

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: P195540

Luminaire Tested: **NAV-AF-06-D-UNV-AFL-7050-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195540
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-7050-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 29820 lumens
Efficiency: N/A
Efficacy: 119.8 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

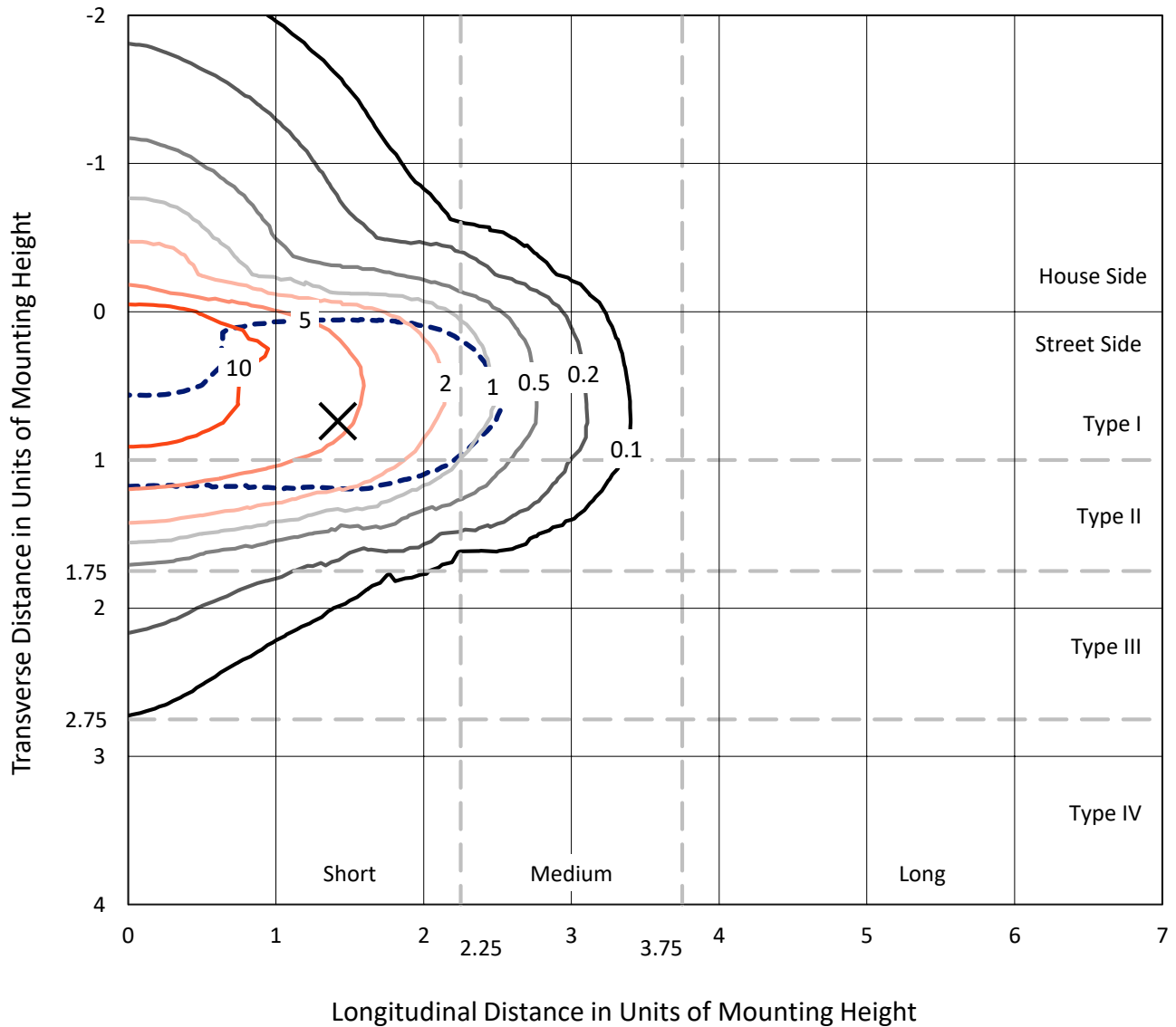
Input Watts (W): 249
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

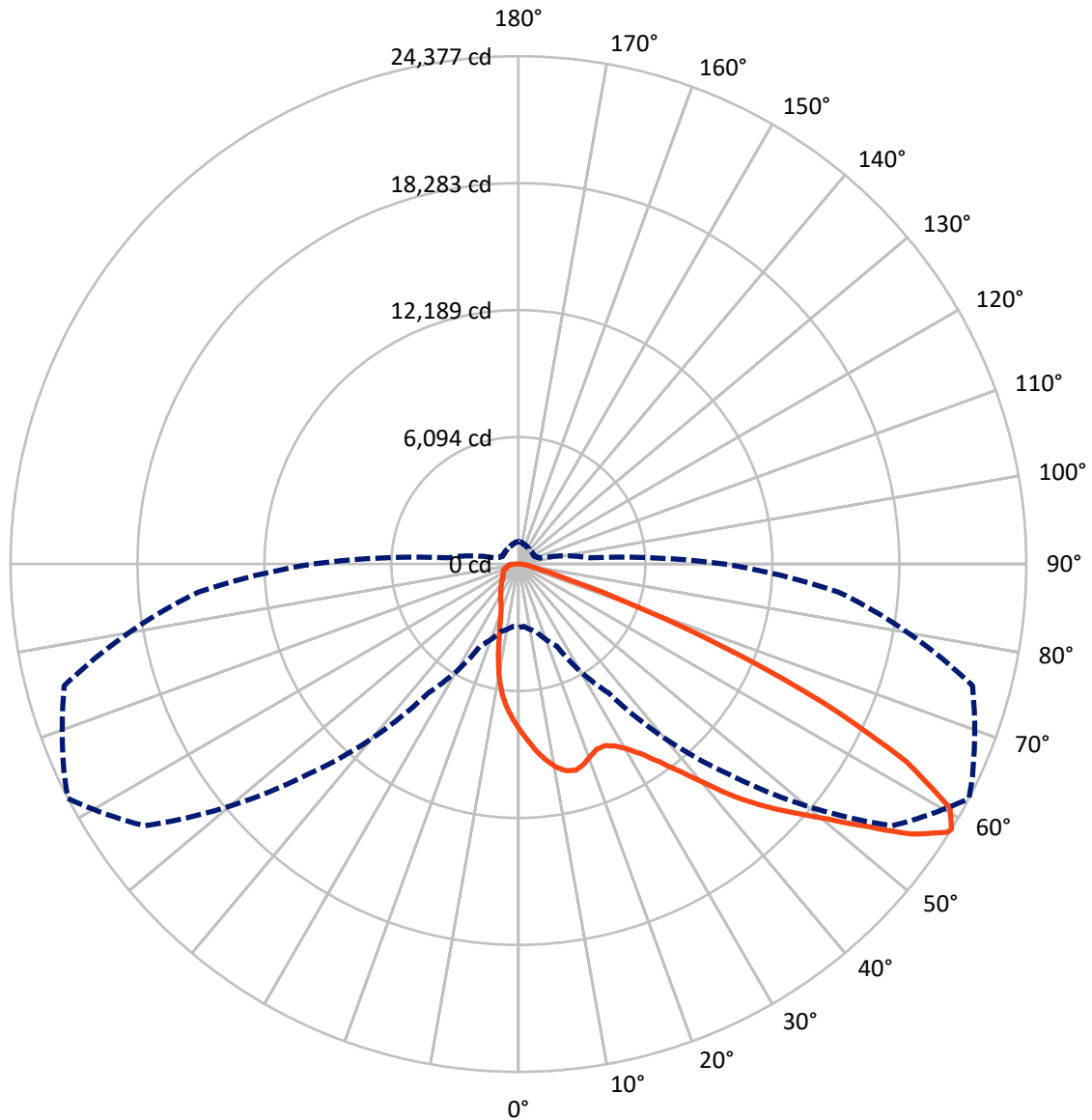
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 14.9 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	4578.5	0.0	4578.5
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	25241.5	0.0	25241.5
	% Fixture	84.6	0.0	84.6
Total	Lumens	29820.0	0.0	29820.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	711.6	2.4
10°-20°	1796.0	6.0
20°-30°	2910.7	9.8
30°-40°	4647.1	15.6
40°-50°	6759.4	22.7
50°-60°	7073.1	23.7
60°-70°	4312.0	14.5
70°-80°	1205.9	4.0
80°-90°	404.2	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°	29820.0	100.0
0°-180°	29820.0	100.0



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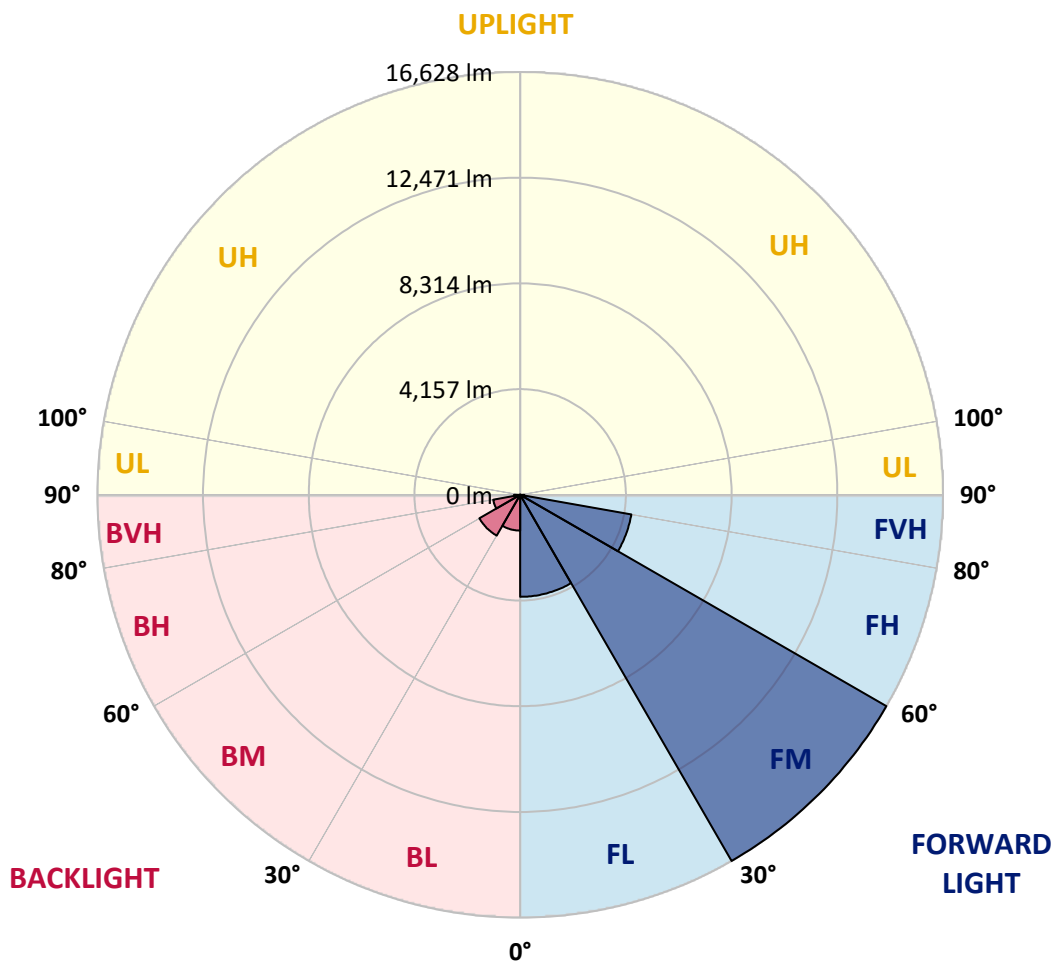
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	4010.9	13.5			
FM (30°-60°)	16628.0	55.8			
FH (60°-80°)	4440.0	14.9			G2/5000
FVH (80°-90°)	162.6	0.5			G2/225
BL (0°-30°)	1407.4	4.7	B3/2500		
BM (30°-60°)	1851.6	6.2	B2/2500		
BH (60°-80°)	1077.9	3.6	B3/2500		G3/2500
