

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: P196736

Luminaire Tested: **NAV-AF-02-D-UNV-T2-7030-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196736  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24136)  
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-T2-7030-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9316.5 lumens  
Efficiency: N/A  
Efficacy: 109.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Medium - Full Cutoff  
BUG Rating: B2 - U0 - G2

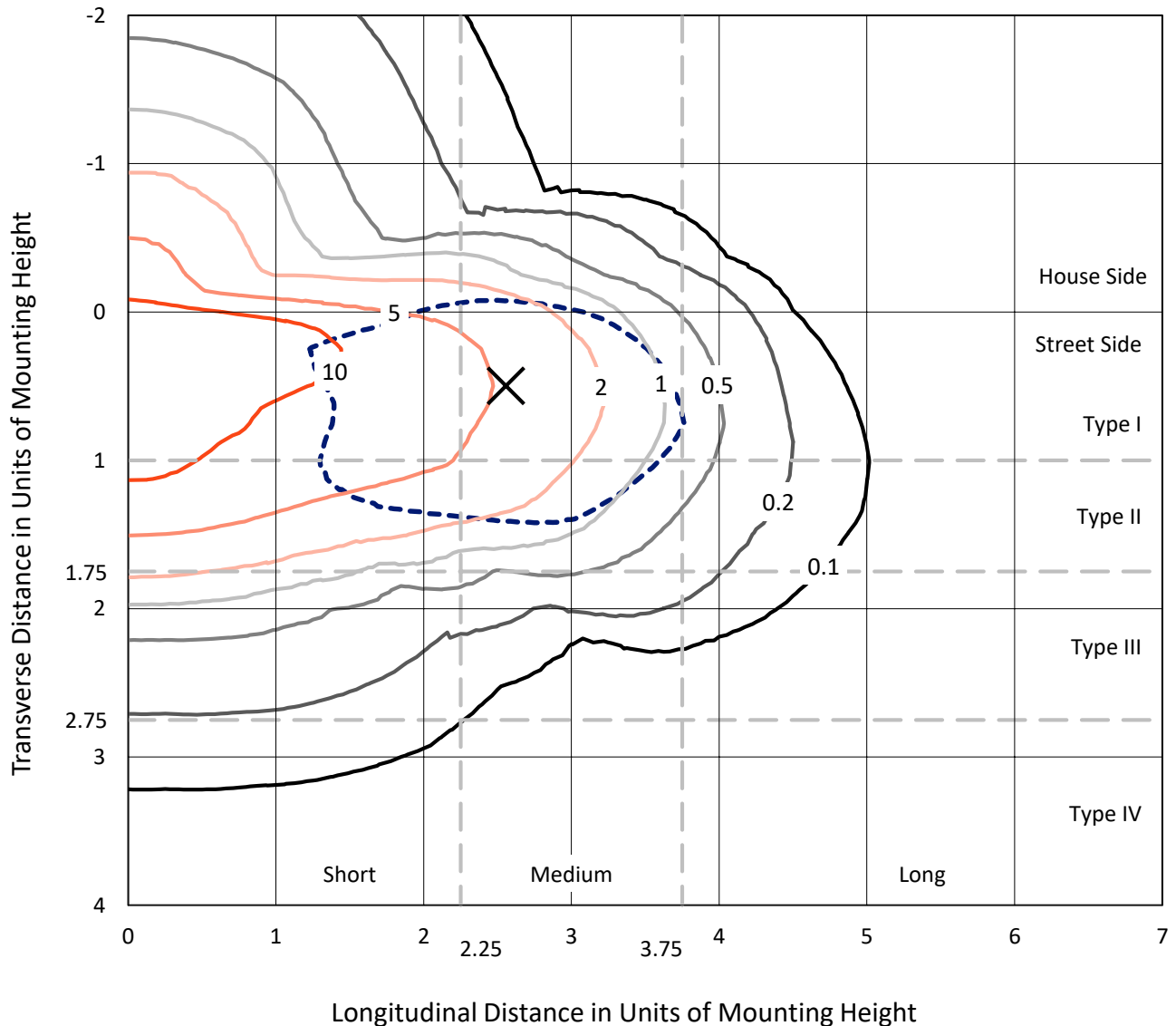
Input Watts (W): 85  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

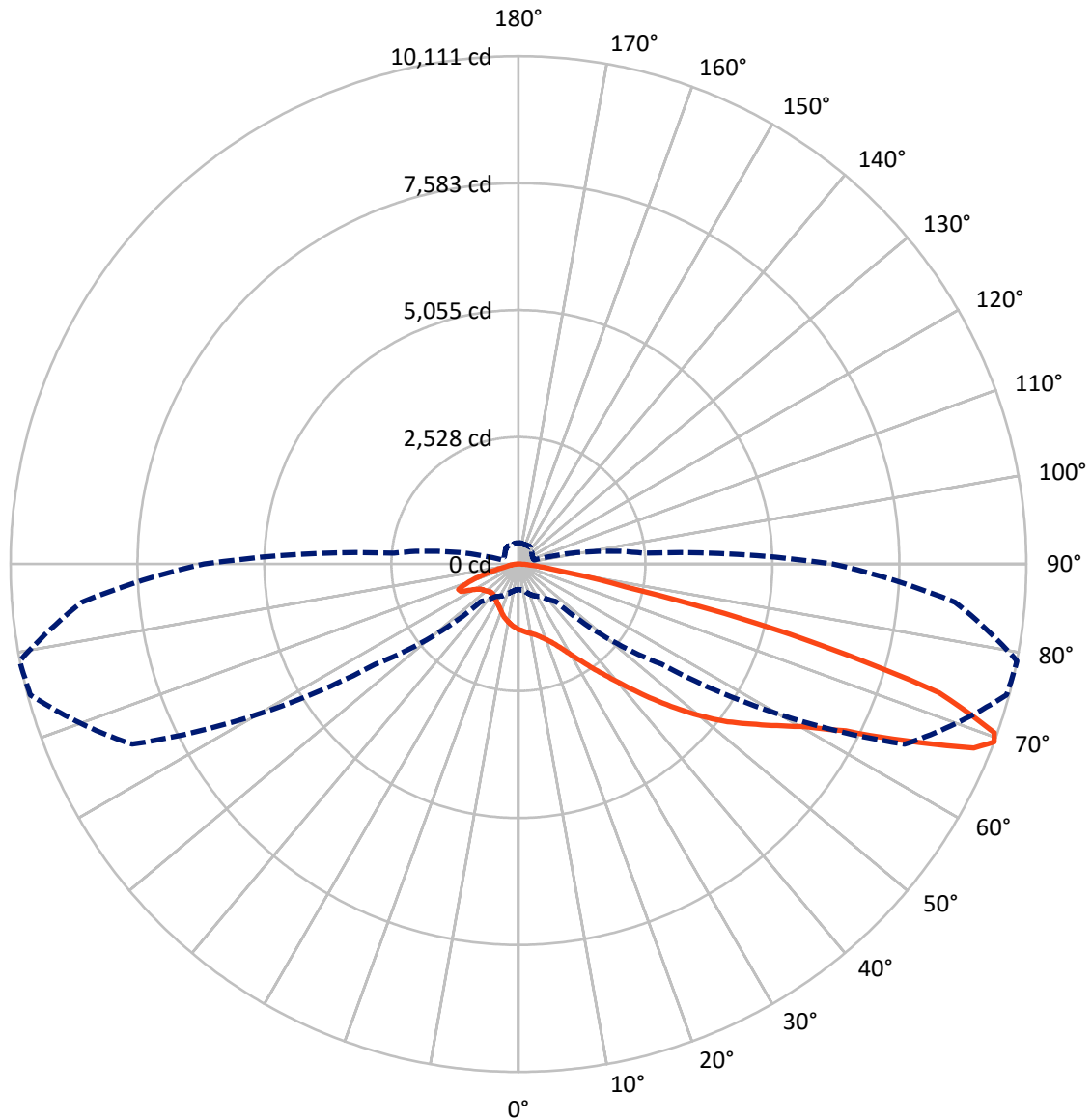
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 15.8 fc  
 Type II - Medium - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1752.6	0.0	1752.6
	% Fixture	18.8	0.0	18.8
<b>Street Side</b>	Lumens	7563.9	0.0	7563.9
	% Fixture	81.2	0.0	81.2
<b>Total</b>	Lumens	9316.5	0.0	9316.5
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	121.2	1.3
10°-20°	347.5	3.7
20°-30°	574.2	6.2
30°-40°	929.8	10.0
40°-50°	1485.3	15.9
50°-60°	2127.1	22.8
60°-70°	2369.9	25.4
70°-80°	1185.6	12.7
80°-90°	176.0	1.9
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°	9316.5	100.0
0°-180°	9316.5	100.0

**Coefficient of Utilization**



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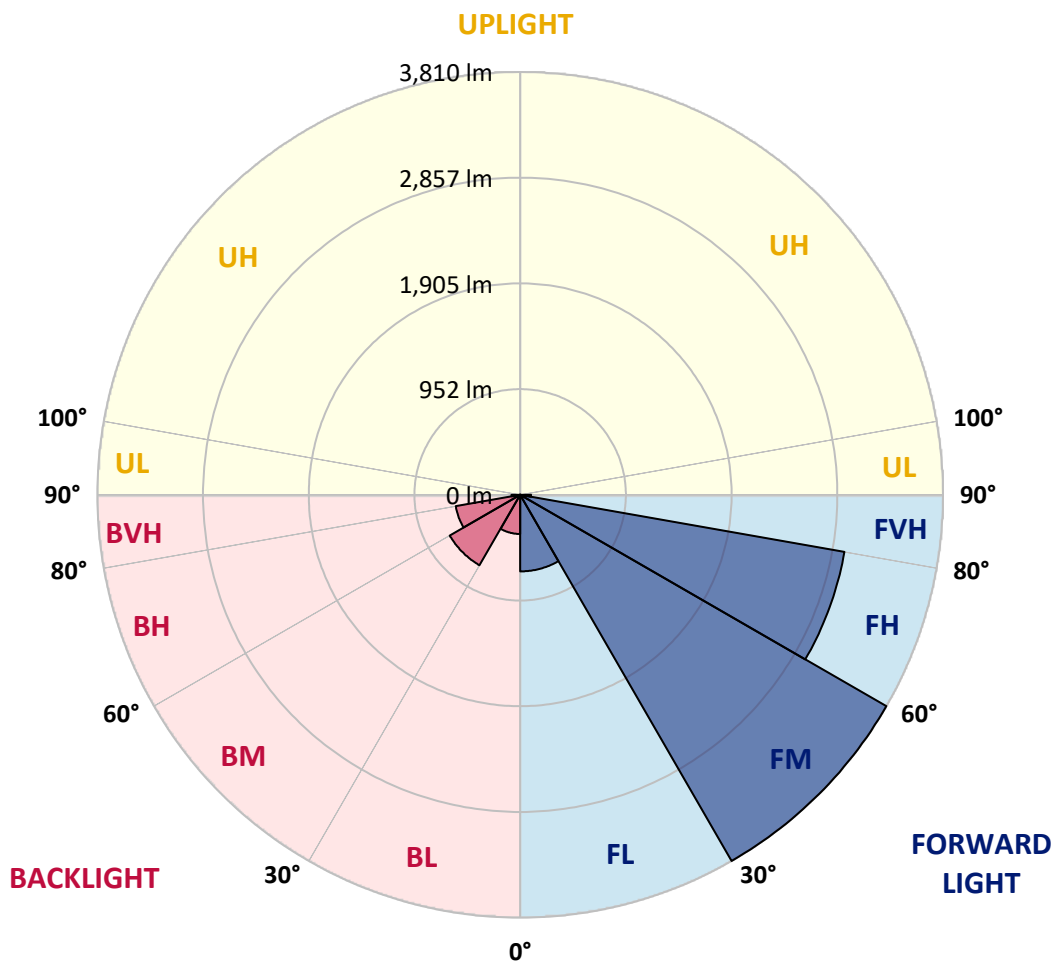
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	689.8	7.4			
FM (30°-60°)	3809.5	40.9			
FH (60°-80°)	2966.3	31.8			G2/5000
