

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: P270699

Luminaire Tested: **NAV-AF-06-D-UNV-T2-7027-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270699
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-06-D-UNV-T2-7027-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 2700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 24750 lumens
Efficiency: N/A
Efficacy: 99.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B3 - U0 - G4

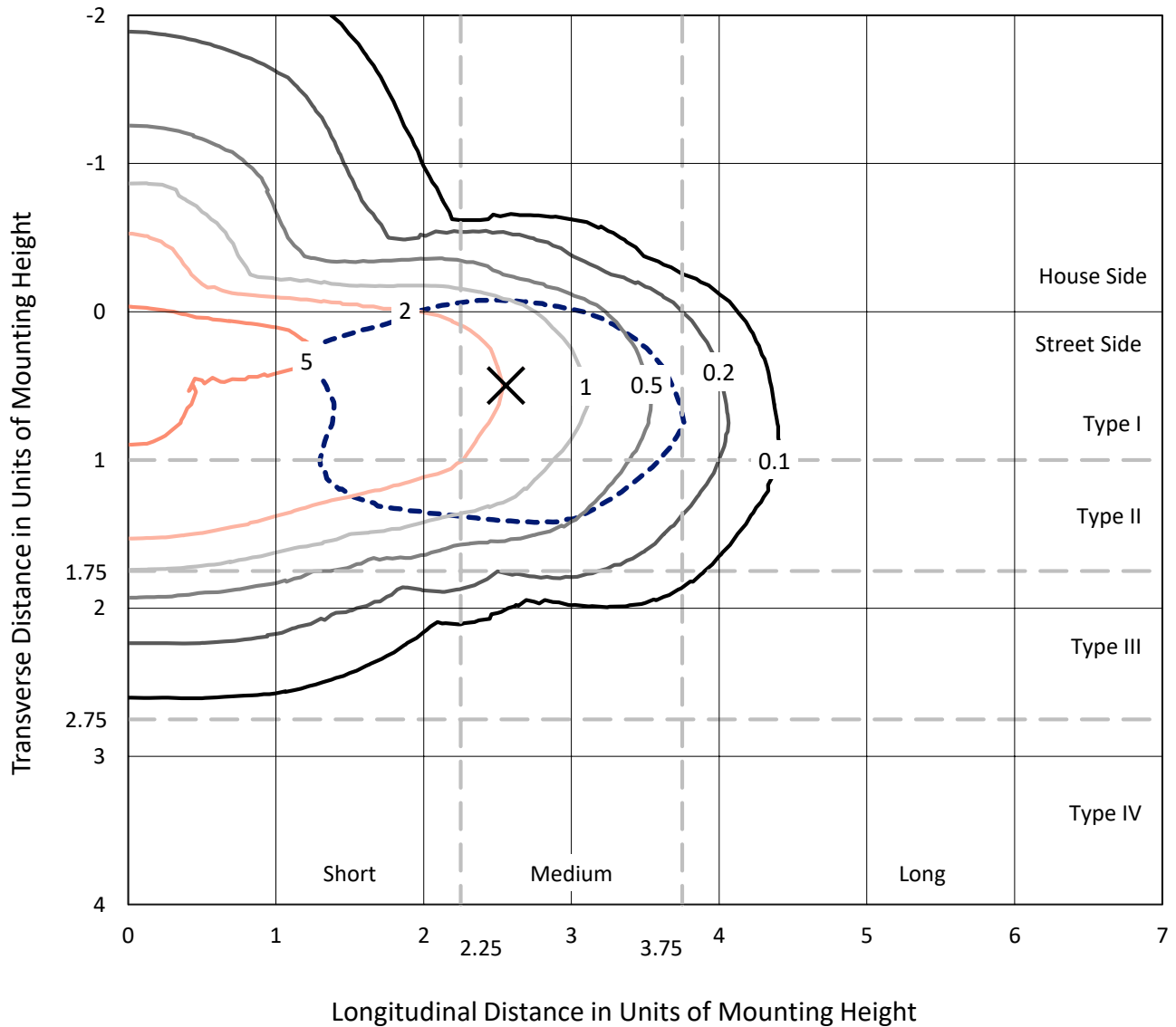
Input Watts (W): 249
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

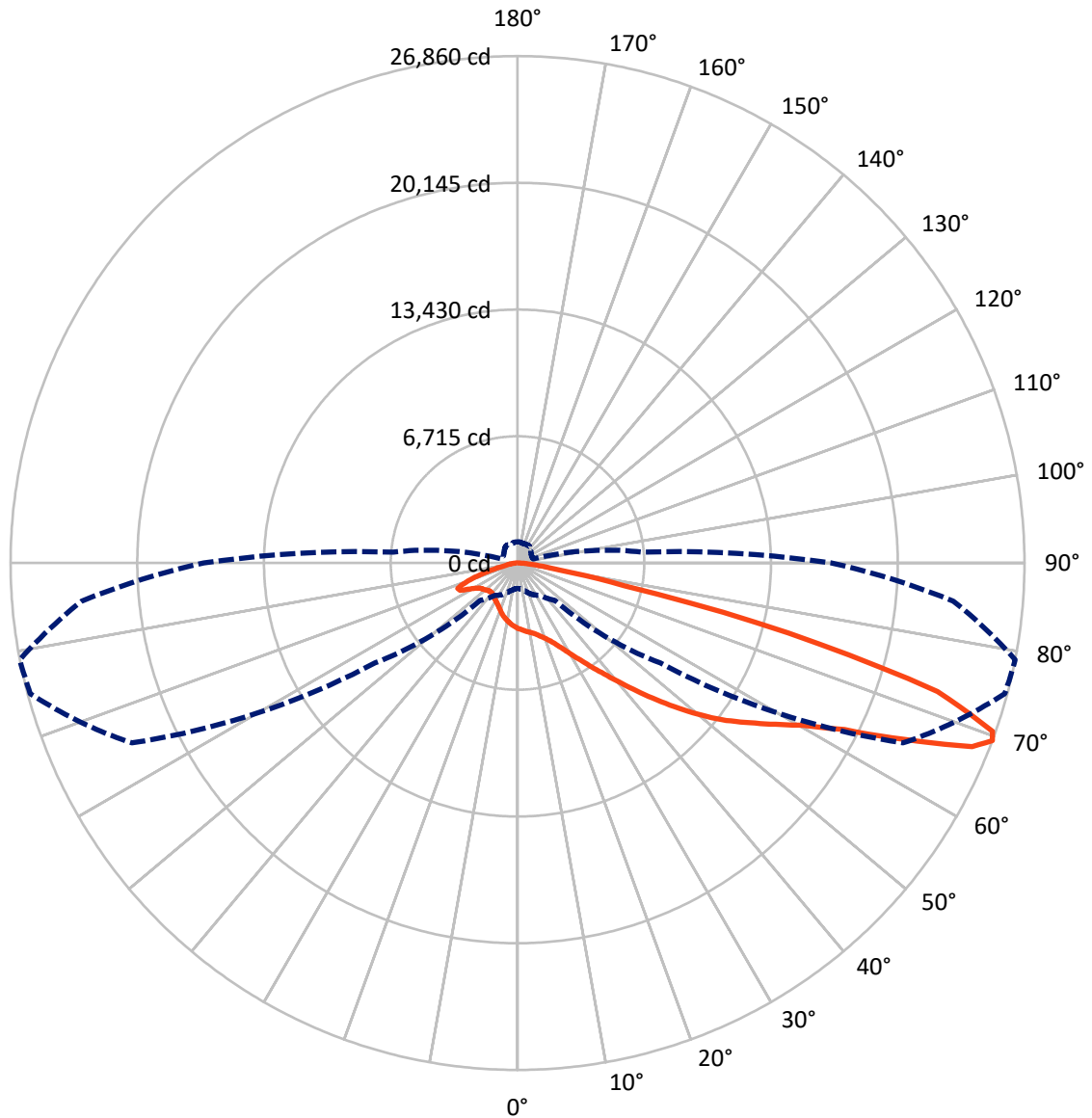
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.7 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
House Side	Lumens	4656.0	0.0	4656.0
	% Fixture	18.8	0.0	18.8
Street Side	Lumens	20094.1	0.0	20094.1
	% Fixture	81.2	0.0	81.2
Total	Lumens	24750.0	0.0	24750.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	322.0	1.3
10°-20°	923.1	3.7
20°-30°	1525.4	6.2
30°-40°	2470.0	10.0
40°-50°	3945.8	15.9
50°-60°	5650.8	22.8
60°-70°	6295.8	25.4
70°-80°	3149.7	12.7
80°-90°	467.4	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°	24750.0	100.0
0°-180°	24750.0	100.0

Coefficient of Utilization



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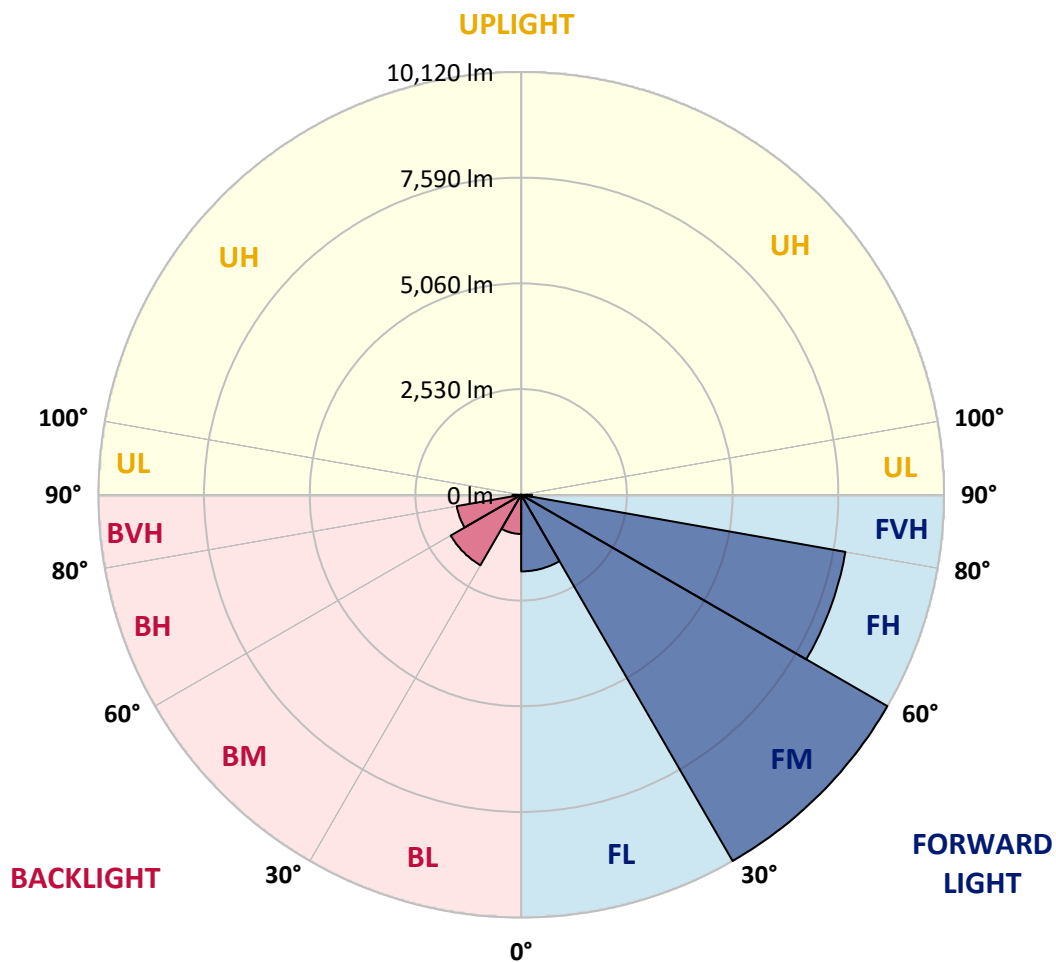
