

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: P270391

Luminaire Tested: **NAV-AF-02-D-UNV-T3R-7027-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270391
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24250)
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-T3R-7027-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 2700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8695.9 lumens
Efficiency: N/A
Efficacy: 102.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Medium - Full Cutoff
BUG Rating: B1 - U0 - G2

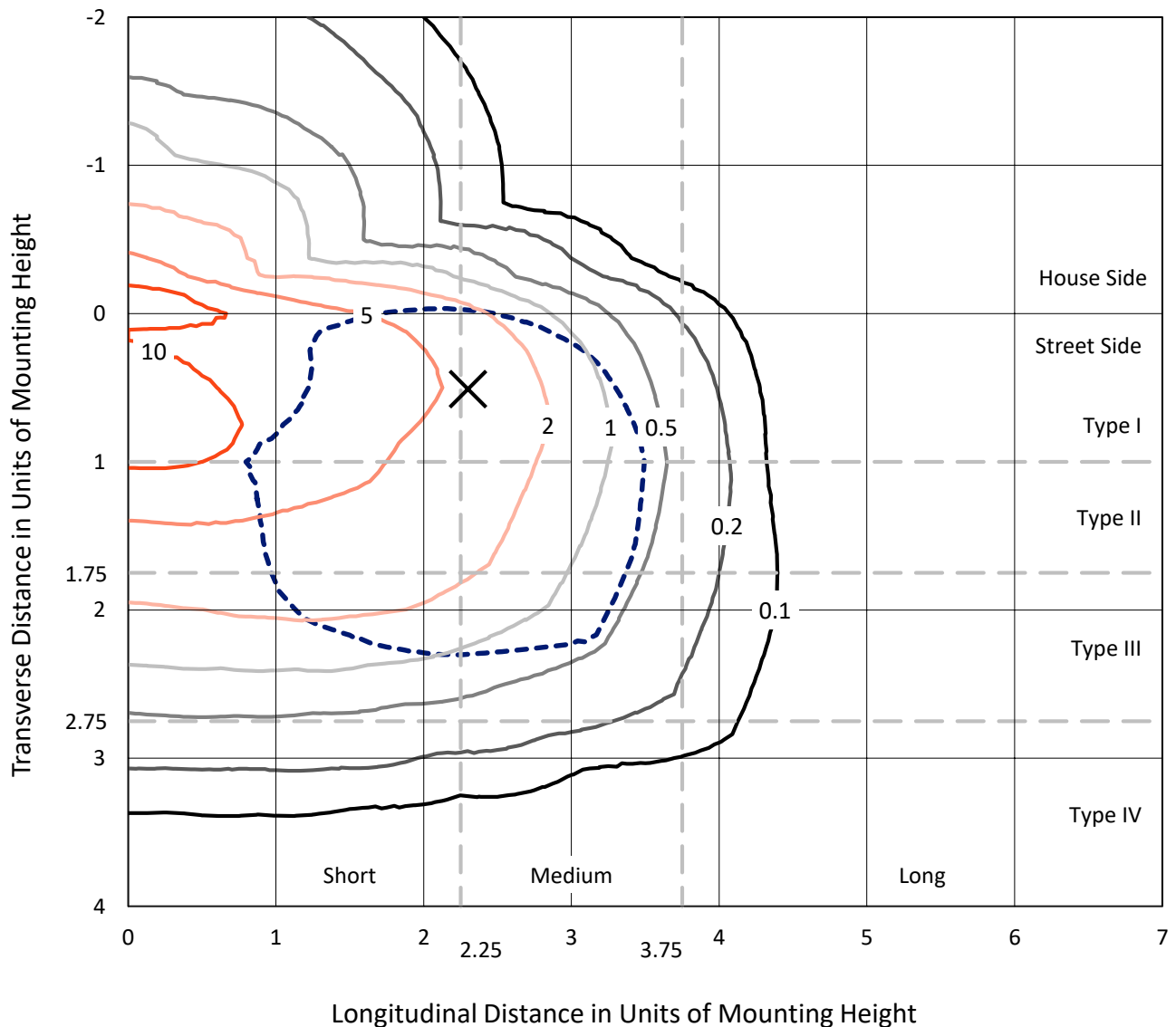
Input Watts (W): 85
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

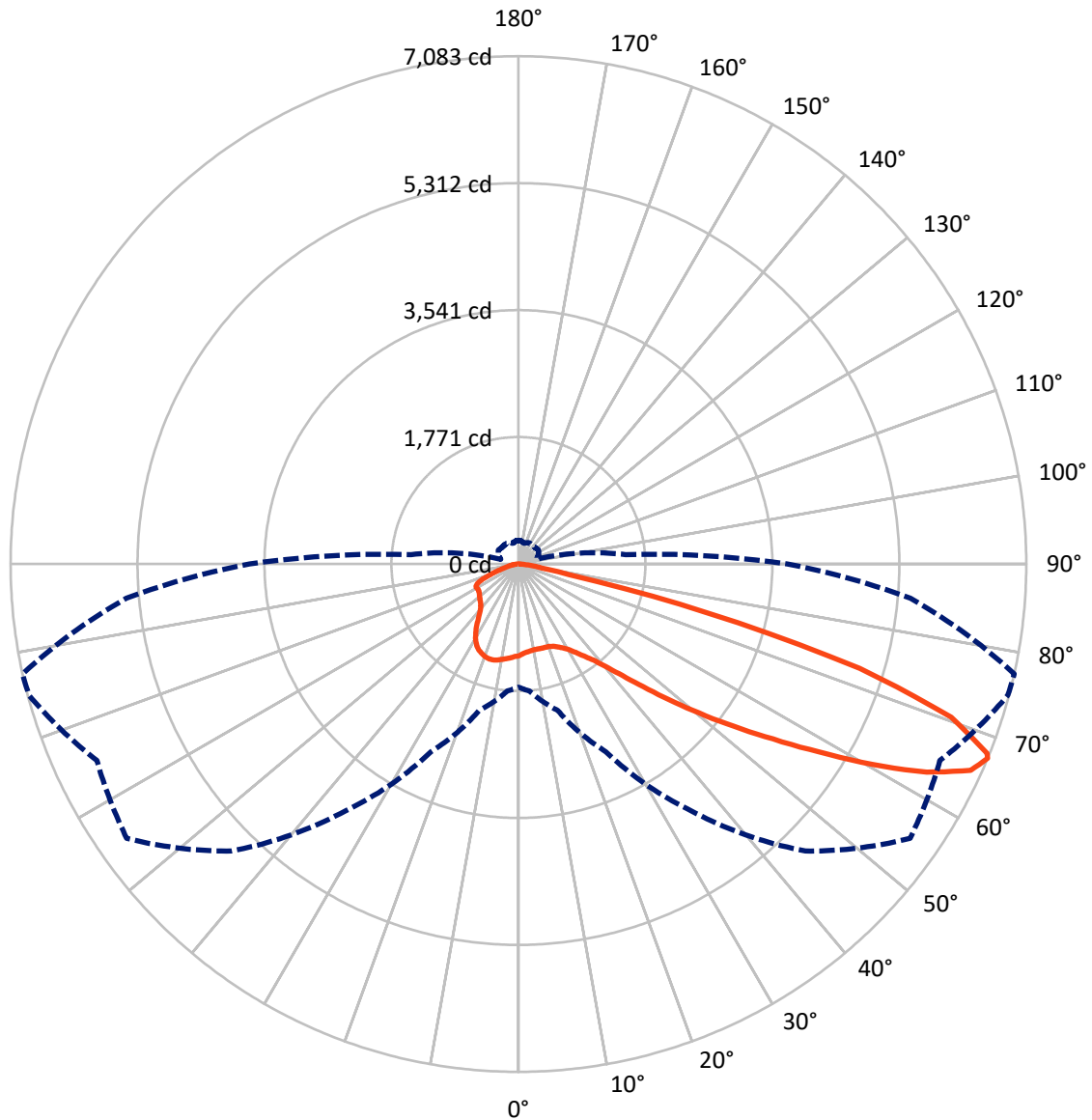


Based on 10 foot mounting height. Maximum calculated value = 15.4 fc
 Type III - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1494.4	0.0	1494.4
	% Fixture	17.2	0.0	17.2
Street Side	Lumens	7201.5	0.0	7201.5
	% Fixture	82.8	0.0	82.8
Total	Lumens	8695.9	0.0	8695.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.0	1.3
10°-20°	315.7	3.6
20°-30°	536.3	6.2
30°-40°	858.0	9.9
40°-50°	1320.9	15.2
50°-60°	1832.7	21.1
60°-70°	2444.7	28.1
70°-80°	1163.4	13.4
80°-90°	110.2	1.3
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°	8695.9	100.0
0°-180°	8695.9	100.0



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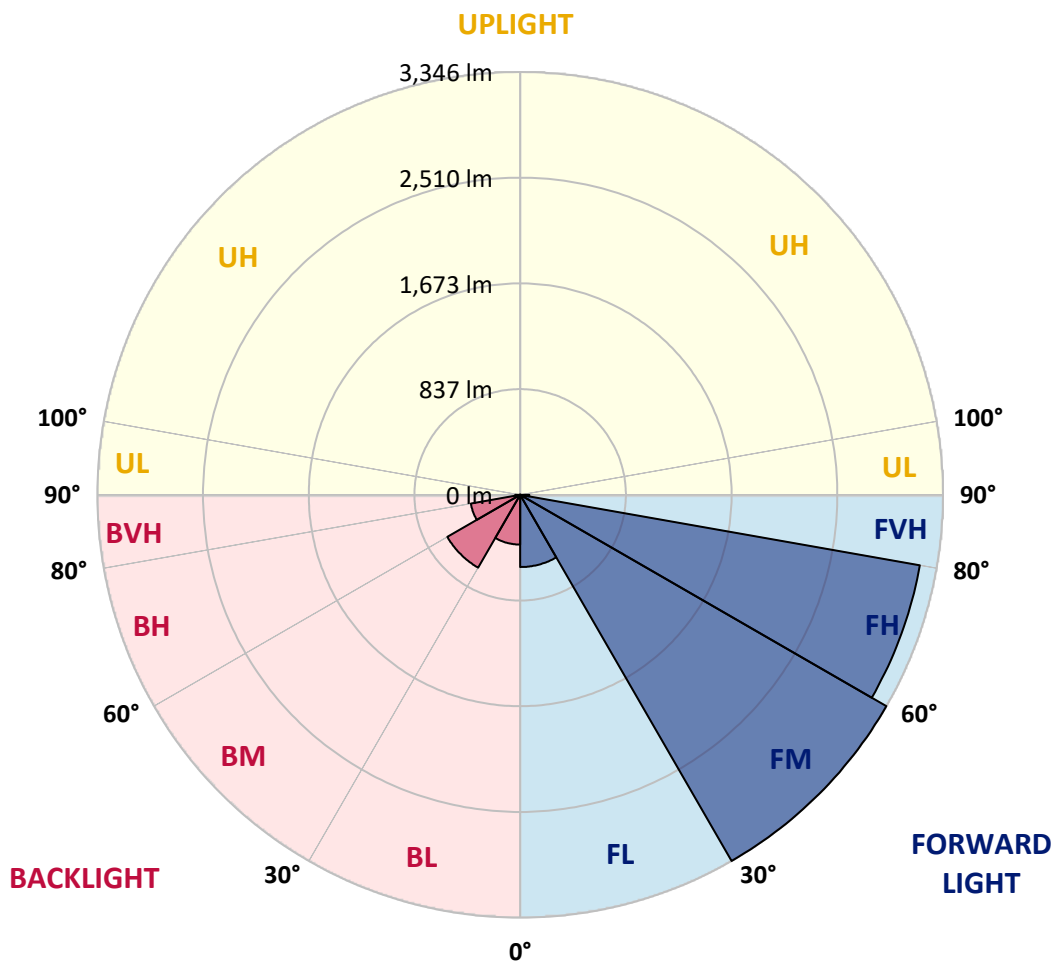
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	571.8	6.6			
FM	(30°-60°)	3346.3	38.5			
FH	(60°-80°)	3211.9	36.9			G2/5000
