

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: P196808

Luminaire Tested: **NAV-AF-02-D-UNV-T3R-7030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196808
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-7030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 3000K, 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: 9680.4 lumens
Efficiency: N/A
Efficacy: 113.9 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

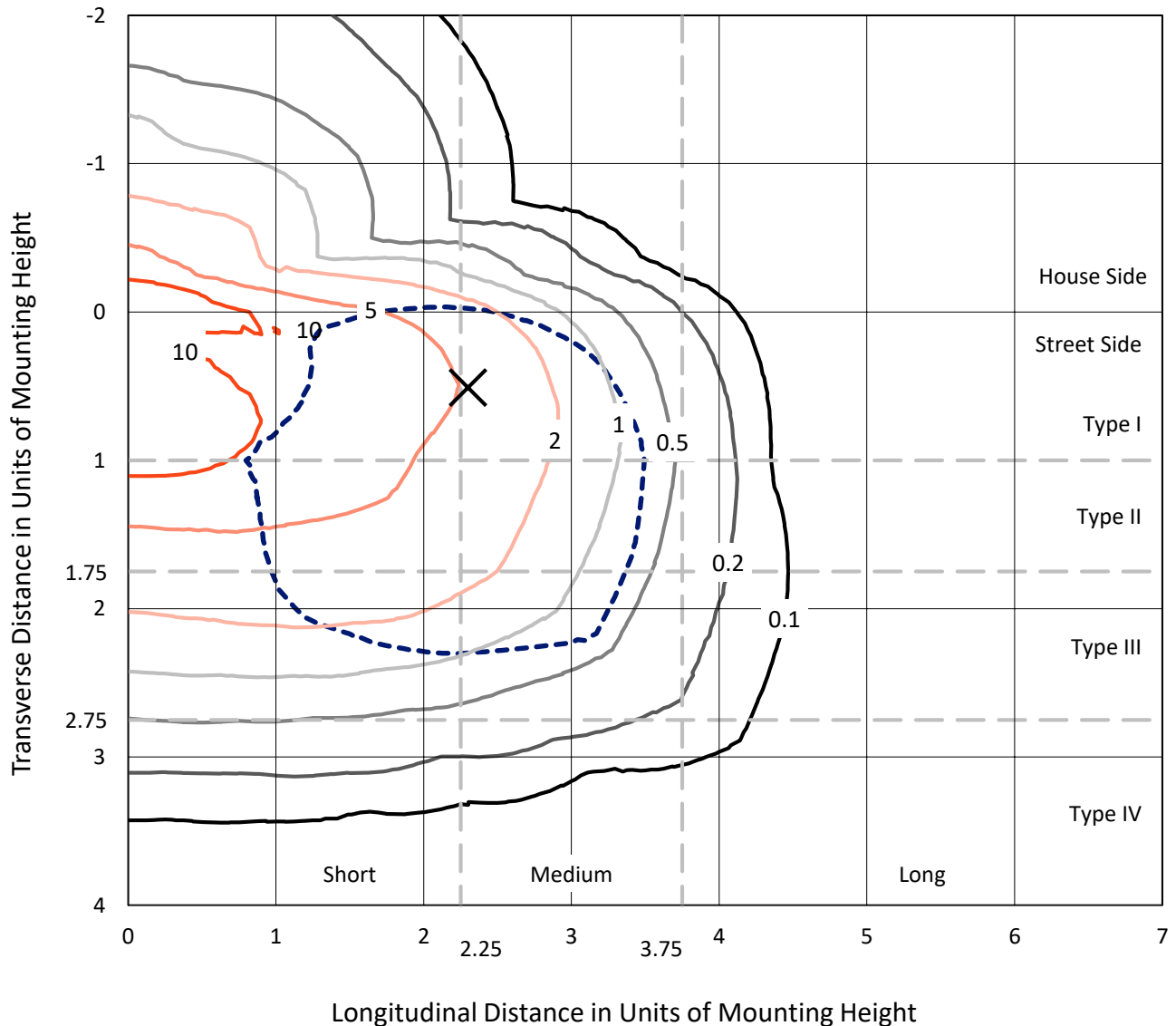


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Iso-Footcandle Lines of Horizontal Illumination

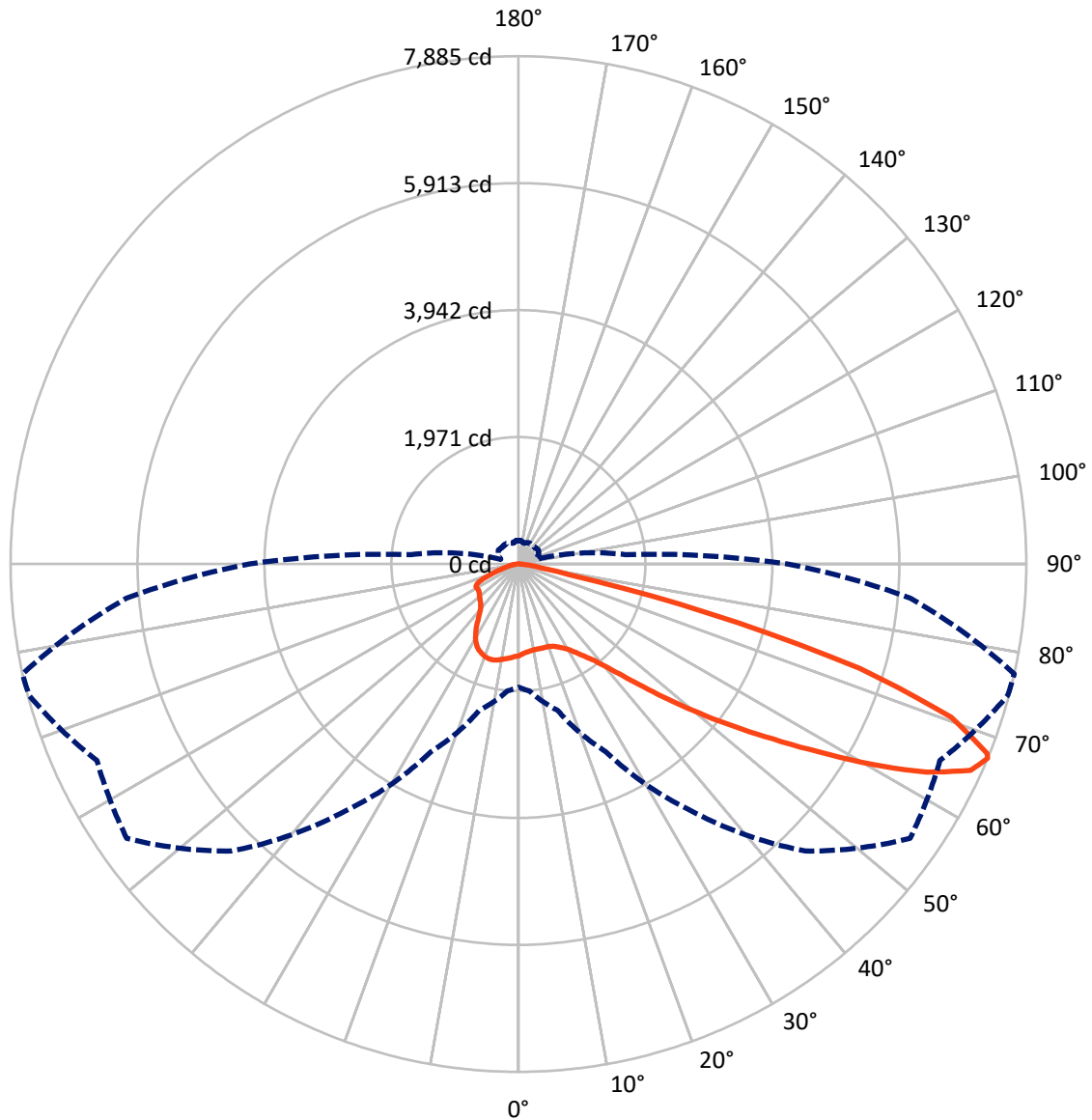
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 17.1 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	1663.5	0.0	1663.5
	% Fixture	17.2	0.0	17.2
Street Side	Lumens	8016.8	0.0	8016.8
	% Fixture	82.8	0.0	82.8
Total	Lumens	9680.4	0.0	9680.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.9	1.3
10°-20°	351.4	3.6
20°-30°	597.1	6.2
30°-40°	955.2	9.9
40°-50°	1470.5	15.2
50°-60°	2040.1	21.1
60°-70°	2721.4	28.1
70°-80°	1295.1	13.4
80°-90°	122.6	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°	9680.4	100.0
0°-180°	9680.4	100.0



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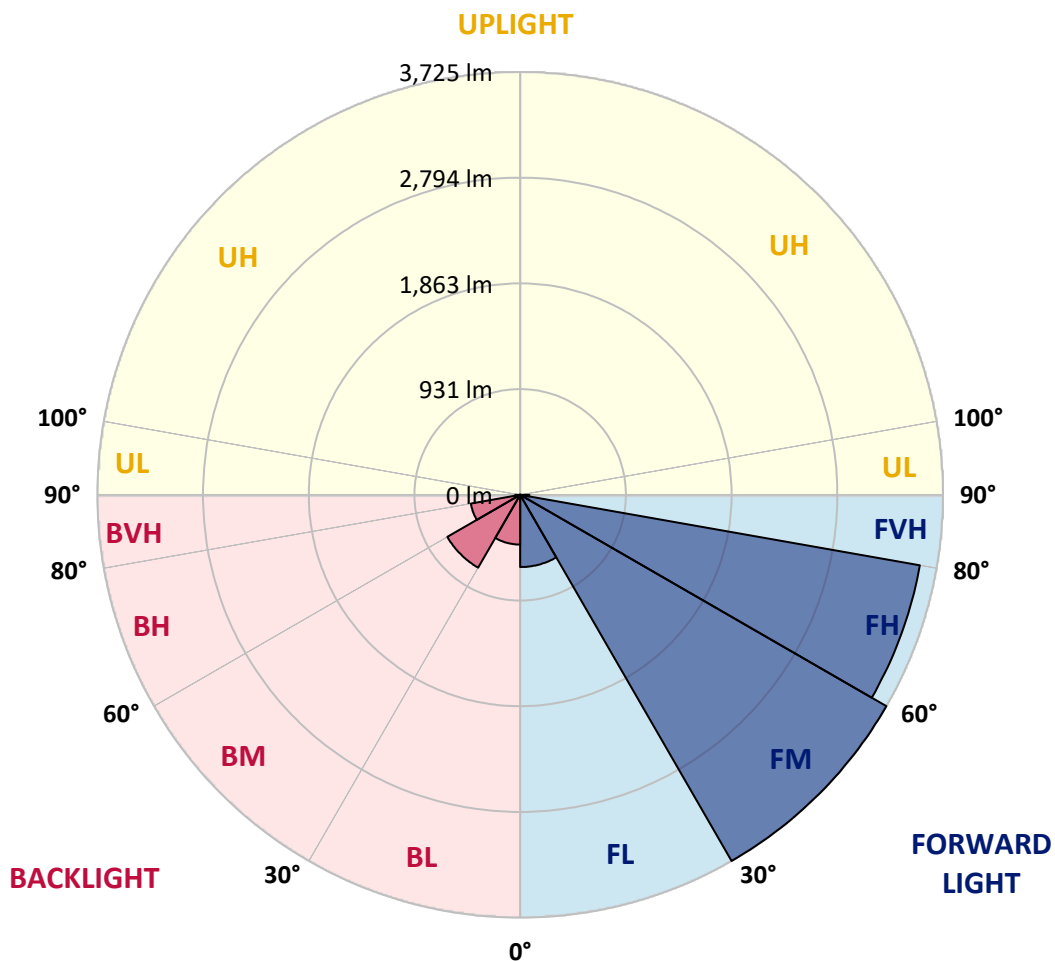
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	636.6	6.6			
FM (30°-60°)	3725.1	38.5			
FH (60°-80°)	3575.5	36.9			G2/5000
FVH (80°-90°)	79.6	0.8			G1/100
BL (0°-30°)	438.8	4.5	B1/500		