FVH (80°-90°)	98.3	1.1			G1/100
BL (0°-30°)	353.1	3.8	B1/500		
BM (30°-60°)	732.6	7.9	B1/1000		
BH (60°-80°)	589.3	6.3	B2/1000		G2/1000
BVH (80°-90°)	77.6	0.8			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 II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	1307.4	1307.4	1307.4	1307.4	1307.4	1307.4	1307.4	1307.4	1307.4	1307.4	1307.4
2.5°	1435.4	1432.4	1431.8	1422.5	1417.7	1407.4	1383.0	1358.0	1334.8	1322.7	1309.8
5°	1555.6	1549.4	1546.3	1531.0	1517.7	1494.5	1456.1	1416.5	1375.0	1353.7	1328.1
7.5°	1628.0	1628.6	1628.6	1616.4	1603.1	1575.0	1526.3	1471.9	1410.4	1382.3	1342.1
10°	1634.1	1634.7	1643.8	1646.9	1650.0	1635.3	1590.3	1522.0	1442.8	1406.1	1353.7
12.5°	1573.8	1578.0	1593.2	1615.2	1646.3	1662.2	1642.6	1575.6	1484.2	1439.7	1375.7
15°	1492.7	1497.0	1516.5	1550.0	1600.0	1653.0	1680.4	1637.1	1538.4	1486.0	1408.1
17.5°	1453.0	1457.9	1471.4	1498.2	1546.9	1618.2	1700.5	1703.1	1602.4	1542.0	1446.4
20°	1434.1	1437.9	1454.9	1476.8	1514.0	1582.3	1702.4	1772.5	1678.5	1608.6	1493.3
22.5°	1477.5	1478.8	1487.2	1499.4	1524.3	1576.8	1701.1	1844.4	1773.8	1692.0	1553.6
25°	1604.3	1596.3	1590.3	1575.0	1581.1	1618.2	1720.7	1921.3	1895.5	1801.6	1634.1
27.5°	1754.1	1752.9	1737.1	1701.7	1679.2	1703.1	1776.1	2007.1	2044.9	1941.3	1739.5
30°	1921.3	1921.8	1905.4	1862.1	1816.3	1818.8	1864.5	2106.5	2223.5	2109.6	1869.4
32.5°	2096.1	2107.1	2076.6	2033.4	1977.9	1960.2	1991.2	2226.6	2430.2	2308.2	2019.8
35°	2305.2	2307.0	2273.4	2210.1	2154.6	2126.6	2155.2	2376.5	2668.4	2541.7	2203.4