FVH	(80°-90°)	71.5	0.8			G1/100
BL	(0°-30°)	394.2	4.5	B1/500		
BM	(30°-60°)	665.4	7.7	B1/1000		
BH	(60°-80°)	396.2	4.6	B1/500		G1/500
BVH	(80°-90°)	38.6	0.4			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 III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	1279.8	1279.8	1279.8	1279.8	1279.8	1279.8	1279.8	1279.8	1279.8	1279.8	1279.8
2.5°	1147.6	1153.0	1153.6	1169.1	1176.2	1193.8	1213.3	1230.4	1245.4	1250.8	1260.4
5°	1032.5	1032.5	1034.2	1044.4	1064.3	1092.8	1133.1	1177.1	1223.4	1234.7	1263.1
7.5°	972.3	973.5	974.5	984.7	1000.4	1025.5	1065.8	1126.0	1202.9	1221.8	1271.7
10°	977.7	976.1	970.8	968.6	975.0	991.2	1026.1	1087.8	1185.8	1214.8	1287.4
12.5°	1062.2	1058.9	1041.1	1015.4	991.6	985.8	1010.0	1068.5	1177.7	1214.8	1313.7
15°	1206.8	1208.8	1173.9	1120.1	1058.4	1016.4	1013.2	1061.5	1175.1	1218.0	1344.4
17.5°	1394.9	1396.0	1347.5	1269.7	1167.0	1080.4	1035.2	1061.5	1175.1	1221.2	1373.9
20°	1594.9	1587.2	1532.5	1434.7	1301.4	1169.1	1075.6	1068.1	1178.2	1226.0	1401.8
22.5°	1766.2	1759.3	1701.7	1599.2	1446.5	1273.8	1129.9	1089.6	1196.0	1245.9	1441.2
25°	1916.3	1920.5	1864.6	1749.1	1591.0	1392.2	1211.0	1139.1	1233.1	1281.9	1489.4
27.5°	2098.4	2090.4	2025.9	1915.6	1739.8	1514.7	1312.7	1201.4	1277.1	1325.4	1548.6
30°	2309.2	2305.4	2218.4	2104.9	1903.9	1651.8	1413.2	1268.5	1334.6	1385.1	1622.8
32.5°	2565.0	2564.4	2471.0	2331.7	2088.2	1806.6	1531.9	1360.5	1418.6	1469.5	1721.2
35°	2854.8	2854.2	2757.4	2573.6	2300.6	1978.1	1671.7	1472.2	1522.3	1575.9	1838.3
