

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: P195853

Luminaire Tested: **NAV-AF-01-D-UNV-T3R-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195853
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-7050
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5000K, 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: 6214 lumens
Efficiency: N/A
Efficacy: 105.3 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

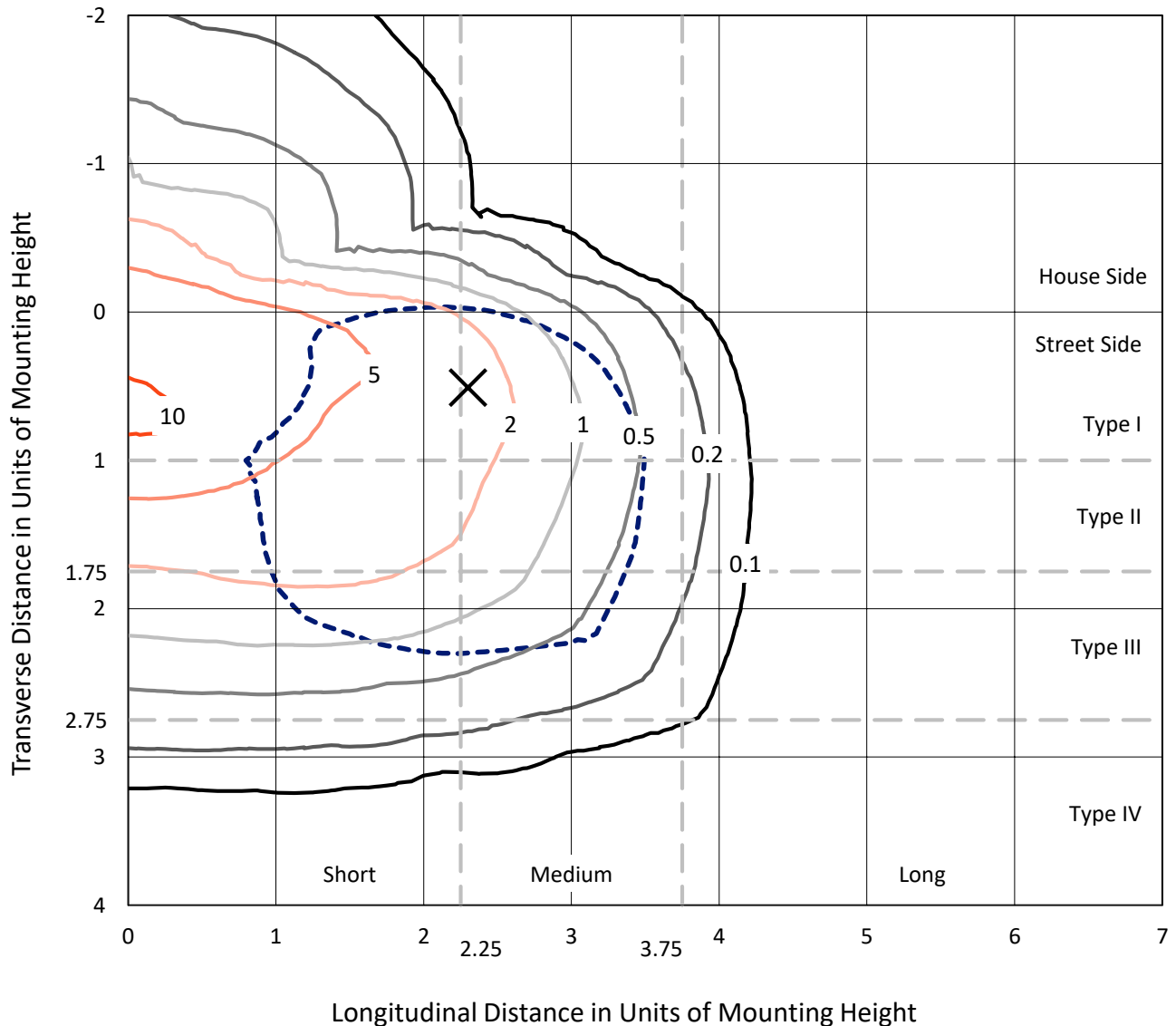
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P195853
 CATALOG NUMBER: NAV-AF-01-D-UNV-T3R-7050