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1832.5	7.4			
FM (30°-60°)	10120.3	40.9			
FH (60°-80°)	7880.1	31.8			G4/12000
FVH (80°-90°)	261.2	1.1			G3/500
BL (0°-30°)	937.9	3.8	B2/1000		
BM (30°-60°)	1946.3	7.9	B2/2500		
BH (60°-80°)	1565.5	6.3	B3/2500		G3/2500
BVH (80°-90°)	206.3	0.8			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	3473.1	3473.1	3473.1	3473.1	3473.1	3473.1	3473.1	3473.1	3473.1	3473.1	3473.1
2.5°	3813.2	3805.1	3803.6	3779.2	3766.2	3738.7	3674.0	3607.7	3546.1	3513.7	3479.7
5°	4132.3	4116.0	4107.9	4067.4	4031.9	3970.2	3868.3	3763.0	3653.0	3596.3	3528.3
7.5°	4324.9	4326.5	4326.5	4294.2	4258.5	4184.0	4054.5	3910.4	3746.9	3672.5	3565.6
10°	4341.1	4342.8	4367.0	4375.1	4383.2	4344.4	4224.5	4043.2	3832.7	3735.5	3596.3
12.5°	4180.8	4192.1	4232.6	4290.9	4373.5	4415.6	4363.7	4185.7	3942.8	3824.5	3654.6
15°	3965.5	3976.7	4028.5	4117.7	4250.4	4391.4	4464.1	4349.2	4086.8	3947.6	3740.5
17.5°	3860.1	3873.1	3908.7	3980.0	4109.6	4299.0	4517.5	4524.0	4256.9	4096.6	3842.4
20°	3810.0	3819.8	3865.0	3923.3	4022.2	4203.4	4522.4	4708.6	4459.2	4273.1	3967.1
22.5°	3925.0	3928.2	3950.8	3983.3	4049.6	4188.8	4519.3	4899.7	4711.9	4494.8	4127.4
25°	4261.7	4240.7	4224.5	4184.0	4200.3	4299.0	4571.0	5103.8	5035.8	4786.3	4341.1