37.5°	3055.8	3052.5	3002.0	2823.6	2535.5	2177.4	1846.3	1622.8	1639.9	1700.1	1979.7
40°	3094.4	3113.7	3157.4	3052.0	2791.8	2399.0	2021.5	1784.6	1800.7	1878.0	2157.5
42.5°	3052.5	3077.9	3222.4	3252.0	3048.2	2667.1	2240.9	2008.7	2029.1	2125.3	2366.7
45°	3016.0	3038.0	3219.2	3362.6	3301.5	2959.6	2514.4	2282.2	2321.0	2440.2	2605.4
47.5°	2953.5	2974.1	3155.7	3382.6	3446.0	3241.2	2843.9	2611.3	2677.8	2822.5	2877.4
50°	2950.5	2959.6	3069.1	3316.0	3495.9	3455.2	3208.9	2996.0	3098.3	3264.8	3178.4
52.5°	2868.6	2932.6	3032.0	3209.5	3497.0	3579.8	3568.5	3418.1	3575.6	3759.9	3508.3
55°	2368.8	2442.4	2908.4	3157.4	3490.6	3686.7	3896.9	3866.8	4113.0	4307.1	3878.2
57.5°	2211.8	2243.1	2551.5	3173.0	3544.4	3863.6	4225.4	4349.1	4727.9	4939.7	4321.6
60°	2168.9	2201.7	2480.1	3180.4	3690.0	4185.7	4670.9	4893.4	5450.8	5675.6	4825.2
62.5°	2121.0	2163.5	2485.4	3187.5	3945.9	4661.8	5262.2	5484.2	6193.2	6393.6	5297.1
65°	1981.2	2037.6	2386.0	3143.3	4225.8	5259.5	6043.7	6100.2	6806.5	6933.8	5582.1
67°	1716.3	1778.0	2113.0	2888.6	4200.1	5662.1	6668.8	6485.7	7067.1	7082.7	5489.6
67.5°	1632.4	1696.4	2020.5	2782.7	4126.5	5714.7	6779.6	6538.9	7065.0	7047.8	5403.6
70°	1099.2	1171.2	1430.8	2043.0	3310.0	5318.7	6752.7	6374.9	6601.7	6404.5	4642.5
72.5°	545.6	547.7	713.9	1119.1	2005.5	3814.7	5633.1	5453.6	5351.5	4978.9	3406.7
75°	262.8	267.6	337.0	494.4	845.6	1969.4	3841.6	3679.7	3133.2	2712.8	1705.1
77.5°	200.5	205.4	261.8	322.0	352.7	642.3	1902.8	1537.8	907.8	725.1	480.6
80°	154.8	163.9	221.0	247.3	233.3	257.5	598.2	470.8	353.2	324.1	238.1