Iso-Footcandle Lines of Horizontal Illumination

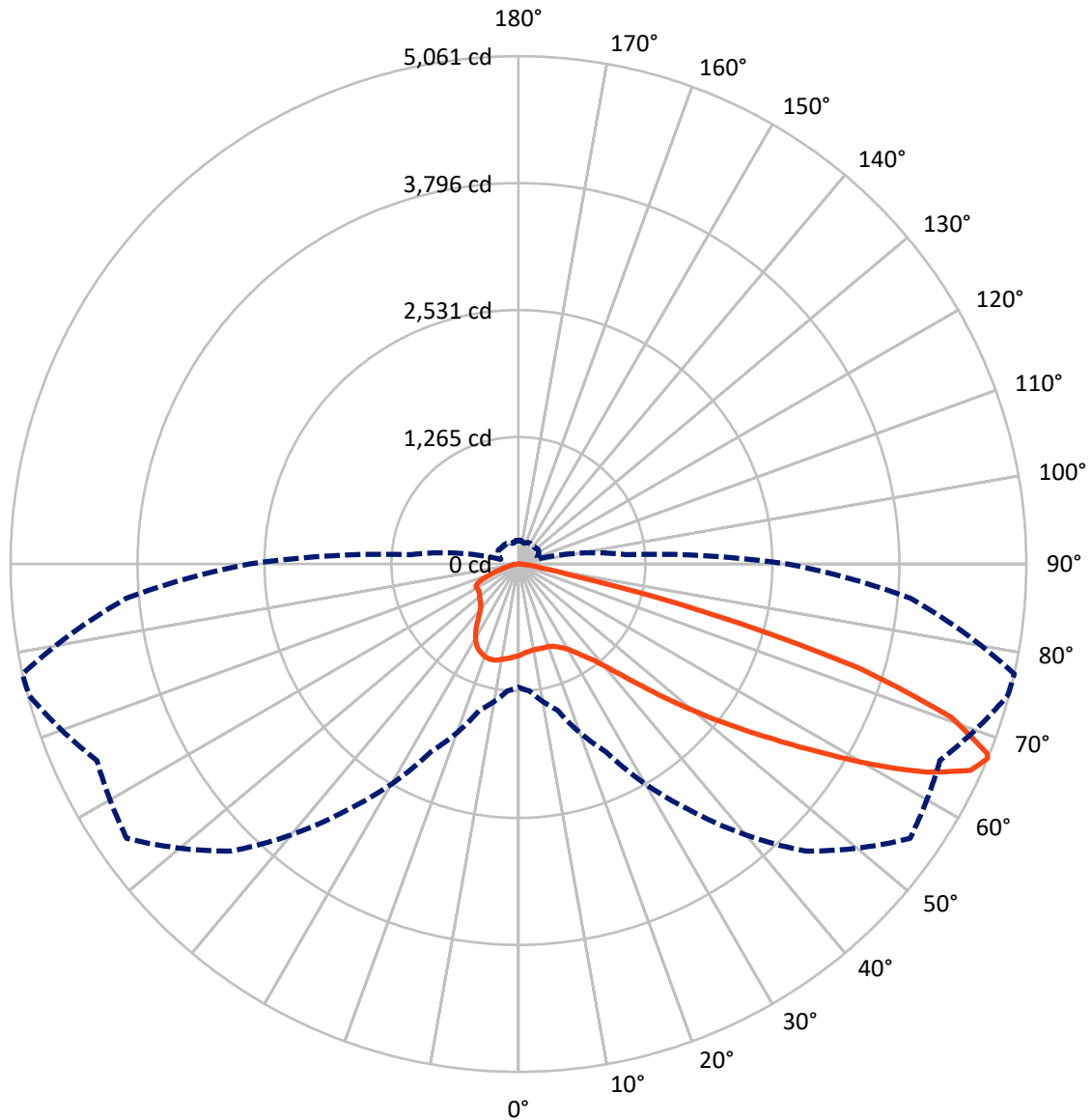
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11 fc
 Type III - Medium - Full Cutoff

REPORT NUMBER: P195853
CATALOG NUMBER: NAV-AF-01-D-UNV-T3R-7050

Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

REPORT NUMBER: P195853

CATALOG NUMBER: NAV-AF-01-D-UNV-T3R-7050

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1067.9	0.0	1067.9
	% Fixture	17.2	0.0	17.2
Street Side	Lumens	5146.1	0.0	5146.1
	% Fixture	82.8	0.0	82.8
Total	Lumens	6214.0	0.0	6214.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.5	1.3
10°-20°	225.6	3.6
20°-30°	383.3	6.2
30°-40°	613.1	9.9
40°-50°	943.9	15.2
50°-60°	1309.6	21.1
60°-70°	1746.9	28.1
70°-80°	831.4	13.4
80°-90°	78.7	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°	6214.0	100.0
0°-180°	6214.0	100.0



