

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: P196819

Luminaire Tested: **NAV-AF-01-D-UNV-T3R-7030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196819
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-7030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 3000K, 1200mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE III
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6592.7 lumens
Efficiency: N/A
Efficacy: 98.4 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

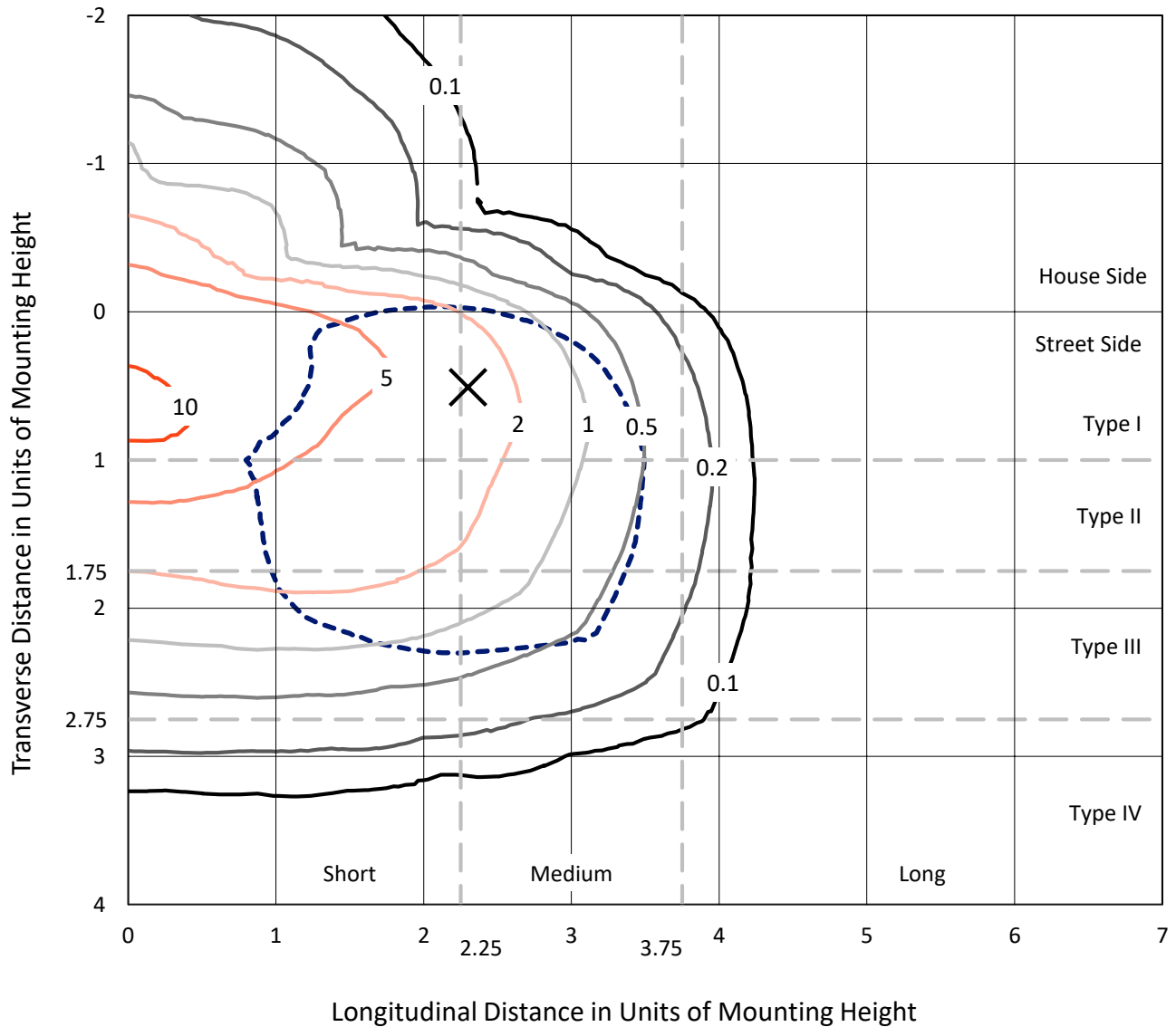
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

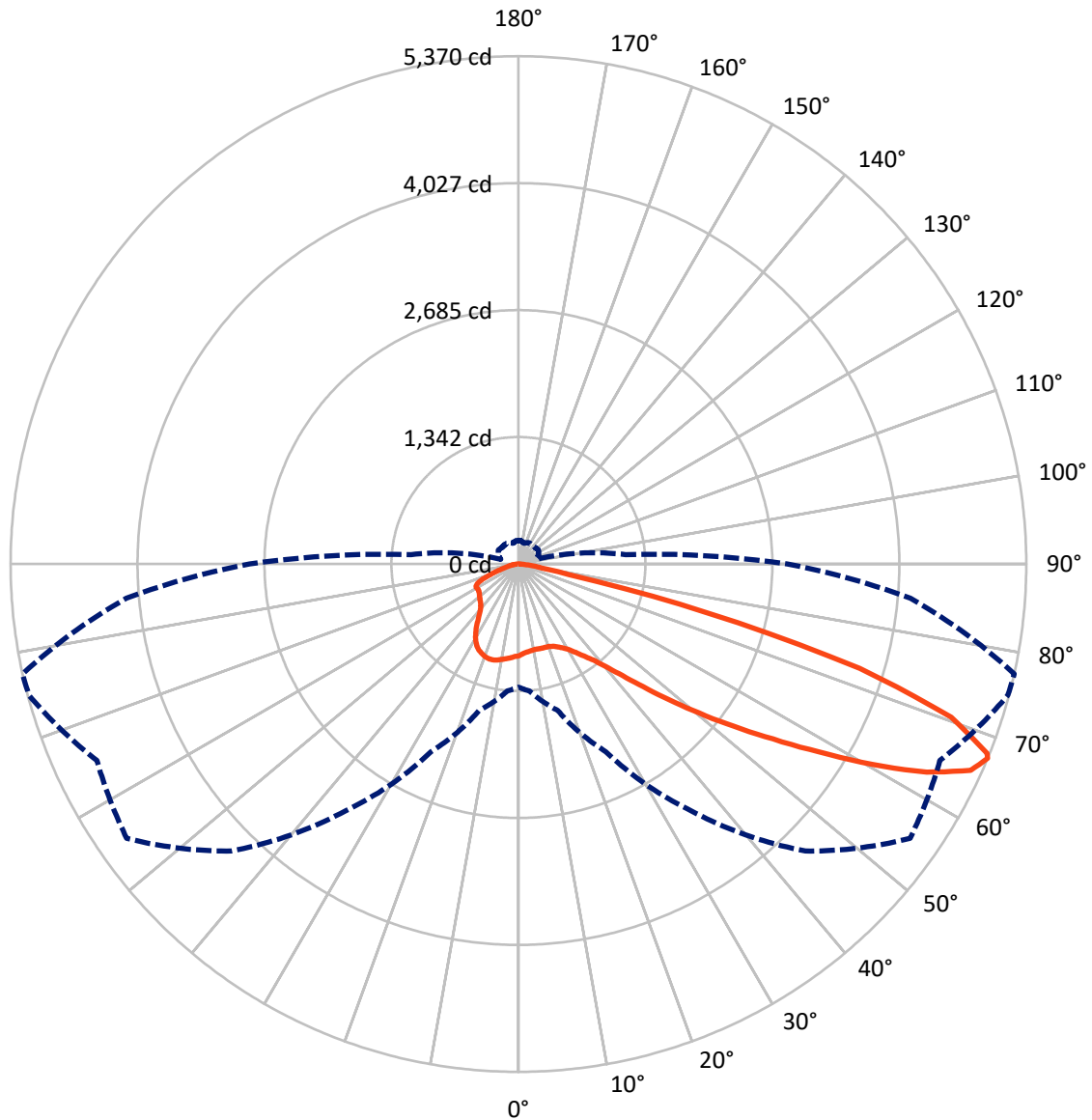
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11.7 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	1133.0	0.0	1133.0
	% Fixture	17.2	0.0	17.2
Street Side	Lumens	5459.8	0.0	5459.8
	% Fixture	82.8	0.0	82.8
Total	Lumens	6592.7	0.0	6592.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.4	1.3
10°-20°	239.3	3.6
20°-30°	406.6	6.2
30°-40°	650.5	9.9
40°-50°	1001.5	15.2
50°-60°	1389.4	21.1
60°-70°	1853.4	28.1
70°-80°	882.0	13.4
80°-90°	83.5	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°	6592.7	100.0
0°-180°	6592.7	100.0