BM (30°-60°)	740.7	7.7	B1/1000		
BH (60°-80°)	441.1	4.6	B1/500		G1/500
BVH (80°-90°)	43.0	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°	1424.7	1424.7	1424.7	1424.7	1424.7	1424.7	1424.7	1424.7	1424.7	1424.7	1424.7
2.5°	1277.5	1283.5	1284.2	1301.4	1309.3	1328.9	1350.6	1369.7	1386.4	1392.4	1403.1
5°	1149.4	1149.4	1151.3	1162.6	1184.8	1216.5	1261.4	1310.4	1361.9	1374.5	1406.1
7.5°	1082.4	1083.7	1084.8	1096.2	1113.6	1141.6	1186.5	1253.5	1339.1	1360.1	1415.7
10°	1088.4	1086.6	1080.7	1078.3	1085.4	1103.4	1142.3	1211.0	1320.0	1352.3	1433.1
12.5°	1182.4	1178.8	1159.0	1130.3	1103.9	1097.4	1124.3	1189.5	1311.0	1352.3	1462.4
15°	1343.4	1345.7	1306.8	1246.9	1178.2	1131.5	1127.9	1181.7	1308.1	1355.9	1496.6
17.5°	1552.8	1554.0	1500.1	1413.4	1299.1	1202.7	1152.4	1181.7	1308.1	1359.5	1529.4
20°	1775.4	1766.9	1706.0	1597.1	1448.7	1301.4	1197.4	1189.0	1311.6	1364.8	1560.5
22.5°	1966.2	1958.5	1894.4	1780.2	1610.2	1418.0	1257.8	1212.9	1331.4	1387.0	1604.3
25°	2133.2	2137.9	2075.7	1947.1	1771.1	1549.8	1348.1	1268.0	1372.7	1427.0	1658.0
27.5°	2336.0	2327.0	2255.2	2132.5	1936.8	1686.2	1461.3	1337.4	1421.7	1475.5	1723.9
30°	2570.6	2566.4	2469.5	2343.2	2119.4	1838.8	1573.2	1412.1	1485.7	1541.9	1806.5
32.5°	2855.4	2854.7	2750.7	2595.7	2324.6	2011.1	1705.3	1514.5	1579.2	1635.9	1916.0
35°	3178.0	3177.3	3069.6	2865.0	2561.0	2202.0	1860.9	1638.9	1694.6	1754.3	2046.4
37.5°	3401.7	3398.1	3341.8	3143.2	2822.5	2423.9	2055.3	1806.5	1825.6	1892.6	2203.8
40°	3444.7	3466.2	3514.8	3397.5	3107.9	2670.6	2250.4	1986.6	2004.5	2090.6	2401.8