REPORT NUMBER: P195853

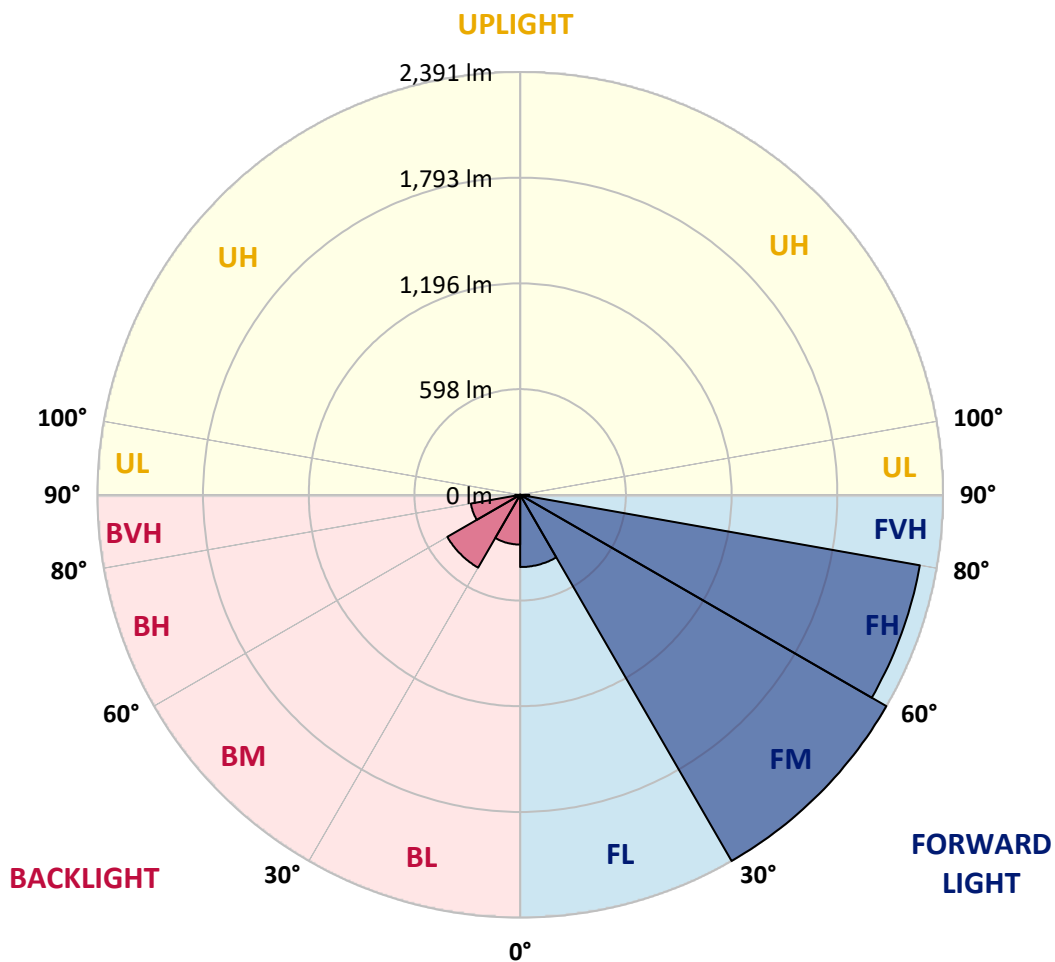
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	408.6	6.6			
FM	(30°-60°)	2391.2	38.5			
FH	(60°-80°)	2295.2	36.9			G2/5000
FVH	(80°-90°)	51.1	0.8			G1/100
BL	(0°-30°)	281.7	4.5	B1/500		
BM	(30°-60°)	475.5	7.7	B1/1000		
BH	(60°-80°)	283.1	4.6	B1/500		G1/500
BVH	(80°-90°)	27.6	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





