

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: P196813

Luminaire Tested: **NAV-AF-01-D-UNV-T3R-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196813
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-01-D-UNV-T3R-7030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 3000K, 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE III
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6010.4 lumens
Efficiency: N/A
Efficacy: 101.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Medium - Full Cutoff
BUG Rating: B1 - U0 - G2

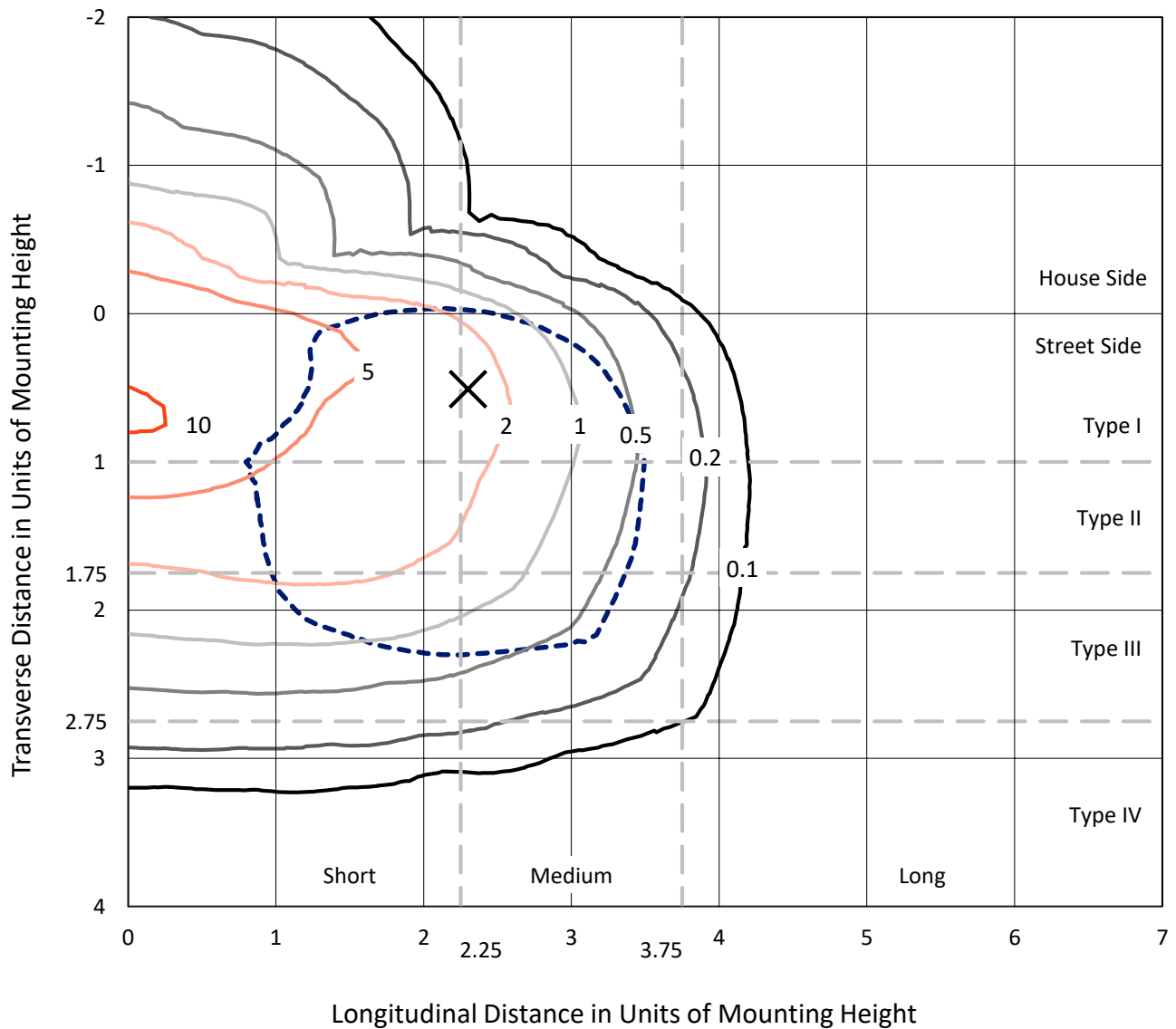
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

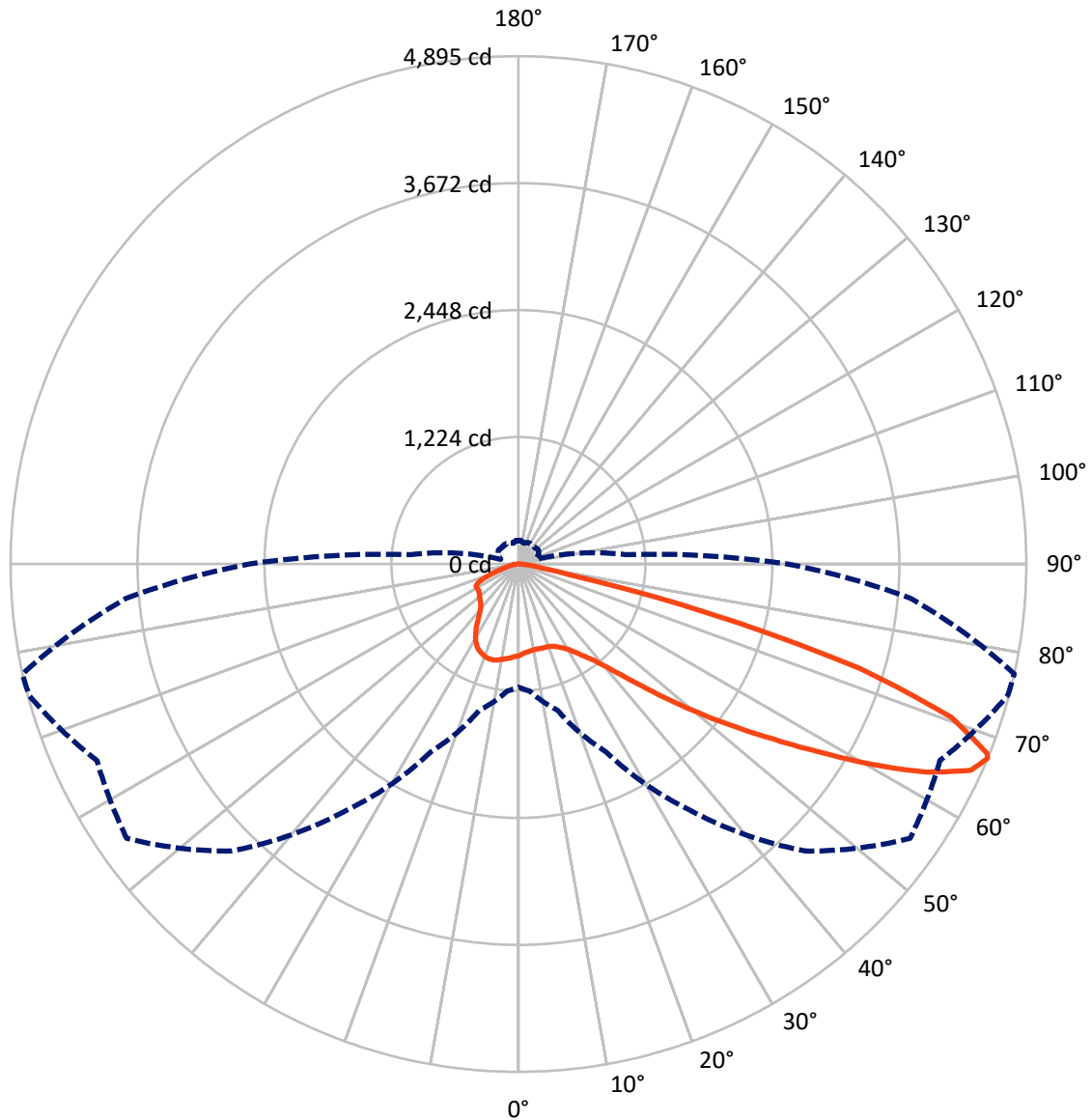
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10.6 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	1032.9	0.0	1032.9
	% Fixture	17.2	0.0	17.2
Street Side	Lumens	4977.5	0.0	4977.5
	% Fixture	82.8	0.0	82.8
Total	Lumens	6010.4	0.0	6010.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.8	1.3
10°-20°	218.2	3.6
20°-30°	370.7	6.2
30°-40°	593.0	9.9
40°-50°	913.0	15.2
50°-60°	1266.7	21.1
60°-70°	1689.7	28.1
70°-80°	804.1	13.4
80°-90°	76.1	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°	6010.4	100.0
0°-180°	6010.4	100.0



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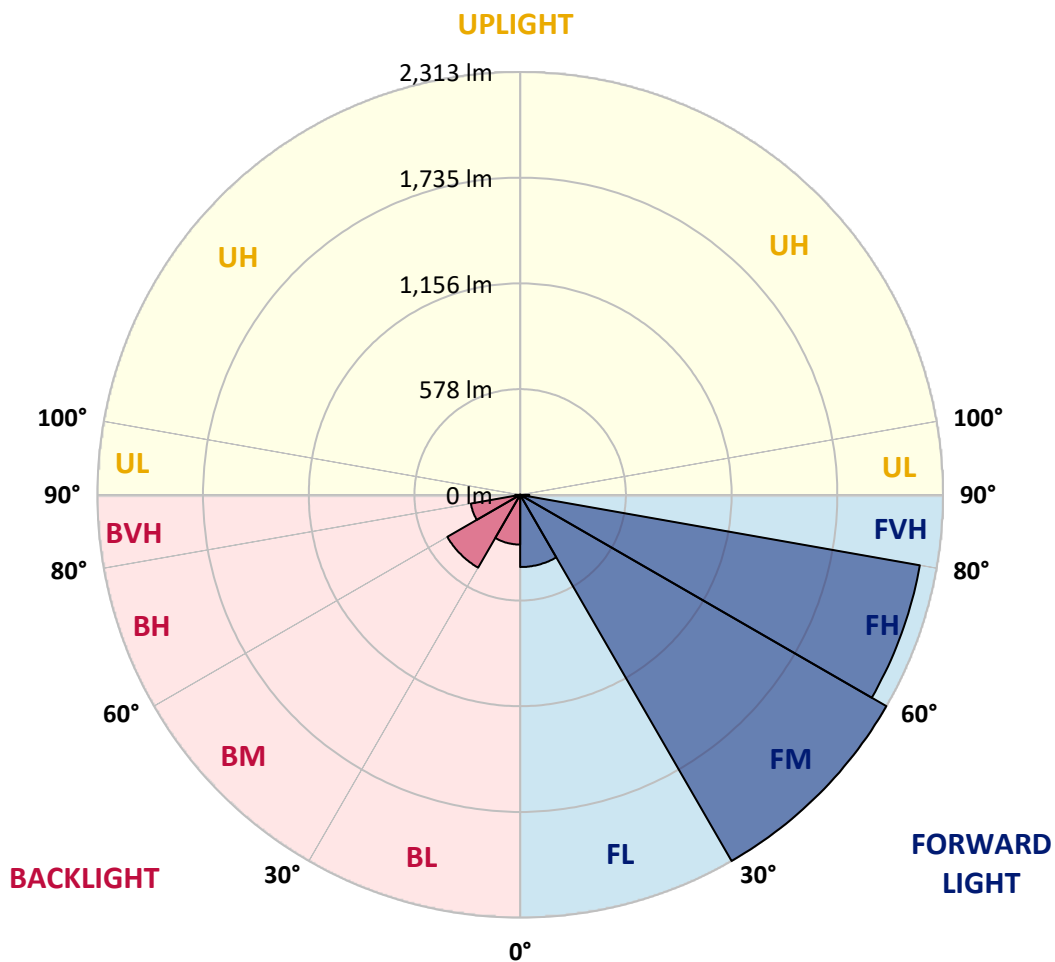
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	395.2	6.6			
FM	(30°-60°)	2312.8	38.5			
FH	(60°-80°)	2219.9	36.9			G2/5000