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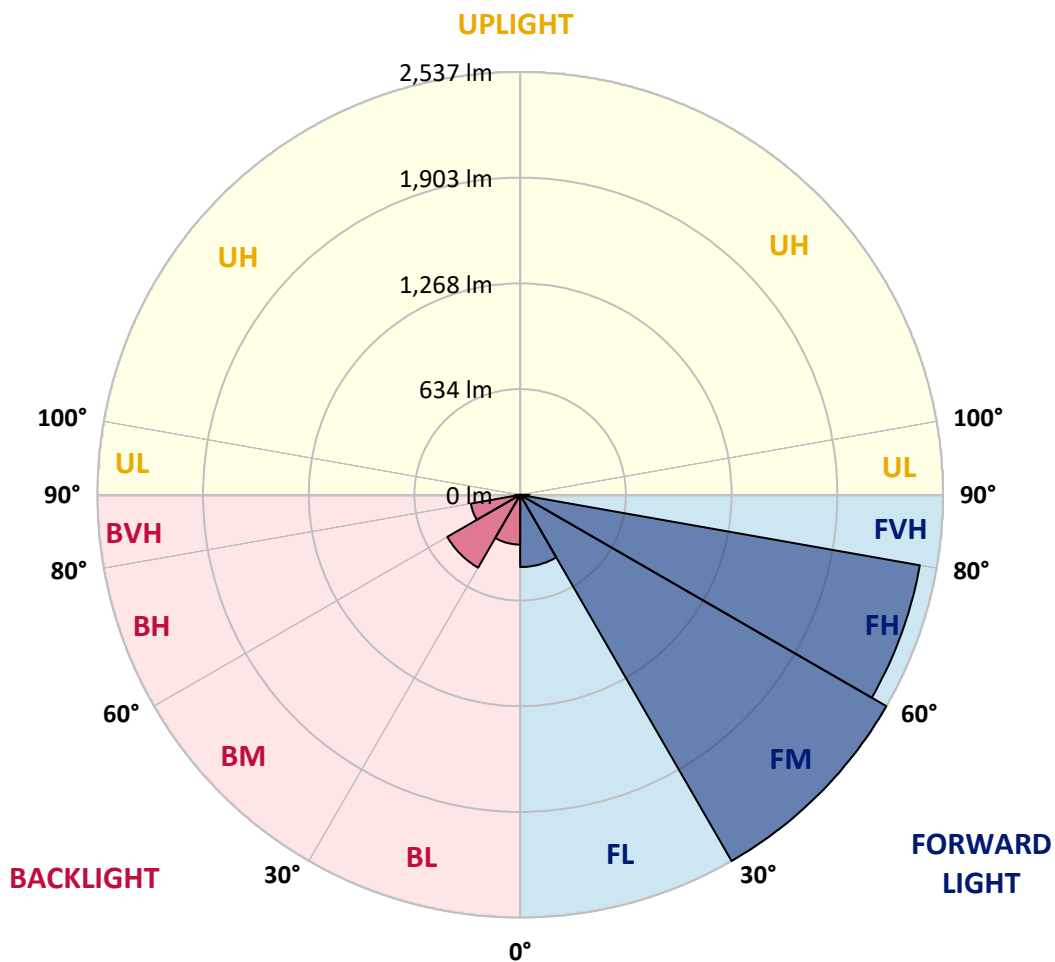
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	433.5	6.6			
FM	(30°-60°)	2536.9	38.5			
FH	(60°-80°)	2435.0	36.9			G2/5000
FVH	(80°-90°)	54.2	0.8			G1/100
BL	(0°-30°)	298.8	4.5	B1/500		
BM	(30°-60°)	504.5	7.7	B1/1000		
BH	(60°-80°)	300.4	4.6	B1/500		G1/500
BVH	(80°-90°)	29.3	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°	970.2	970.2	970.2	970.2	970.2	970.2	970.2	970.2	970.2	970.2	970.2
2.5°	870.0	874.1	874.5	886.3	891.7	905.1	919.8	932.7	944.2	948.3	955.6
5°	782.9	782.9	784.1	791.8	806.9	828.5	859.0	892.4	927.5	936.1	957.6
7.5°	737.2	738.0	738.8	746.6	758.4	777.5	808.1	853.8	912.0	926.3	964.2
10°	741.3	740.0	736.0	734.3	739.2	751.4	777.9	824.8	898.9	920.9	976.0
12.5°	805.2	802.8	789.3	769.7	751.8	747.4	765.7	810.1	892.8	920.9	995.9
15°	914.8	916.4	890.0	849.3	802.4	770.6	768.2	804.8	890.8	923.5	1019.2
17.5°	1057.5	1058.2	1021.6	962.6	884.7	819.1	784.8	804.8	890.8	925.9	1041.6
20°	1209.1	1203.4	1161.8	1087.6	986.6	886.3	815.4	809.7	893.3	929.5	1062.8
22.5°	1339.1	1333.7	1290.2	1212.3	1096.6	965.8	856.6	826.0	906.8	944.5	1092.5
