

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: P195552

Luminaire Tested: **NAV-AF-06-D-UNV-AFL-7050-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195552
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24160)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-06-D-UNV-AFL-7050-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 40489 lumens
Efficiency: N/A
Efficacy: 106.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B3 - U0 - G3

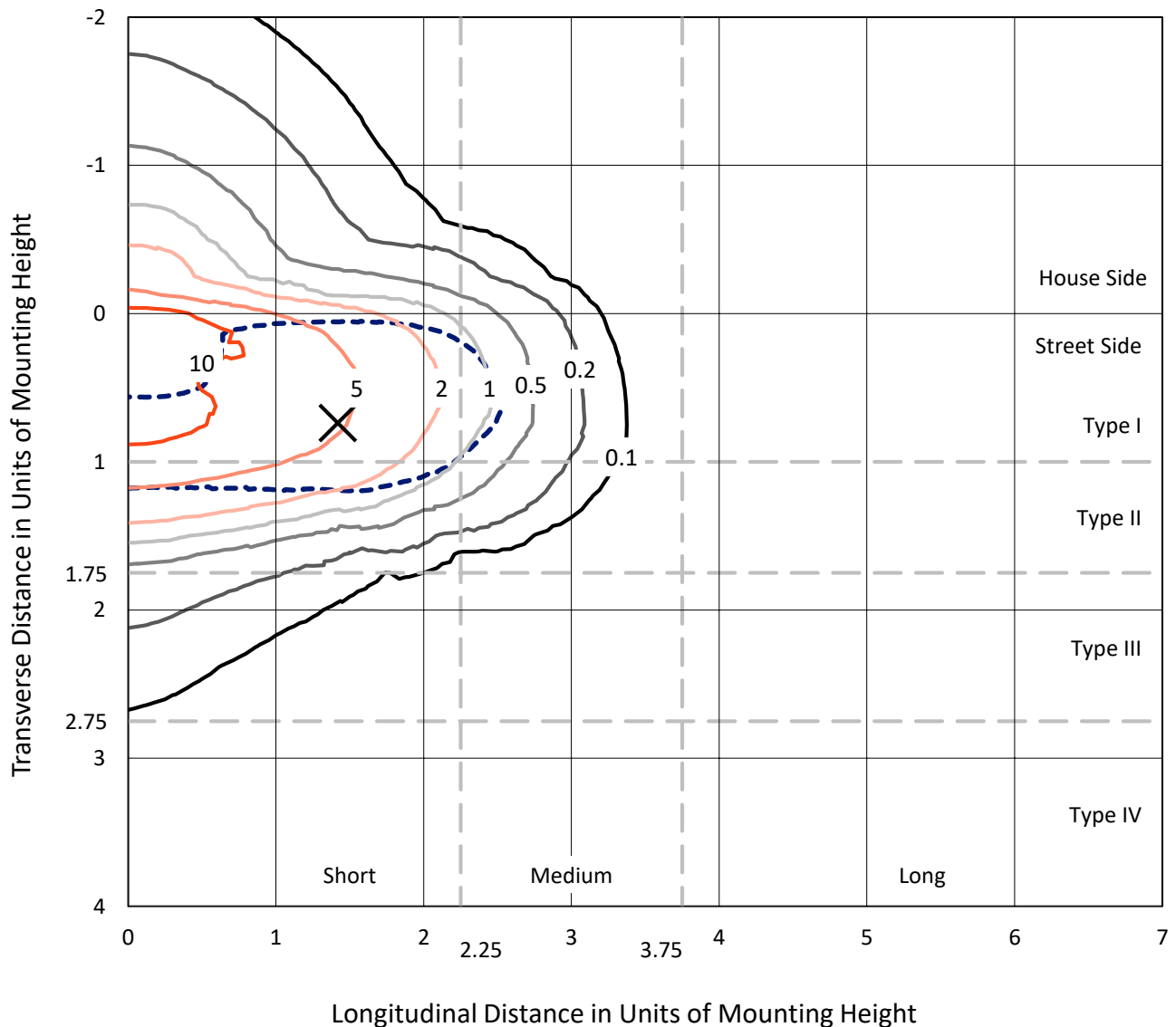
Input Watts (W): 382
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

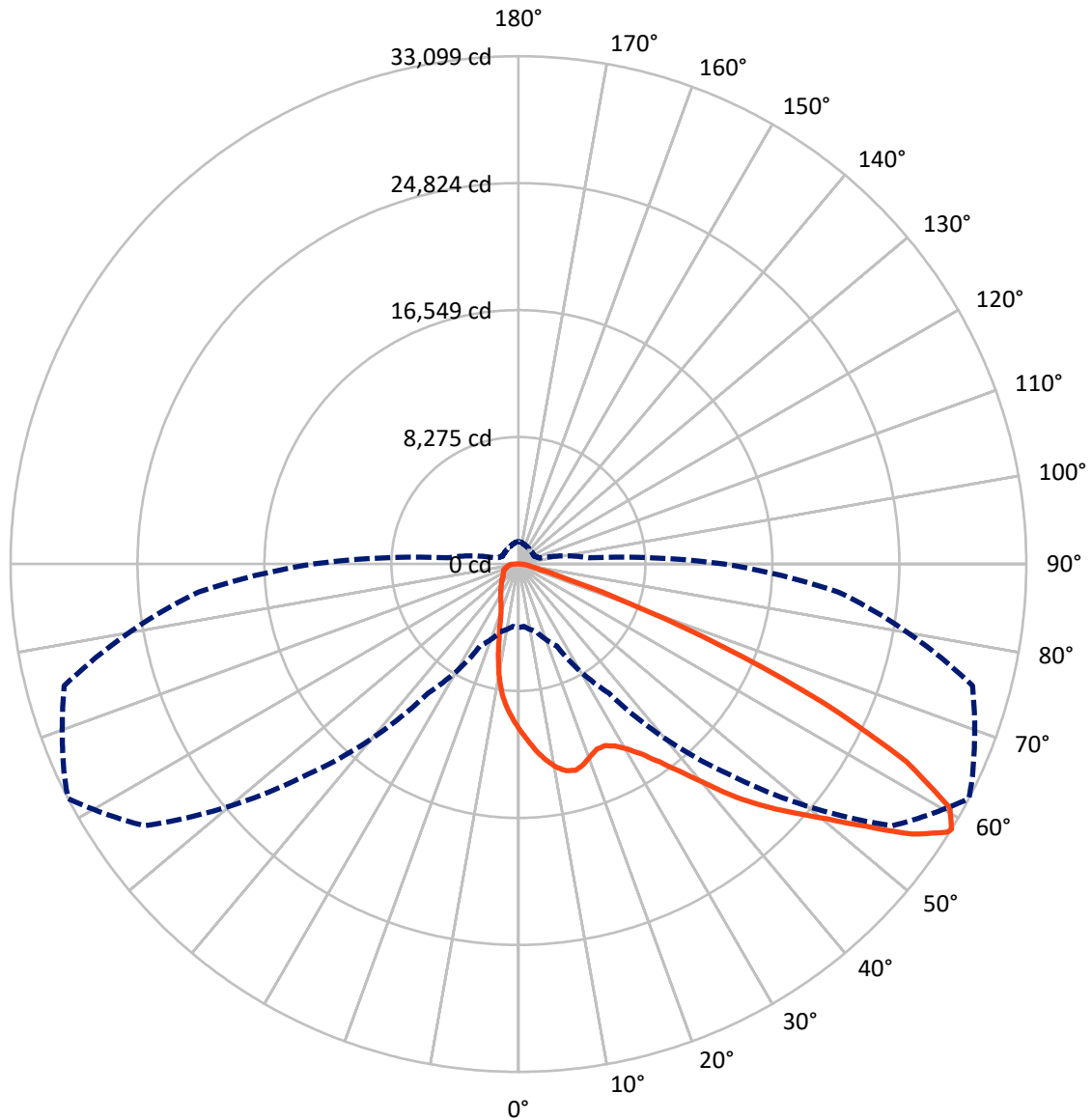
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 14.1 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 62.5-Deg Lateral - - - Horizontal Cone Through 58-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6216.6	0.0	6216.6
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	34272.4	0.0	34272.4
	% Fixture	84.6	0.0	84.6
Total	Lumens	40489.0	0.0	40489.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	966.3	2.4
10°-20°	2438.6	6.0
20°-30°	3952.0	9.8
30°-40°	6309.8	15.6
40°-50°	9177.8	22.7
50°-60°	9603.7	23.7
60°-70°	5854.8	14.5
70°-80°	1637.3	4.0
80°-90°	548.8	1.4
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°	40489.0	100.0
0°-180°	40489.0	100.0

Coefficient of Utilization