FVH	(80°-90°)	49.5	0.8			G1/100
BL	(0°-30°)	272.4	4.5	B1/500		
BM	(30°-60°)	459.9	7.7	B1/1000		
BH	(60°-80°)	273.9	4.6	B1/500		G1/500
BVH	(80°-90°)	26.7	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°	884.6	884.6	884.6	884.6	884.6	884.6	884.6	884.6	884.6	884.6	884.6
2.5°	793.2	796.9	797.3	808.1	812.9	825.1	838.4	850.4	860.8	864.5	871.3
5°	713.7	713.7	714.8	721.8	735.7	755.3	783.2	813.7	845.5	853.4	873.1
7.5°	672.1	672.8	673.6	680.5	691.4	708.9	736.7	778.4	831.5	844.5	879.0
10°	675.8	674.6	671.0	669.4	673.9	685.0	709.2	751.9	819.6	839.6	889.8
12.5°	734.1	731.9	719.6	701.8	685.4	681.3	698.0	738.6	814.0	839.6	908.0
15°	834.0	835.5	811.4	774.2	731.5	702.5	700.3	733.7	812.2	841.9	929.1
17.5°	964.1	964.8	931.3	877.5	806.6	746.8	715.5	733.7	812.2	844.0	949.6
20°	1102.3	1097.1	1059.2	991.5	899.4	808.1	743.4	738.1	814.3	847.5	968.9
22.5°	1220.8	1215.9	1176.1	1105.2	999.7	880.5	780.8	753.1	826.6	861.2	996.0
25°	1324.4	1327.4	1288.8	1208.9	1099.7	962.2	837.0	787.2	852.2	886.1	1029.4
27.5°	1450.4	1444.9	1400.2	1324.1	1202.6	1046.9	907.2	830.4	882.7	916.1	1070.3
30°	1596.1	1593.4	1533.2	1454.8	1315.9	1141.6	976.7	876.8	922.4	957.3	1121.5
32.5°	1772.8	1772.5	1707.8	1611.6	1443.4	1248.7	1058.8	940.2	980.4	1015.7	1189.7
35°	1973.1	1972.6	1905.8	1778.7	1590.0	1367.2	1155.4	1017.5	1052.1	1089.4	1270.5
37.5°	2112.0	2109.8	2074.9	1951.6	1752.4	1504.9	1276.1	1121.5	1133.4	1175.1	1368.3