42.5°	3398.1	3426.3	3587.2	3620.1	3393.3	2969.0	2494.6	2236.1	2258.8	2365.9	2634.6
45°	3357.4	3381.9	3583.6	3743.3	3675.2	3294.6	2799.1	2540.6	2583.8	2716.5	2900.3
47.5°	3287.9	3310.8	3513.0	3765.5	3836.1	3608.1	3165.9	2906.9	2981.0	3142.0	3203.1
50°	3284.5	3294.6	3416.6	3691.4	3891.7	3846.3	3572.2	3335.2	3449.0	3634.4	3538.2
52.5°	3193.4	3264.6	3375.3	3572.8	3892.9	3985.1	3972.5	3805.0	3980.4	4185.5	3905.5
55°	2637.0	2718.9	3237.7	3514.8	3885.8	4104.1	4338.1	4304.6	4578.6	4794.7	4317.2
57.5°	2462.2	2497.0	2840.4	3532.2	3945.6	4301.0	4703.7	4841.4	5263.1	5498.9	4810.8
60°	2414.4	2450.9	2760.9	3540.5	4107.7	4659.5	5199.7	5447.4	6067.9	6318.1	5371.5
62.5°	2361.1	2408.4	2766.8	3548.3	4392.6	5189.6	5857.9	6105.1	6894.3	7117.4	5896.8
65°	2205.5	2268.3	2656.1	3499.2	4704.2	5854.9	6727.9	6790.8	7577.0	7718.8	6214.0
67°	1910.6	1979.3	2352.2	3215.6	4675.6	6303.1	7423.8	7219.9	7867.2	7884.5	6111.1
67.5°	1817.2	1888.4	2249.2	3097.7	4593.6	6361.7	7547.1	7279.1	7864.8	7845.7	6015.3
70°	1223.6	1303.8	1592.8	2274.3	3684.7	5920.8	7517.2	7096.6	7349.1	7129.5	5168.1
72.5°	607.4	609.7	794.7	1245.8	2232.5	4246.6	6270.8	6071.0	5957.3	5542.6	3792.4
75°	292.6	297.9	375.2	550.4	941.3	2192.4	4276.5	4096.3	3487.9	3019.9	1898.1
77.5°	223.2	228.6	291.4	358.4	392.6	715.0	2118.2	1711.9	1010.6	807.2	535.0
80°	172.3	182.5	246.0	275.3	259.7	286.6	665.9	524.1	393.2	360.8	265.1
82.5°	134.6	140.6	208.8	208.8	179.5	192.1	310.0	302.7	244.0	220.1	142.4