37.5°	2522.1	2523.4	2488.6	2407.5	2337.5	2319.2	2350.9	2558.8	2920.8	2807.4	2419.1
40°	2699.6	2712.4	2684.9	2608.7	2538.0	2527.0	2572.7	2777.0	3243.3	3122.0	2675.8
42.5°	2900.8	2915.2	2882.4	2803.1	2747.1	2743.4	2814.7	3025.6	3563.8	3485.8	2966.5
45°	3127.4	3148.1	3102.4	3013.5	2965.9	3046.3	3050.6	3301.2	3933.3	3892.9	3293.8
47.5°	3374.9	3392.0	3354.8	3259.1	3207.3	3323.6	3281.6	3599.2	4332.4	4329.4	3647.9
50°	3565.6	3584.6	3588.2	3546.1	3491.9	3506.5	3535.2	3912.5	4730.4	4778.0	4014.3
52.5°	3530.9	3549.2	3631.4	3741.8	3829.0	3791.2	3825.9	4245.3	5115.1	5215.6	4362.2
55°	3250.6	3260.3	3414.5	3676.6	4047.7	4228.3	4230.6	4607.4	5480.8	5621.5	4692.6
57.5°	2745.2	2746.4	2946.9	3333.4	3920.3	4511.7	4869.3	5062.0	5862.3	6070.1	5102.2
60°	1942.5	1947.4	2180.9	2686.1	3463.8	4477.5	5556.3	5875.8	6304.2	6574.2	5630.0
62.5°	1153.2	1164.1	1340.3	1745.6	2572.7	4038.7	5962.3	7323.3	6955.1	7313.6	6474.8
65°	750.3	759.5	864.9	1068.4	1520.2	2938.4	5828.8	8725.2	8187.1	8476.5	7689.0
67.5°	577.9	585.1	668.0	791.1	932.5	1588.4	4660.4	9019.0	9686.4	9776.6	8713.7
69°	507.7	513.8	574.8	693.0	785.0	1051.4	3473.1	8485.6	10061.2	10110.7	8726.4
70°	470.6	475.4	532.7	635.2	721.0	839.3	2658.1	7866.3	9924.1	10050.2	8474.7
72.5°	387.7	391.9	432.7	511.4	589.4	597.9	1177.6	5744.1	8356.3	8759.9	7171.6
75°	323.6	326.1	352.9	410.2	477.3	476.1	601.6	3253.6	5099.1	5580.1	4428.1
77.5°	270.0	271.8	289.5	324.8	376.7	374.9	423.6	1404.3	2251.5	2172.3	1524.3
80°	238.3	239.5	248.7	257.9	290.7	288.9	313.9	644.8	916.1	846.6	576.6