REPORT NUMBER: P195853
 CATALOG NUMBER: NAV-AF-01-D-UNV-T3R-7050

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	914.5	914.5	914.5	914.5	914.5	914.5	914.5	914.5	914.5	914.5	914.5
2.5°	820.0	823.9	824.3	835.4	840.4	853.1	866.9	879.2	890.0	893.8	900.7
5°	737.9	737.9	739.0	746.3	760.5	780.9	809.7	841.2	874.2	882.3	902.6
7.5°	694.8	695.6	696.4	703.7	714.8	732.9	761.7	804.7	859.6	873.1	908.8
10°	698.7	697.5	693.7	692.1	696.8	708.3	733.2	777.4	847.3	868.1	919.9
12.5°	759.0	756.7	744.0	725.6	708.7	704.4	721.7	763.6	841.6	868.1	938.7
15°	862.3	863.8	838.9	800.5	756.3	726.3	724.0	758.6	839.6	870.4	960.6
17.5°	996.7	997.5	962.9	907.2	833.9	772.0	739.8	758.6	839.6	872.7	981.8
20°	1139.6	1134.2	1095.1	1025.2	929.9	835.4	768.6	763.2	841.9	876.1	1001.7
22.5°	1262.1	1257.2	1216.1	1142.7	1033.6	910.3	807.4	778.6	854.6	890.3	1029.8
25°	1369.3	1372.4	1332.4	1249.9	1136.9	994.8	865.4	813.9	881.1	916.1	1064.3
27.5°	1499.5	1493.8	1447.7	1368.9	1243.3	1082.4	938.0	858.5	912.6	947.2	1106.6
30°	1650.1	1647.4	1585.2	1504.1	1360.5	1180.3	1009.8	906.5	953.7	989.8	1159.6
32.5°	1832.9	1832.5	1765.7	1666.2	1492.2	1291.0	1094.7	972.2	1013.6	1050.1	1229.9
35°	2039.9	2039.6	1970.4	1839.1	1643.9	1413.5	1194.5	1052.0	1087.8	1126.2	1313.6
37.5°	2183.6	2181.3	2145.2	2017.7	1811.8	1556.0	1319.4	1159.6	1171.9	1214.9	1414.6
40°	2211.3	2225.1	2256.2	2180.9	1995.0	1714.2	1444.6	1275.2	1286.7	1342.0	1541.8
42.5°	2181.3	2199.3	2302.7	2323.8	2178.2	1905.9	1601.3	1435.4	1450.0	1518.7	1691.2
45°	2155.2	2170.9	2300.4	2402.9	2359.1	2114.8	1796.8	1630.9	1658.5	1743.8	1861.7
47.5°	2110.6	2125.2	2255.0	2417.1	2462.5	2316.1	2032.3	1865.9	1913.6	2016.9	2056.1
50°	2108.3	2114.8	2193.2	2369.5	2498.2	2469.0	2293.1	2141.0	2213.9	2333.0	2271.2
52.5°	2049.9	2095.6	2166.7	2293.4	2498.9	2558.1	2550.0	2442.5	2555.0	2686.8	2507.0
55°	1692.7	1745.3	2078.4	2256.2	2494.3	2634.5	2784.7	2763.2	2939.1	3077.8	2771.3
57.5°	1580.6	1602.8	1823.3	2267.3	2532.7	2760.9	3019.4	3107.7	3378.5	3529.9	3088.1
60°	1549.8	1573.3	1772.2	2272.7	2636.8	2991.0	3337.8	3496.8	3895.1	4055.7	3448.0
62.5°	1515.7	1546.0	1776.1	2277.7	2819.7	3331.3	3760.3	3919.0	4425.6	4568.8	3785.3
65°	1415.8	1456.1	1705.0	2246.2	3019.8	3758.4	4318.8	4359.1	4863.8	4954.9	3988.9
67°	1226.4	1270.6	1509.9	2064.1	3001.3	4046.1	4765.5	4634.5	5050.1	5061.3	3922.8
67.5°	1166.5	1212.2	1443.8	1988.5	2948.7	4083.7	4844.6	4672.6	5048.6	5036.3	3861.3
70°	785.5	836.9	1022.5	1460.0	2365.3	3800.7	4825.4	4555.4	4717.5	4576.5	3317.5
72.5°	389.9	391.4	510.1	799.7	1433.1	2725.9	4025.3	3897.1	3824.1	3557.9	2434.4
75°	187.8	191.3	240.8	353.4	604.2	1407.3	2745.1	2629.5	2238.9	1938.5	1218.4
77.5°	143.3	146.7	187.1	230.1	252.0	459.0	1359.7	1098.9	648.7	518.1	343.4
80°	110.6	117.1	157.9	176.7	166.7	184.0	427.5	336.5	252.4	231.6	170.2
82.5°	86.4	90.3	134.1	134.1	115.2	123.3	199.0	194.4	156.7	141.3	91.4
85°	61.1	68.8	107.9	99.9	75.7	76.4	119.1	114.1	80.7	64.9	35.7
87.5°	27.3	35.0	76.8	65.3	40.3	31.1	48.8	41.9	31.9	24.6	16.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P195853