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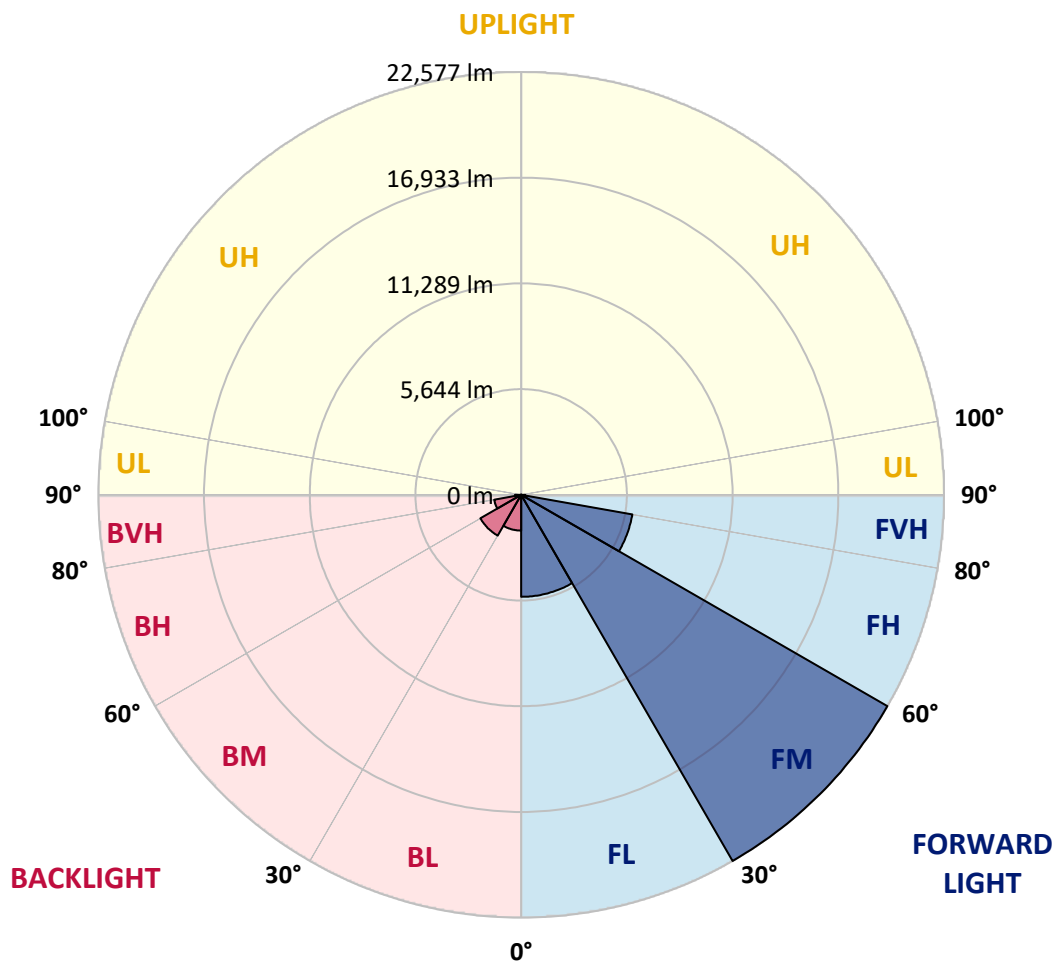
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	5445.9	13.5			
FM (30°-60°)	22577.2	55.8			
FH (60°-80°)	6028.6	14.9			G3/7500
FVH (80°-90°)	220.8	0.5			G2/225
BL (0°-30°)	1911.0	4.7	B3/2500		
BM (30°-60°)	2514.1	6.2	B3/5000		
BH (60°-80°)	1463.5	3.6	B3/2500		G3/2500
BVH (80°-90°)	328.1	0.8			G3/500
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	62.5°	65°	75°	85°
0°	10810.3	10810.3	10810.3	10810.3	10810.3	10810.3	10810.3	10810.3	10810.3	10810.3	10810.3
2.5°	12270.4	12262.8	12159.1	12090.7	12009.8	11822.5	11635.2	11496.1	11425.2	11154.4	10891.3
5°	13285.1	13254.8	13196.6	13123.2	13016.9	12781.6	12485.5	12229.9	12128.7	11647.9	11164.6
7.5°	12748.7	12796.7	12976.4	13178.8	13391.4	13406.6	13196.6	12892.9	12781.6	12138.8	11430.3
10°	11263.3	11243.0	11468.2	11863.0	12563.9	13257.3	13604.0	13454.7	13338.3	12604.4	11696.0
12.5°	10812.8	10807.8	10845.7	10946.9	11387.3	12338.7	13500.2	13824.1	13783.6	13097.9	11979.4
15°	10949.5	10954.5	10952.0	10964.7	11086.1	11539.1	12920.7	13948.1	14074.6	13586.3	12267.9
17.5°	11387.3	11369.5	11313.9	11253.1	11270.8	11432.8	12295.7	13735.6	14115.1	14021.5	12510.8
20°	12062.9	12062.9	11913.6	11744.1	11632.7	11668.1	12035.1	13371.2	13927.9	14391.0	12693.0
22.5°	12910.6	12923.3	12703.1	12394.4	12141.3	12045.2	12184.4	13100.4	13700.1	14732.6	12854.9