27.5°	4660.0	4656.9	4614.8	4520.8	4461.0	4524.0	4718.3	5332.1	5432.5	5157.2	4621.2
30°	5103.8	5105.3	5061.7	4946.6	4825.2	4831.8	4953.2	5596.0	5906.9	5604.0	4966.1
32.5°	5568.5	5597.6	5516.6	5401.7	5254.4	5207.4	5289.9	5915.0	6455.8	6132.0	5366.0
35°	6123.8	6128.7	6039.7	5871.2	5723.9	5649.4	5725.5	6313.3	7089.0	6752.1	5853.4
37.5°	6700.3	6703.5	6611.3	6395.9	6209.7	6161.0	6245.2	6797.5	7759.3	7458.1	6426.7
40°	7171.4	7205.5	7132.6	6930.2	6742.4	6713.3	6834.8	7377.2	8615.9	8293.6	7108.4
42.5°	7705.8	7744.6	7657.2	7446.8	7297.8	7288.0	7477.5	8037.8	9467.5	9260.3	7880.7
45°	8308.2	8363.2	8241.8	8005.3	7879.0	8092.8	8104.1	8769.7	10448.7	10341.8	8750.2
47.5°	8965.5	9010.9	8912.2	8658.0	8520.3	8829.6	8717.8	9561.5	11509.4	11501.3	9690.9
50°	9472.4	9522.7	9532.4	9420.5	9276.4	9315.3	9391.4	10393.7	12566.7	12693.1	10664.0
52.5°	9380.1	9428.7	9647.3	9940.4	10171.9	10071.4	10163.9	11277.9	13588.4	13855.5	11588.8
55°	8635.2	8661.2	9070.8	9767.1	10753.3	11232.4	11239.0	12239.6	14560.0	14934.1	12466.3
57.5°	7292.9	7296.2	7828.9	8855.5	10414.8	11985.4	12936.0	13447.5	15573.6	16125.7	13554.4
60°	5160.5	5173.3	5793.6	7135.9	9202.0	11894.7	14760.7	15609.2	16747.6	17464.8	14956.7
62.5°	3063.6	3092.7	3560.6	4637.4	6834.8	10728.8	15839.2	19454.9	18476.8	19428.9	17200.8
65°	1993.2	2017.6	2297.7	2838.5	4038.3	7806.2	15484.5	23179.1	21749.3	22518.4	20426.4