CATALOG NUMBER: NAV-AF-01-D-UNV-T3R-7050

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	914.5	914.5	914.5	914.5	914.5	914.5	914.5	914.5	914.5	914.5	914.5
2.5°	908.4	914.5	924.1	929.9	937.6	940.7	943.7	949.1	953.3	952.2	950.3
5°	916.8	927.2	939.1	943.0	943.0	939.1	936.8	937.2	936.0	935.3	933.0
7.5°	929.1	943.3	951.8	948.0	936.0	921.1	906.9	898.4	890.3	885.3	886.9
10°	946.4	962.2	962.5	945.6	917.2	884.6	856.5	838.5	821.2	813.5	815.8
12.5°	971.4	987.1	973.7	937.2	887.3	836.2	784.7	747.5	714.0	706.0	703.7
15°	998.3	1010.6	980.6	919.1	844.2	760.1	673.7	618.0	580.8	574.2	571.9
17.5°	1021.7	1028.6	977.1	886.9	776.3	643.7	543.1	505.5	497.8	501.6	501.6
20°	1042.4	1040.1	962.2	836.9	669.1	514.7	456.3	455.9	466.3	475.9	476.7
22.5°	1068.6	1050.5	938.4	762.8	541.2	429.4	419.4	429.4	440.9	451.7	452.9
25°	1099.7	1062.0	906.5	657.2	435.2	389.9	394.1	402.5	409.8	418.3	418.7
27.5°	1130.8	1070.9	861.5	533.1	377.6	364.5	369.1	372.6	374.5	379.9	379.9
30°	1166.9	1077.8	796.6	427.1	351.1	342.2	339.5	338.0	339.5	346.8	347.2
32.5°	1212.2	1090.1	707.9	366.4	338.8	326.5	312.7	305.0	310.4	323.4	325.7
35°	1263.7	1104.7	601.5	342.2	334.5	318.8	293.5	281.5	283.5	295.4	297.3
37.5°	1328.2	1123.5	496.6	336.5	338.8	318.0	284.6	267.7	259.3	259.7	259.3
40°	1410.8	1142.3	413.7	338.0	348.0	320.0	280.4	253.9	236.2	237.0	238.5
42.5°	1497.2	1154.6	361.1	342.6	359.1	322.6	278.9	240.4	225.1	238.1	250.0
45°	1598.2	1151.1	333.8	346.8	367.6	323.8	273.1	238.9	226.2	265.4	287.7
47.5°	1714.2	1136.2	318.4	348.8	369.9	323.4	268.9	243.9	235.8	303.8	329.2
50°	1840.2	1112.7	306.1	345.7	368.7	321.9	273.5	250.0	239.7	312.3	331.9
52.5°	1978.1	1091.2	293.5	338.8	363.0	317.3	279.2	247.4	228.9	287.7	302.7
55°	2141.3	1086.2	279.2	326.9	353.4	312.3	276.2	238.9	217.0	255.0	264.3
57.5°	2328.0	1117.3	260.8	312.3	340.3	302.3	268.9	234.3	212.8	232.0	237.0
60°	2565.0	1186.1	241.2	296.9	324.2	287.3	262.3	235.5	213.9	228.5	229.7
62.5°	2750.1	1247.9	223.5	278.1	302.7	269.3	255.4	236.6	217.4	233.1	231.2
65°	2817.4	1217.6	201.7	250.0	272.3	249.3	245.8	237.4	217.4	235.8	231.6
67°	2679.5	1072.8	180.9	222.0	243.5	231.6	236.6	234.3	213.6	235.5	228.2
67.5°	2613.8	1021.7	175.5	217.4	235.8	226.2	234.3	232.8	212.4	234.7	226.2
70°	2155.6	732.9	148.3	182.4	197.4	199.3	220.1	222.8	203.2	220.5	205.1
72.5°	1533.7	458.6	127.9	141.3	159.4	170.5	200.9	209.3	190.9	191.7	179.0
75°	759.0	246.2	114.1	109.1	124.1	142.1	175.1	190.9	172.8	159.8	155.6
77.5°	256.2	139.4	96.4	88.0	96.4	114.1	145.2	166.7	152.5	135.2	132.5
80°	132.5	101.4	75.3	70.7	76.1	88.3	113.7	138.7	130.2	131.0	107.9
82.5°	82.6	61.8	54.2	53.8	57.6	67.6	83.7	112.5	111.8	95.6	69.5
85°	38.4	35.7	34.6	35.7	36.9	38.4	54.5	80.3	84.9	51.5	45.7
87.5°	16.1	15.7	13.8	15.0	16.5	16.1	21.9	34.2	47.6	32.3	29.6
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)