BVH (80°-90°)	241.6	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°	7961.7	7961.7	7961.7	7961.7	7961.7	7961.7	7961.7	7961.7	7961.7	7961.7	7961.7
2.5°	9037.1	9031.5	8955.1	8904.8	8845.1	8707.2	8569.3	8466.8	8414.6	8215.2	8021.4
5°	9784.4	9762.1	9719.2	9665.2	9586.9	9413.6	9195.5	9007.3	8932.7	8578.6	8222.7
7.5°	9389.3	9424.8	9557.1	9706.2	9862.7	9873.9	9719.2	9495.6	9413.6	8940.2	8418.4
10°	8295.3	8280.4	8446.3	8737.0	9253.3	9763.9	10019.3	9909.3	9823.6	9283.1	8614.0
12.5°	7963.6	7959.9	7987.8	8062.4	8386.7	9087.4	9942.9	10181.4	10151.6	9646.5	8822.8
15°	8064.2	8068.0	8066.1	8075.4	8164.9	8498.5	9516.1	10272.7	10365.9	10006.2	9035.2
17.5°	8386.7	8373.6	8332.6	8287.9	8300.9	8420.2	9055.7	10116.2	10395.7	10326.8	9214.2
20°	8884.3	8884.3	8774.3	8649.5	8567.4	8593.5	8863.8	9847.8	10257.8	10598.9	9348.3
22.5°	9508.6	9517.9	9355.8	9128.4	8942.1	8871.2	8973.7	9648.4	10090.1	10850.5	9467.6
25°	10283.9	10282.1	10045.4	9719.2	9424.8	9255.2	9253.3	9657.7	10037.9	11145.0	9592.5
27.5°	11243.7	11156.1	10880.3	10416.2	10000.6	9741.6	9624.2	9892.5	10147.9	11506.5	9760.2
30°	12326.5	12237.1	11875.5	11279.1	10716.3	10338.0	10144.1	10298.8	10483.3	11966.8	10013.7
32.5°	13398.2	13418.7	12993.7	12320.9	11597.8	11064.8	10777.8	10872.9	11001.4	12529.7	10356.6
35°	14967.4	14965.5	14410.2	13569.6	12710.5	11972.4	11609.0	11659.3	11776.7	13323.6	10837.4
37.5°	16137.8	16119.2	15761.3	15017.7	14050.5	13165.2	12639.6	12647.1	12747.7	14320.7	11471.1
40°	16257.1	16253.4	16251.5	16145.3	15483.7	14648.7	13990.8	13854.8	13895.8	15379.3	12143.9
42.5°	15345.7	15481.8	15873.2	16473.3	16657.8	16219.8	15597.3	15293.6	15204.1	16594.4	12855.8