67.5°	1535.1	1554.4	1774.6	2101.8	2477.3	4219.7	12380.5	23959.5	25732.5	25972.2	23148.2
69°	1348.8	1365.1	1526.8	1841.0	2085.5	2793.1	9226.3	22542.6	26728.3	26859.5	23182.3
70°	1250.0	1262.9	1415.2	1687.2	1915.5	2229.7	7061.3	20897.5	26363.9	26699.2	22513.5
72.5°	1029.7	1041.1	1149.7	1358.5	1565.7	1588.5	3128.3	15259.5	22199.5	23271.3	19051.7
75°	859.8	866.2	937.6	1089.7	1267.9	1264.6	1598.2	8643.3	13546.4	14823.9	11763.6
77.5°	717.2	722.1	769.0	863.0	1000.7	995.9	1125.3	3730.8	5981.4	5770.9	4049.6
80°	633.1	636.4	660.7	684.9	772.4	767.5	833.8	1713.1	2433.7	2249.0	1531.8
82.5°	481.0	487.4	610.5	621.7	599.1	578.1	581.4	997.5	1246.8	1135.1	822.6
85°	272.0	273.7	391.8	458.2	521.3	391.8	377.3	514.9	615.2	539.3	359.4
87.5°	121.5	126.3	187.8	217.0	281.8	230.0	215.4	218.6	265.5	220.3	142.6
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°	3473.1	3473.1	3473.1	3473.1	3473.1	3473.1	3473.1	3473.1	3473.1	3473.1	3473.1
2.5°	3447.2	3419.8	3355.0	3288.7	3222.2	3180.1	3136.4	3095.9	3079.7	3078.1	3047.4
5°	3461.9	3397.1	3249.8	3087.8	2934.0	2814.2	2713.8	2649.0	2586.0	2574.5	2547.1
7.5°	3466.6	3361.5	3121.8	2862.8	2628.0	2462.9	2362.5	2318.7	2288.0	2279.9	2270.1
10°	3465.1	3316.2	2979.4	2624.8	2357.6	2232.8	2195.6	2205.3	2218.4	2224.8	2224.8