82.5°	120.9	126.3	187.6	187.6	161.2	172.6	278.5	271.9	219.2	197.7	127.9
85°	85.5	96.2	151.1	139.7	105.9	107.0	166.6	159.7	112.8	90.9	49.9
87.5°	38.2	48.9	107.4	91.4	56.5	43.6	68.4	58.6	44.6	34.3	23.0
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°	1279.8	1279.8	1279.8	1279.8	1279.8	1279.8	1279.8	1279.8	1279.8	1279.8	1279.8
2.5°	1271.2	1279.8	1293.3	1301.4	1312.1	1316.3	1320.7	1328.1	1334.2	1332.5	1329.9
5°	1283.0	1297.5	1314.2	1319.6	1319.6	1314.2	1310.9	1311.5	1309.9	1308.8	1305.5
7.5°	1300.2	1320.1	1331.9	1326.5	1309.9	1289.0	1269.0	1257.3	1245.9	1238.9	1241.1
10°	1324.5	1346.5	1347.0	1323.4	1283.6	1237.9	1198.7	1173.4	1149.2	1138.4	1141.7
12.5°	1359.3	1381.5	1362.5	1311.5	1241.6	1170.1	1098.2	1045.9	999.3	988.0	984.7
15°	1397.0	1414.2	1372.3	1286.3	1181.5	1063.8	942.9	864.9	812.6	803.5	800.4
17.5°	1429.8	1439.4	1367.4	1241.1	1086.3	900.9	760.1	707.3	696.6	701.9	701.9
20°	1458.8	1455.6	1346.5	1171.2	936.4	720.4	638.5	638.1	652.4	666.0	667.0
22.5°	1495.4	1470.0	1313.1	1067.5	757.4	601.0	587.0	601.0	617.0	632.0	633.8
25°	1538.8	1486.2	1268.5	919.7	609.1	545.6	551.5	563.2	573.5	585.3	585.9
27.5°	1582.5	1498.6	1205.6	746.0	528.4	510.1	516.5	521.3	524.2	531.5	531.5
30°	1632.9	1508.3	1114.7	597.7	491.4	478.9	475.2	473.0	475.2	485.4	486.0
32.5°	1696.4	1525.4	990.7	512.8	474.0	456.9	437.6	426.8	434.3	452.6	455.8
35°	1768.5	1545.9	841.7	478.9	468.1	446.2	410.6	393.9	396.7	413.3	416.1
37.5°	1858.8	1572.3	695.0	470.8	474.0	445.1	398.3	374.7	362.8	363.4	362.8
40°	1974.3	1598.5	578.9	473.0	487.1	447.7	392.4	355.3	330.5	331.7	333.8