45°	14046.7	14115.7	14801.5	16150.9	17248.6	17695.9	17228.1	16587.0	16434.1	17776.0	13435.4
47.5°	13442.9	13413.1	13810.0	15280.5	17190.8	18870.0	18903.6	17852.4	17593.4	18795.5	13929.3
50°	12147.6	12108.5	12609.8	14000.1	16560.9	19453.3	20623.8	19231.6	18752.6	19764.6	14376.6
52.5°	9566.4	9529.1	10201.9	11992.9	15151.9	19235.3	22073.7	20923.8	20107.5	20698.3	14794.1
55°	6224.8	6228.5	6869.6	8716.5	12261.3	17964.2	22754.0	22878.8	21963.8	21632.0	15131.4
57.5°	3427.4	3395.7	3852.3	4987.3	8435.1	15077.4	22187.4	24287.8	23810.7	22433.4	15375.6
58°	3047.2	3009.9	3362.1	4340.6	7562.9	14262.9	21902.3	24377.3	24047.4	22565.7	15411.0
60°	2171.2	2107.8	2053.8	2447.0	4357.3	10283.9	20001.3	23797.6	24116.3	22830.4	15377.4
62.5°	1830.2	1757.5	1563.6	1548.7	2051.9	5030.1	15817.3	20899.6	21792.3	22220.9	14836.9
65°	1699.7	1627.0	1371.7	1280.4	1392.2	2171.2	9780.7	16137.8	17330.6	20101.9	13476.4
67.5°	1606.5	1520.8	1246.8	1127.5	1149.9	1299.0	4150.5	10554.2	11937.0	15675.6	10811.3
70°	1522.6	1427.6	1148.0	1010.1	991.5	987.8	1621.4	5511.0	6843.5	10257.8	7242.4
72.5°	1427.6	1334.4	1060.4	913.2	872.2	801.4	974.7	2277.4	3121.7	5028.3	3319.3
75°	1289.7	1213.3	963.5	833.1	762.3	650.4	719.4	1092.1	1345.6	1925.2	1541.3
77.5°	1135.0	1073.5	864.8	766.0	670.9	531.2	549.8	739.9	831.2	1084.7	892.7
80°	803.3	825.6	754.8	674.7	590.8	428.7	423.1	542.3	596.4	728.7	600.1
82.5°	553.5	570.3	615.0	533.0	477.1	333.6	311.2	376.5	404.4	439.8	290.7
85°	395.1	383.9	426.8	382.1	350.4	212.5	199.4	238.6	255.3	268.4	139.8