85°	95.2	107.1	168.2	155.5	117.9	119.1	185.5	177.8	125.6	101.2	55.6
87.5°	42.5	54.4	119.6	101.7	62.9	48.5	76.1	65.2	49.7	38.2	25.6
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°	1424.7	1424.7	1424.7	1424.7	1424.7	1424.7	1424.7	1424.7	1424.7	1424.7	1424.7
2.5°	1415.1	1424.7	1439.7	1448.7	1460.6	1465.3	1470.2	1478.5	1485.2	1483.3	1480.4
5°	1428.2	1444.4	1463.0	1469.0	1469.0	1463.0	1459.3	1460.0	1458.2	1457.0	1453.3
7.5°	1447.4	1469.5	1482.7	1476.7	1458.2	1434.9	1412.7	1399.6	1387.0	1379.2	1381.6
10°	1474.4	1498.9	1499.5	1473.2	1428.9	1378.0	1334.4	1306.2	1279.3	1267.3	1270.9
12.5°	1513.2	1537.9	1516.8	1460.0	1382.2	1302.6	1222.5	1164.3	1112.4	1099.8	1096.2
15°	1555.1	1574.3	1527.7	1431.9	1315.2	1184.2	1049.6	962.8	904.6	894.5	891.0
17.5°	1591.7	1602.4	1522.2	1381.6	1209.3	1002.9	846.1	787.4	775.5	781.4	781.4
20°	1623.9	1620.4	1498.9	1303.8	1042.4	801.9	710.8	710.3	726.3	741.4	742.5
22.5°	1664.7	1636.4	1461.8	1188.3	843.1	669.0	653.4	669.0	686.9	703.6	705.5
25°	1713.0	1654.5	1412.1	1023.8	678.0	607.4	613.9	627.0	638.4	651.6	652.2
27.5°	1761.6	1668.3	1342.1	830.5	588.2	567.8	575.0	580.3	583.5	591.7	591.7
30°	1817.8	1679.0	1240.9	665.4	547.0	533.1	529.0	526.5	529.0	540.3	541.0
32.5°	1888.4	1698.1	1102.8	570.9	527.7	508.6	487.1	475.1	483.5	503.8	507.4
35°	1968.7	1720.9	937.0	533.1	521.1	496.7	457.1	438.5	441.6	460.1	463.2
37.5°	2069.2	1750.3	773.7	524.1	527.7	495.5	443.4	417.1	403.9	404.5	403.9
40°	2197.8	1779.5	644.4	526.5	542.2	498.4	436.8	395.5	367.9	369.2	371.6