25°	13963.3	13960.8	13639.4	13196.6	12796.7	12566.5	12563.9	13113.1	13629.3	15132.4	13024.5
27.5°	15266.5	15147.6	14773.1	14143.0	13578.7	13226.9	13067.5	13431.9	13778.6	15623.3	13252.2
30°	16736.7	16615.3	16124.3	15314.6	14550.4	14036.7	13773.5	13983.5	14234.1	16248.3	13596.4
32.5°	18191.8	18219.6	17642.6	16729.1	15747.3	15023.6	14633.9	14762.9	14937.5	17012.6	14062.0
35°	20322.4	20319.9	19565.8	18424.6	17258.0	16255.9	15762.5	15830.8	15990.2	18090.5	14714.9
37.5°	21911.6	21886.3	21400.4	20390.8	19077.4	17875.5	17161.9	17172.0	17308.6	19444.4	15575.2
40°	22073.6	22068.5	22066.0	21921.7	21023.4	19889.7	18996.5	18811.7	18867.4	20881.7	16488.7
42.5°	20836.1	21020.9	21552.3	22367.1	22617.6	22022.9	21177.8	20765.3	20643.8	22531.6	17455.4
45°	19072.4	19166.0	20097.2	21929.3	23419.8	24027.1	23391.9	22521.5	22314.0	24135.9	18242.4
47.5°	18252.5	18212.0	18751.0	20747.6	23341.3	25621.3	25666.9	24239.7	23887.9	25520.1	18913.0
50°	16493.8	16440.7	17121.4	19009.1	22486.0	26413.4	28002.5	26112.2	25461.9	26836.0	19520.3
52.5°	12989.1	12938.4	13852.0	16283.8	20573.0	26117.3	29971.2	28409.9	27301.6	28103.7	20087.1
55°	8451.9	8456.9	9327.4	11835.1	16648.2	24391.5	30894.9	31064.4	29821.9	29371.5	20545.1
57.5°	4653.6	4610.6	5230.5	6771.6	11453.0	20471.7	30125.6	32977.5	32329.7	30459.6	20876.6
58°	4137.4	4086.8	4565.0	5893.5	10268.8	19365.9	29738.4	33098.9	32651.0	30639.3	20924.7