87.5°	240.4	238.6	246.0	197.6	182.6	108.1	98.8	113.7	121.1	117.4	67.1
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°	7961.7	7961.7	7961.7	7961.7	7961.7	7961.7	7961.7	7961.7	7961.7	7961.7	7961.7
2.5°	7948.7	7857.4	7658.0	7497.7	7324.4	7192.0	7059.7	6985.2	6903.2	6856.6	6851.0
5°	8036.3	7849.9	7425.0	7029.9	6623.6	6258.3	5900.5	5635.8	5419.7	5296.6	5289.2
7.5°	8133.2	7840.6	7184.6	6500.6	5777.5	5058.1	4422.6	3973.4	3684.5	3550.4	3541.0
10°	8207.8	7801.5	6892.0	5827.8	4681.6	3731.1	3153.4	2888.7	2801.1	2778.8	2775.1
12.5°	8297.2	7773.5	6523.0	4964.9	3578.3	2840.3	2665.1	2648.3	2667.0	2678.1	2680.0
15°	8381.1	7719.5	6025.4	4008.8	2801.1	2538.4	2542.1	2577.5	2614.8	2631.6	2633.4
17.5°	8420.2	7587.1	5371.2	3159.0	2450.8	2402.3	2445.2	2491.8	2525.3	2538.4	2538.4
20°	8420.2	7374.7	4612.7	2558.9	2268.1	2277.4	2329.6	2365.0	2372.5	2361.3	2355.7
22.5°	8384.8	7111.9	3874.6	2232.7	2119.0	2154.4	2195.4	2171.2	2083.6	2016.5	2003.5
25°	8353.1	6800.7	3164.6	2033.3	1988.6	2035.2	2018.4	1852.5	1718.3	1649.4	1638.2
27.5°	8300.9	6424.2	2571.9	1869.3	1861.8	1899.1	1733.2	1573.0	1505.9	1468.6	1461.1
30°	8287.9	6016.0	2152.6	1723.9	1737.0	1684.8	1494.7	1442.5	1427.6	1407.1	1397.8
32.5°	8330.8	5607.9	1889.8	1604.6	1617.7	1446.2	1373.5	1381.0	1379.1	1353.0	1343.7
35°	8448.2	5210.9	1722.1	1496.6	1459.3	1295.3	1304.6	1327.0	1327.0	1295.3	1284.1
37.5°	8653.2	4841.9	1615.8	1405.2	1276.6	1217.0	1241.2	1271.0	1271.0	1248.7	1239.4
40°	8871.2	4482.2	1535.7	1332.5	1161.1	1163.0	1187.2	1209.5	1218.9	1222.6	1215.1