82.5°	181.1	183.4	229.8	234.1	225.5	217.7	218.8	375.5	469.4	427.3	309.6
85°	102.3	103.0	147.5	172.5	196.2	147.5	142.0	193.8	231.6	203.0	135.3
87.5°	45.7	47.5	70.7	81.7	106.1	86.6	81.1	82.3	100.0	82.9	53.6
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°	1307.4	1307.4	1307.4	1307.4	1307.4	1307.4	1307.4	1307.4	1307.4	1307.4	1307.4
2.5°	1297.7	1287.3	1262.9	1237.9	1212.9	1197.1	1180.6	1165.4	1159.2	1158.7	1147.1
5°	1303.1	1278.8	1223.2	1162.3	1104.4	1059.4	1021.6	997.2	973.4	969.1	958.7
7.5°	1305.0	1265.3	1175.2	1077.7	989.3	927.1	889.3	872.9	861.3	858.2	854.5
10°	1304.3	1248.3	1121.5	988.0	887.4	840.5	826.5	830.2	835.1	837.5	837.5
12.5°	1314.1	1240.3	1067.9	903.9	821.6	799.1	810.0	829.0	843.6	849.7	850.9
15°	1331.8	1235.5	1008.8	830.8	775.3	780.7	807.7	835.1	855.7	864.9	867.3
17.5°	1353.7	1228.7	940.5	770.4	748.5	767.3	802.1	836.8	861.8	873.4	875.2
20°	1378.1	1219.0	869.8	725.4	724.7	748.5	783.2	822.2	849.1	861.8	861.3
22.5°	1411.0	1209.9	803.9	692.3	698.5	720.4	749.1	784.5	809.4	821.0	818.6
25°	1454.9	1201.3	744.8	663.2	668.6	683.3	703.4	730.2	747.9	754.0	749.7
27.5°	1514.0	1194.6	698.5	636.3	635.7	642.5	654.6	669.2	677.7	676.0	669.2
30°	1586.6	1187.9	664.4	612.5	603.9	603.4	608.9	617.5	622.9	612.0	606.5
32.5°	1667.7	1176.4	633.9	591.8	576.6	571.1	573.5	585.1	607.7	596.7	592.4
35°	1763.3	1162.9	603.4	569.2	557.7	547.4	549.1	574.1	642.5	634.5	630.2
37.5°	1878.5	1150.7	575.4	544.8	544.3	531.5	530.2	560.2	651.6	634.5	630.9
40°	2016.9	1148.4	550.3	518.1	527.8	523.0	518.7	537.0	600.9	566.3	559.5