60°	2948.0	2862.0	2788.6	3322.5	5916.3	13963.3	27157.3	32312.0	32744.7	30998.6	20879.2
62.5°	2485.0	2386.3	2123.1	2102.8	2786.1	6829.8	21476.4	28377.0	29589.1	30171.2	20145.3
65°	2307.8	2209.1	1862.4	1738.5	1890.3	2948.0	13280.1	21911.6	23531.1	27294.0	18298.0
67.5°	2181.3	2064.9	1692.9	1531.0	1561.3	1763.8	5635.4	14330.2	16207.9	21284.0	14679.4
70°	2067.4	1938.4	1558.8	1371.5	1346.2	1341.2	2201.5	7482.7	9292.0	13927.9	9833.5
72.5°	1938.4	1811.8	1439.9	1239.9	1184.3	1088.1	1323.5	3092.3	4238.6	6827.3	4506.8
75°	1751.1	1647.4	1308.3	1131.1	1035.0	883.1	976.8	1482.9	1827.0	2614.0	2092.7
77.5°	1541.1	1457.6	1174.2	1040.0	911.0	721.2	746.5	1004.6	1128.6	1472.8	1212.1
80°	1090.6	1121.0	1024.9	916.0	802.2	582.0	574.4	736.4	809.8	989.4	814.8
82.5°	751.6	774.3	835.1	723.7	647.8	453.0	422.6	511.2	549.1	597.2	394.8
85°	536.5	521.3	579.5	518.8	475.7	288.5	270.8	323.9	346.7	364.4	189.8
87.5°	326.4	323.9	334.0	268.2	248.0	146.8	134.1	154.4	164.5	159.4	91.1
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°	10810.3	10810.3	10810.3	10810.3	10810.3	10810.3	10810.3	10810.3	10810.3	10810.3	10810.3
2.5°	10792.6	10668.6	10397.8	10180.2	9944.9	9765.2	9585.5	9484.3	9373.0	9309.7	9302.1
5°	10911.5	10658.5	10081.5	9545.0	8993.4	8497.4	8011.6	7652.2	7358.7	7191.7	7181.6
7.5°	11043.1	10645.8	9755.1	8826.4	7844.6	6867.8	6004.9	5395.0	5002.8	4820.6	4808.0