25°	1452.7	1456.0	1413.6	1326.1	1206.2	1055.5	918.1	863.4	934.8	971.9	1129.2
27.5°	1591.0	1584.8	1535.8	1452.4	1319.1	1148.4	995.2	910.7	968.2	1004.8	1174.0
30°	1750.7	1747.8	1681.8	1595.8	1443.5	1252.2	1071.3	961.7	1011.8	1050.1	1230.3
32.5°	1944.6	1944.2	1873.4	1767.9	1583.1	1369.7	1161.4	1031.4	1075.4	1114.1	1304.9
35°	2164.3	2163.9	2090.4	1951.2	1744.1	1499.6	1267.3	1116.2	1154.1	1194.9	1393.7
37.5°	2316.7	2314.2	2275.9	2140.6	1922.2	1650.8	1399.8	1230.3	1243.3	1288.9	1500.9
40°	2346.1	2360.6	2393.7	2313.8	2116.6	1818.7	1532.6	1352.9	1365.2	1423.8	1635.7
42.5°	2314.2	2333.3	2443.0	2465.4	2311.0	2022.1	1698.9	1522.8	1538.4	1611.2	1794.2
45°	2286.5	2303.1	2440.6	2549.3	2502.9	2243.7	1906.3	1730.2	1759.6	1850.1	1975.2
47.5°	2239.3	2254.8	2392.4	2564.5	2612.5	2457.2	2156.1	1979.7	2030.1	2139.9	2181.4
50°	2236.7	2243.7	2326.9	2513.9	2650.4	2619.5	2432.7	2271.4	2348.8	2475.2	2409.6
52.5°	2175.0	2223.3	2298.7	2433.2	2651.2	2714.0	2705.5	2591.3	2710.7	2850.5	2659.8
55°	1795.9	1851.7	2205.1	2393.7	2646.4	2795.1	2954.4	2931.7	3118.3	3265.3	2940.1
57.5°	1676.9	1700.5	1934.4	2405.6	2687.1	2929.1	3203.4	3297.1	3584.5	3745.0	3276.3
60°	1644.3	1669.2	1880.3	2411.3	2797.6	3173.2	3541.2	3709.9	4132.5	4302.8	3658.2