12.5°	3491.1	3295.2	2836.8	2401.3	2182.7	2122.8	2151.9	2202.1	2241.0	2257.3	2260.4
15°	3538.0	3282.1	2679.9	2207.0	2059.6	2074.1	2145.4	2218.4	2273.4	2297.7	2304.2
17.5°	3596.3	3264.4	2498.5	2046.7	1988.4	2038.7	2130.9	2223.1	2289.6	2320.3	2325.3
20°	3661.0	3238.4	2310.6	1926.9	1925.2	1988.4	2080.7	2184.3	2255.6	2289.6	2288.0
22.5°	3748.4	3214.1	2135.7	1839.4	1855.5	1913.8	1990.0	2083.9	2150.4	2181.1	2174.5
25°	3865.0	3191.5	1978.6	1761.7	1776.3	1815.1	1868.6	1939.8	1986.8	2003.0	1991.6
27.5°	4022.2	3173.6	1855.5	1690.5	1688.9	1706.7	1738.9	1777.8	1800.6	1795.7	1777.8
30°	4214.8	3155.8	1764.9	1627.3	1604.6	1603.0	1617.6	1640.2	1654.9	1625.8	1611.1
32.5°	4430.3	3125.1	1684.1	1572.3	1531.8	1517.1	1523.6	1554.4	1614.3	1585.1	1573.9
35°	4684.4	3089.5	1603.0	1512.3	1481.6	1454.0	1458.8	1525.3	1706.7	1685.6	1674.4
37.5°	4990.4	3057.1	1528.6	1447.6	1445.9	1412.0	1408.7	1488.0	1730.9	1685.6	1675.9
40°	5358.0	3050.6	1462.1	1376.4	1402.3	1389.3	1377.9	1426.5	1596.6	1504.2	1486.4
42.5°	5801.7	3079.7	1413.6	1308.3	1352.0	1382.9	1361.8	1373.1	1442.7	1360.2	1345.7
45°	6319.8	3159.1	1377.9	1248.5	1298.6	1377.9	1353.7	1344.0	1355.4	1310.0	1300.2
47.5°	6923.7	3300.0	1353.7	1198.2	1248.5	1365.1	1350.4	1331.0	1326.2	1300.2	1293.7
50°	7569.7	3489.3	1337.4	1152.9	1203.1	1342.3	1348.8	1321.2	1313.2	1301.9	1298.6