42.5°	9068.8	4109.5	1450.0	1254.3	1108.9	1121.9	1133.1	1149.9	1189.0	1215.1	1211.4
45°	9184.3	3734.9	1356.8	1157.4	1073.5	1079.1	1075.4	1105.2	1151.8	1190.9	1190.9
47.5°	9290.6	3427.4	1280.4	1060.4	1038.1	1038.1	1026.9	1056.7	1099.6	1146.2	1149.9
50°	9391.2	3227.9	1226.3	985.9	993.4	987.8	984.0	1012.0	1069.8	1125.7	1135.0
52.5°	9493.7	3160.8	1177.9	931.9	946.8	939.3	943.0	982.2	1047.4	1105.2	1114.5
55°	9637.2	3203.7	1127.5	894.6	902.0	900.2	915.1	959.8	1017.6	1075.4	1079.1
57.5°	9814.3	3360.3	1084.7	866.6	859.2	870.3	894.6	937.4	993.4	1062.3	1067.9
58°	9849.7	3397.5	1077.2	859.2	849.8	866.6	890.9	931.9	989.6	1062.3	1067.9
60°	9903.7	3529.9	1058.6	844.3	818.2	848.0	877.8	918.8	982.2	1071.6	1082.8
62.5°	9642.8	3555.9	1053.0	827.5	784.6	821.9	857.3	903.9	974.7	1103.3	1127.5
65°	8738.9	3287.6	1013.9	799.5	756.7	801.4	838.7	892.7	997.1	1198.4	1209.5
67.5°	7015.0	2730.3	918.8	756.7	725.0	777.2	823.8	892.7	1006.4	1213.3	1220.7
70°	4823.3	2051.9	799.5	710.1	687.7	747.3	818.2	913.2	974.7	1148.0	1125.7
72.5°	2519.7	1427.6	700.8	656.0	643.0	721.3	872.2	892.7	937.4	1071.6	1049.3
75°	1269.2	971.0	616.9	594.5	592.7	711.9	976.6	859.2	898.3	1008.3	1056.7
77.5°	749.2	760.4	549.8	536.7	546.1	695.2	978.4	825.6	853.6	928.1	980.3
80°	512.5	628.1	497.6	493.9	501.3	639.3	902.0	784.6	801.4	877.8	933.7
82.5°	288.9	346.6	436.1	460.3	456.6	523.7	779.0	713.8	734.3	1038.1	1097.7
85°	139.8	208.7	365.3	430.5	389.5	348.5	633.7	633.7	639.3	743.6	752.9
87.5°	52.2	93.2	246.0	341.1	272.1	208.7	430.5	449.2	499.5	514.4	525.6
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)