42.5°	2332.3	1798.6	562.4	533.7	559.5	502.6	434.5	374.5	350.6	370.9	389.5
45°	2489.8	1793.3	520.0	540.3	572.6	504.4	425.4	372.1	352.5	413.4	448.2
47.5°	2670.6	1770.0	496.0	543.3	576.3	503.8	418.9	380.0	367.4	473.3	512.8
50°	2866.8	1733.4	476.9	538.5	574.3	501.4	426.0	389.5	373.3	486.4	517.1
52.5°	3081.5	1700.0	457.1	527.7	565.4	494.3	435.0	385.3	356.6	448.2	471.5
55°	3335.9	1692.2	435.0	509.2	550.4	486.4	430.3	372.1	338.0	397.2	411.7
57.5°	3626.7	1740.6	406.3	486.4	530.1	470.9	418.9	365.0	331.5	361.4	369.2
60°	3995.8	1847.7	375.8	462.5	505.0	447.5	408.6	366.8	333.2	356.0	357.9
62.5°	4284.3	1944.0	348.2	433.2	471.5	419.4	397.9	368.6	338.7	363.2	360.2
65°	4389.0	1896.8	314.1	389.5	424.3	388.3	383.0	369.8	338.7	367.4	360.8
67°	4174.1	1671.2	281.8	345.8	379.3	360.8	368.6	365.0	332.7	366.8	355.4
67.5°	4071.9	1591.7	273.4	338.7	367.4	352.5	365.0	362.6	330.9	365.6	352.5
70°	3358.0	1141.6	231.0	284.2	307.6	310.6	342.8	347.0	316.6	343.5	319.5
72.5°	2389.3	714.4	199.3	220.1	248.3	265.7	312.9	326.1	297.4	298.6	278.8
75°	1182.4	383.5	177.8	169.9	193.3	221.4	272.8	297.4	269.3	248.9	242.3
77.5°	399.2	217.2	150.2	137.0	150.2	177.8	226.1	259.7	237.5	210.7	206.4
80°	206.4	158.0	117.2	110.2	118.4	137.6	177.1	216.0	202.9	204.0	168.2
82.5°	128.6	96.3	84.3	83.8	89.7	105.3	130.4	175.4	174.2	149.0	108.2
85°	59.9	55.6	53.9	55.6	57.5	59.9	85.0	125.1	132.2	80.2	71.2
87.5°	25.1	24.6	21.6	23.4	25.6	25.1	34.1	53.2	74.2	50.3	46.1
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)