52.5°	8211.0	3695.1	1318.1	1114.0	1165.8	1314.8	1350.4	1311.5	1300.2	1293.7	1290.5
55°	8849.1	3908.7	1282.4	1080.0	1138.3	1282.4	1348.8	1298.6	1285.7	1285.7	1285.7
57.5°	9676.5	4234.3	1235.4	1052.5	1102.7	1240.3	1327.8	1284.0	1266.3	1267.9	1269.5
60°	10871.4	4779.9	1183.6	1021.7	1055.7	1191.7	1295.4	1258.2	1237.1	1243.6	1245.2
62.5°	12868.0	5733.6	1112.5	978.1	1007.2	1139.9	1253.2	1222.6	1203.1	1214.4	1216.0
65°	15529.9	6888.2	1018.5	923.0	957.0	1081.6	1199.9	1180.5	1159.4	1186.9	1185.3
67.5°	17153.9	7226.5	919.8	864.7	908.4	1020.1	1133.4	1125.3	1110.8	1159.4	1156.1
69°	16621.2	6614.5	863.0	827.3	874.4	978.1	1091.4	1088.0	1076.8	1123.7	1120.5
70°	15793.8	6042.9	827.3	803.2	856.5	952.2	1063.9	1063.9	1052.5	1093.0	1084.9
72.5°	12686.6	4482.0	744.9	741.6	795.0	880.9	989.4	997.5	991.0	1005.6	997.5
75°	7448.3	2700.8	663.8	673.5	720.5	804.7	906.7	913.2	906.7	905.1	906.7
77.5°	2582.6	1211.2	586.1	600.7	641.2	727.0	816.1	829.0	819.3	807.9	811.2
80°	1010.5	704.4	502.0	523.1	556.9	639.7	725.4	733.5	719.0	717.2	704.4
82.5°	607.3	429.1	390.3	424.2	466.3	555.4	626.7	623.5	612.0	678.5	594.3
85°	263.9	238.1	285.0	319.0	340.1	416.2	529.6	514.9	487.4	429.1	419.4
87.5°	106.9	123.1	157.1	189.5	204.1	268.9	362.6	349.7	354.7	291.5	289.9
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)