42.5°	2095.1	1615.7	505.2	479.4	502.6	451.5	390.3	336.4	314.9	333.2	349.9
45°	2236.6	1610.9	467.1	485.4	514.4	453.1	382.1	334.3	316.7	371.4	402.6
47.5°	2399.0	1590.0	445.6	488.0	517.7	452.6	376.3	341.4	330.0	425.2	460.7
50°	2575.3	1557.1	428.4	483.7	515.9	450.4	382.7	349.9	335.3	436.9	464.5
52.5°	2768.1	1527.1	410.6	474.0	507.9	444.0	390.8	346.1	320.3	402.6	423.6
55°	2996.7	1520.1	390.8	457.4	494.4	436.9	386.5	334.3	303.6	356.8	369.8
57.5°	3257.9	1563.6	365.0	436.9	476.2	423.0	376.3	327.9	297.8	324.6	331.7
60°	3589.4	1659.8	337.6	415.5	453.6	402.0	367.0	329.5	299.3	319.8	321.5
62.5°	3848.6	1746.3	312.8	389.1	423.6	376.7	357.4	331.1	304.3	326.3	323.6
65°	3942.7	1703.9	282.2	349.9	381.2	348.8	344.1	332.2	304.3	330.0	324.1
67°	3749.6	1501.2	253.1	310.6	340.7	324.1	331.1	327.9	298.9	329.5	319.3
67.5°	3657.8	1429.8	245.6	304.3	330.0	316.7	327.9	325.7	297.2	328.4	316.7
70°	3016.5	1025.5	207.5	255.3	276.3	279.0	307.9	311.7	284.4	308.6	287.0
72.5°	2146.3	641.7	179.0	197.7	223.0	238.7	281.1	292.9	267.2	268.2	250.4
75°	1062.2	344.5	159.7	152.6	173.6	198.9	245.1	267.2	241.9	223.6	217.7
77.5°	358.6	195.1	134.9	123.1	134.9	159.7	203.1	233.3	213.3	189.3	185.4
80°	185.4	141.9	105.3	99.0	106.4	123.6	159.1	194.0	182.3	183.3	151.1
82.5°	115.5	86.5	75.7	75.3	80.6	94.6	117.1	157.6	156.5	133.8	97.2
85°	53.8	49.9	48.4	49.9	51.7	53.8	76.4	112.4	118.8	72.0	64.0
87.5°	22.5	22.1	19.4	21.0	23.0	22.5	30.6	47.8	66.7	45.2	41.4
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)