40°	2138.8	2152.2	2182.2	2109.5	1929.6	1658.0	1397.2	1233.4	1244.6	1298.1	1491.3
42.5°	2109.8	2127.3	2227.2	2247.7	2106.8	1843.4	1548.9	1388.3	1402.5	1469.0	1635.7
45°	2084.5	2099.8	2224.9	2324.2	2281.8	2045.6	1737.9	1577.4	1604.2	1686.6	1800.7
47.5°	2041.4	2055.6	2181.2	2337.9	2381.8	2240.3	1965.7	1804.8	1850.9	1950.9	1988.7
50°	2039.3	2045.6	2121.4	2291.8	2416.3	2388.1	2218.0	2070.8	2141.4	2256.5	2196.7
52.5°	1982.7	2027.0	2095.7	2218.3	2417.1	2474.2	2466.4	2362.4	2471.3	2598.7	2424.9
55°	1637.2	1688.2	2010.3	2182.2	2412.6	2548.2	2693.5	2672.6	2842.8	2976.9	2680.4
57.5°	1528.7	1550.3	1763.6	2193.1	2449.7	2670.4	2920.4	3005.9	3267.8	3414.2	2986.9
60°	1499.0	1521.7	1714.2	2198.2	2550.4	2892.9	3228.4	3382.2	3767.5	3922.7	3335.0
62.5°	1465.9	1495.3	1717.9	2203.1	2727.2	3222.0	3637.1	3790.5	4280.6	4419.1	3661.3
65°	1369.3	1408.4	1649.2	2172.6	2920.8	3635.3	4177.3	4216.4	4704.4	4792.4	3858.2
67°	1186.2	1228.9	1460.4	1996.5	2903.0	3913.4	4609.3	4482.7	4884.7	4895.4	3794.2
67.5°	1128.3	1172.5	1396.6	1923.3	2852.1	3949.9	4685.9	4519.4	4883.2	4871.3	3734.8
70°	759.8	809.5	989.1	1412.0	2287.8	3676.1	4667.3	4406.1	4562.8	4426.5	3208.7
72.5°	377.1	378.6	493.5	773.4	1386.1	2636.7	3893.5	3769.3	3698.8	3441.3	2354.6
75°	181.7	184.9	232.9	341.8	584.4	1361.3	2655.2	2543.3	2165.5	1875.0	1178.5
77.5°	138.5	141.9	181.0	222.6	243.7	443.9	1315.2	1062.9	627.4	501.2	332.1
80°	107.0	113.3	152.8	170.9	161.2	178.0	413.4	325.5	244.0	224.0	164.6
82.5°	83.6	87.3	129.7	129.7	111.5	119.2	192.4	188.0	151.6	136.7	88.4