10°	11144.3	10592.7	9357.8	7912.9	6356.6	5066.1	4281.6	3922.3	3803.3	3773.0	3767.9
12.5°	11265.8	10554.7	8856.8	6741.3	4858.6	3856.5	3618.6	3595.8	3621.1	3636.3	3638.9
15°	11379.7	10481.3	8181.1	5443.1	3803.3	3446.5	3451.6	3499.7	3550.3	3573.1	3575.6
17.5°	11432.8	10301.7	7292.9	4289.2	3327.6	3261.8	3320.0	3383.3	3428.8	3446.5	3446.5
20°	11432.8	10013.2	6263.0	3474.4	3079.6	3092.3	3163.1	3211.2	3221.3	3206.1	3198.6
22.5°	11384.7	9656.4	5260.9	3031.5	2877.2	2925.3	2980.9	2948.0	2829.1	2738.0	2720.3
25°	11341.7	9233.8	4296.8	2760.8	2700.0	2763.3	2740.5	2515.3	2333.1	2239.5	2224.3
27.5°	11270.8	8722.6	3492.1	2538.1	2528.0	2578.6	2353.4	2135.7	2044.6	1994.0	1983.9
30°	11253.1	8168.5	2922.7	2340.7	2358.4	2287.6	2029.5	1958.6	1938.4	1910.5	1897.9
32.5°	11311.3	7614.3	2565.9	2178.8	2196.5	1963.7	1865.0	1875.1	1872.6	1837.1	1824.5
35°	11470.8	7075.3	2338.2	2032.0	1981.4	1758.7	1771.4	1801.7	1801.7	1758.7	1743.5
37.5°	11749.1	6574.2	2193.9	1908.0	1733.4	1652.4	1685.3	1725.8	1725.8	1695.4	1682.8
40°	12045.2	6085.9	2085.1	1809.3	1576.5	1579.0	1611.9	1642.3	1654.9	1660.0	1649.9
42.5°	12313.4	5579.8	1968.7	1703.0	1505.6	1523.4	1538.5	1561.3	1614.5	1649.9	1644.8
45°	12470.3	5071.1	1842.2	1571.4	1457.6	1465.2	1460.1	1500.6	1563.8	1617.0	1617.0
47.5°	12614.5	4653.6	1738.5	1439.9	1409.5	1409.5	1394.3	1434.8	1493.0	1556.3	1561.3
