.8	1097.2
20°	1175.4	1177.9	1174.7	1152.7	1131.2	1113.6	1083.3	1056.2	1030.4	1016.5	1010.9
22.5°	1194.9	1196.8	1187.3	1165.9	1133.1	1075.8	1014.7	968.0	928.3	906.9	898.7
25°	1233.3	1236.5	1223.3	1196.2	1110.4	1010.2	923.9	860.9	811.1	785.3	778.3
27.5°	1300.8	1303.9	1289.4	1218.8	1057.5	922.6	818.0	755.6	712.8	690.7	687.6
30°	1401.6	1406.0	1392.8	1218.2	976.8	811.1	714.7	678.1	653.5	638.4	637.8
32.5°	1541.5	1557.9	1503.7	1196.8	877.3	698.3	636.5	623.9	611.9	601.9	601.9
35°	1719.2	1757.7	1613.4	1152.0	767.6	621.4	593.0	581.1	565.9	555.2	554.0
37.5°	1931.6	1991.5	1691.5	1072.6	673.1	584.2	566.6	547.0	523.1	502.3	497.2
40°	2223.4	2237.3	1730.0	943.4	602.5	564.0	542.0	517.4	487.2	463.8	461.3
42.5°	2516.5	2471.1	1722.4	804.8	562.2	545.8	516.8	489.7	462.6	443.0	443.0
45°	2849.8	2675.3	1665.0	665.5	525.6	525.0	493.5	467.6	446.8	432.3	429.2
47.5°	3168.7	2858.7	1566.1	562.8	487.8	504.2	478.3	457.5	438.6	424.8	422.2
50°	3555.7	3071.1	1460.8	490.9	451.2	485.9	472.0	461.3	443.0	419.1	416.6
52.5°	3940.1	3319.4	1379.5	436.7	419.1	471.4	475.8	477.1	460.1	413.4	410.3
55°	4352.9	3584.7	1293.8	394.5	392.6	464.5	484.6	483.4	475.2	414.7	409.6
57.5°	4745.5	3851.3	1165.9	364.9	371.8	457.5	486.5	466.4	451.9	421.0	412.8
60°	5070.7	4071.8	978.1	344.1	354.2	443.7	473.9	443.7	419.1	419.7	412.2
62.5°	5228.9	4133.6	748.1	320.2	339.7	421.0	455.6	426.7	404.0	422.2	417.8
65°	5108.6	3957.8	533.2	298.1	322.0	394.5	444.9	412.2	396.4	434.9	429.8
67.5°	4676.2	3478.8	387.0	278.6	305.0	367.4	424.8	398.9	388.8	444.3	433.0
69°	4216.8	3003.6	335.3	267.2	293.1	352.9	411.5	392.0	383.2	431.1	414.7
70°	3834.9	2637.5	309.4	260.3	283.0	344.7	401.4	387.6	377.5	415.3	395.8
72.5°	2749.6	1704.7	260.3	239.5	256.5	326.5	379.4	371.2	356.1	375.0	362.4
75°	1661.3	889.9	221.2	218.1	228.8	301.2	353.6	343.5	328.3	330.2	323.9
77.5°	763.2	410.9	185.3	192.8	199.8	269.7	322.0	310.7	296.8	291.8	292.4
80°	334.6	240.1	155.0	164.5	168.3	242.6	288.0	275.4	260.3	287.4	266.6
82.5°	180.9	139.3	121.0	127.3	138.0	211.1	250.2	233.8	219.3	255.2	206.1
85°	73.1	71.2	81.9	88.2	95.8	151.9	209.2	192.2	174.6	156.3	152.5
87.5°	31.5	34.0	40.3	42.9	51.0	94.5	140.5	122.9	123.5	105.9	104.0
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)