85°	59.1	66.5	104.4	96.5	73.2	74.0	115.2	110.4	78.0	62.9	34.5
87.5°	26.3	33.8	74.3	63.2	39.0	30.0	47.2	40.5	30.8	23.8	16.0
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°	884.6	884.6	884.6	884.6	884.6	884.6	884.6	884.6	884.6	884.6	884.6
2.5°	878.7	884.6	893.8	899.4	906.9	909.8	912.8	918.0	922.0	920.9	919.1
5°	886.7	896.8	908.4	912.1	912.1	908.4	906.1	906.6	905.3	904.6	902.4
7.5°	898.6	912.5	920.6	916.9	905.3	890.9	877.2	868.9	861.2	856.4	857.8
10°	915.4	930.7	931.0	914.6	887.1	855.6	828.5	811.0	794.4	786.8	789.1
12.5°	939.5	954.8	941.9	906.6	858.2	808.7	759.1	723.0	690.6	682.9	680.5
15°	965.6	977.5	948.5	889.1	816.6	735.2	651.6	597.7	561.7	555.4	553.2
17.5°	988.2	995.0	945.1	857.8	750.8	622.7	525.3	488.9	481.5	485.2	485.2
20°	1008.3	1006.1	930.7	809.5	647.2	497.7	441.4	441.0	451.0	460.3	461.1
22.5°	1033.6	1016.1	907.6	737.8	523.5	415.3	405.7	415.3	426.5	436.9	438.0
25°	1063.6	1027.2	876.8	635.7	420.8	377.1	381.2	389.3	396.4	404.6	405.0
27.5°	1093.6	1035.8	833.3	515.7	365.2	352.6	357.1	360.3	362.2	367.4	367.4
30°	1128.6	1042.5	770.5	413.1	339.6	331.0	328.5	326.9	328.5	335.4	335.9
32.5°	1172.5	1054.4	684.7	354.4	327.7	315.8	302.4	295.0	300.1	312.8	315.0
35°	1222.3	1068.4	581.8	331.0	323.6	308.3	283.8	272.3	274.1	285.7	287.6
37.5°	1284.7	1086.7	480.4	325.5	327.7	307.6	275.4	259.0	250.7	251.2	250.7
40°	1364.5	1104.8	400.1	326.9	336.6	309.4	271.2	245.7	228.5	229.2	230.7