50°	12751.2	4382.8	1665.1	1338.6	1348.8	1341.2	1336.1	1374.1	1452.5	1528.4	1541.1
52.5°	12890.4	4291.7	1599.3	1265.3	1285.5	1275.4	1280.4	1333.6	1422.1	1500.6	1513.2
55°	13085.2	4349.9	1531.0	1214.6	1224.8	1222.2	1242.5	1303.2	1381.7	1460.1	1465.2
57.5°	13325.6	4562.5	1472.8	1176.7	1166.6	1181.7	1214.6	1272.8	1348.8	1442.4	1450.0
58°	13373.7	4613.1	1462.6	1166.6	1153.9	1176.7	1209.6	1265.3	1343.7	1442.4	1450.0
60°	13447.1	4792.8	1437.3	1146.3	1110.9	1151.4	1191.9	1247.5	1333.6	1455.0	1470.2
62.5°	13092.8	4828.2	1429.7	1123.5	1065.3	1116.0	1164.0	1227.3	1323.5	1498.1	1531.0
65°	11865.5	4463.8	1376.6	1085.6	1027.4	1088.1	1138.7	1212.1	1353.8	1627.1	1642.3
67.5°	9524.8	3707.2	1247.5	1027.4	984.4	1055.2	1118.5	1212.1	1366.5	1647.4	1657.5
70°	6548.9	2786.1	1085.6	964.1	933.8	1014.7	1110.9	1239.9	1323.5	1558.8	1528.4
72.5°	3421.2	1938.4	951.5	890.7	873.0	979.3	1184.3	1212.1	1272.8	1455.0	1424.7
75°	1723.3	1318.4	837.6	807.2	804.7	966.7	1326.0	1166.6	1219.7	1369.0	1434.8
77.5°	1017.3	1032.4	746.5	728.8	741.4	943.9	1328.5	1121.0	1159.0	1260.2	1331.0
80°	695.9	852.8	675.6	670.6	680.7	868.0	1224.8	1065.3	1088.1	1191.9	1267.8
82.5°	392.2	470.7	592.1	625.0	620.0	711.1	1057.7	969.2	997.0	1409.5	1490.5
85°	189.8	283.4	496.0	584.5	528.9	473.2	860.4	860.4	868.0	1009.7	1022.3
87.5°	70.9	126.5	334.0	463.1	369.5	283.4	584.5	609.9	678.2	698.4	713.6
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)