42.5°	2183.9	1159.2	532.1	492.5	508.9	520.5	512.7	516.9	543.1	512.0	506.5
45°	2378.9	1189.2	518.7	470.0	488.8	518.7	509.5	505.9	510.1	493.1	489.5
47.5°	2606.3	1242.2	509.5	451.0	470.0	513.8	508.4	501.1	499.2	489.5	487.0
50°	2849.5	1313.6	503.4	434.0	452.9	505.4	507.7	497.3	494.3	490.0	488.8
52.5°	3090.8	1390.9	496.1	419.3	438.9	495.0	508.4	493.8	489.5	487.0	485.7
55°	3331.0	1471.4	482.7	406.6	428.6	482.7	507.7	488.8	483.9	483.9	483.9
57.5°	3642.4	1593.9	465.0	396.2	415.0	466.9	499.8	483.4	476.6	477.3	477.9
60°	4092.3	1799.3	445.6	384.6	397.3	448.6	487.7	473.6	465.7	468.0	468.7
62.5°	4843.8	2158.3	418.7	368.1	379.1	429.1	471.8	460.2	452.9	457.1	457.8
65°	5845.8	2592.8	383.4	347.5	360.2	407.1	451.7	444.3	436.4	446.8	446.3
67.5°	6457.2	2720.2	346.3	325.5	342.0	384.0	426.6	423.6	418.1	436.4	435.2
69°	6256.6	2489.9	324.8	311.5	329.1	368.1	410.9	409.6	405.4	423.1	421.7
70°	5945.3	2274.7	311.5	302.3	322.5	358.4	400.4	400.4	396.2	411.5	408.4
72.5°	4775.5	1687.2	280.4	279.1	299.3	331.6	372.5	375.5	373.0	378.5	375.5
75°	2803.8	1016.6	249.8	253.6	271.2	302.9	341.3	343.7	341.3	340.7	341.3
77.5°	972.2	455.9	220.6	226.1	241.4	273.7	307.2	312.1	308.4	304.2	305.4
80°	380.3	265.2	188.9	196.8	209.7	240.8	273.0	276.1	270.6	270.0	265.2
82.5°	228.6	161.4	146.9	159.7	175.6	209.0	235.9	234.7	230.4	255.3	223.7
85°	99.3	89.6	107.3	120.0	128.1	156.7	199.3	193.8	183.4	161.4	157.9
87.5°	40.2	46.3	59.1	71.3	76.8	101.2	136.6	131.6	133.6	109.7	109.2
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)