42.5°	1448.1	1116.7	349.2	331.4	347.3	312.1	269.8	232.6	217.8	230.3	241.9
45°	1545.8	1113.5	322.9	335.4	355.5	313.1	264.2	231.1	218.8	256.8	278.3
47.5°	1658.0	1098.9	308.0	337.3	357.8	312.8	260.0	235.9	228.2	293.9	318.4
50°	1780.0	1076.3	296.1	334.4	356.6	311.3	264.5	241.9	231.8	302.0	321.0
52.5°	1913.2	1055.5	283.8	327.7	351.0	306.9	270.1	239.3	221.5	278.3	292.7
55°	2071.1	1050.6	270.1	316.2	341.8	302.0	267.1	231.1	209.9	246.7	255.5
57.5°	2251.8	1080.7	252.3	302.0	329.2	292.4	260.0	226.6	205.9	224.4	229.2
60°	2481.0	1147.2	233.3	287.2	313.6	277.8	253.7	227.7	206.9	221.0	222.2
62.5°	2660.0	1207.0	216.3	269.0	292.7	260.5	247.0	228.9	210.4	225.5	223.7
65°	2725.0	1177.7	195.0	241.9	263.5	241.1	237.7	229.6	210.4	228.2	224.0
67°	2591.6	1037.6	175.1	214.7	235.6	224.0	228.9	226.6	206.6	227.7	220.7
67.5°	2528.2	988.2	169.8	210.4	228.2	218.8	226.6	225.2	205.4	227.0	218.8
70°	2084.8	708.9	143.4	176.5	190.9	192.9	212.8	215.5	196.5	213.3	198.5
72.5°	1483.4	443.6	123.7	136.7	154.2	165.0	194.3	202.4	184.6	185.4	173.1
75°	734.1	238.1	110.4	105.6	119.9	137.4	169.5	184.6	167.1	154.6	150.4
77.5°	247.8	134.8	93.2	85.1	93.2	110.4	140.4	161.2	147.5	130.8	128.2
80°	128.2	98.2	72.7	68.4	73.5	85.4	110.0	134.1	125.9	126.6	104.4
82.5°	79.9	59.8	52.3	52.0	55.7	65.3	81.0	108.8	108.0	92.6	67.2
85°	37.1	34.5	33.5	34.5	35.6	37.1	52.8	77.7	82.1	49.8	44.2
87.5°	15.7	15.2	13.3	14.5	16.0	15.7	21.2	33.1	46.1	31.2	28.6
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)