62.5°	1608.0	1640.2	1884.2	2416.5	2991.5	3534.3	3989.5	4157.8	4695.3	4847.3	4016.0
65°	1502.1	1544.8	1808.9	2383.1	3203.8	3987.4	4582.0	4624.8	5160.2	5256.8	4231.9
67°	1301.2	1348.0	1602.0	2190.0	3184.3	4292.7	5056.0	4917.0	5357.8	5369.8	4161.9
67.5°	1237.6	1286.1	1531.9	2109.7	3128.4	4332.5	5139.9	4957.3	5356.2	5343.3	4096.6
70°	833.3	888.0	1084.8	1549.0	2509.4	4032.3	5119.5	4833.0	5004.9	4855.5	3519.7
72.5°	413.6	415.3	541.2	848.4	1520.5	2892.1	4270.6	4134.6	4057.2	3774.7	2582.8
75°	199.3	202.9	255.5	374.9	641.1	1493.1	2912.5	2789.8	2375.4	2056.7	1292.6
77.5°	152.0	155.7	198.5	244.0	267.3	487.0	1442.5	1165.9	688.3	549.7	364.3
80°	117.4	124.3	167.5	187.5	176.9	195.2	453.5	356.9	267.6	245.8	180.5
82.5°	91.7	95.7	142.2	142.2	122.3	130.8	211.1	206.2	166.3	150.0	97.0
85°	64.8	72.9	114.5	106.0	80.3	81.1	126.3	121.1	85.5	68.9	37.9
87.5°	29.0	37.0	81.5	69.3	42.8	33.0	51.8	44.5	33.9	26.1	17.5
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°	970.2	970.2	970.2	970.2	970.2	970.2	970.2	970.2	970.2	970.2	970.2
2.5°	963.7	970.2	980.5	986.6	994.7	998.0	1001.3	1007.0	1011.4	1010.2	1008.1
5°	972.7	983.8	996.3	1000.4	1000.4	996.3	993.9	994.4	993.0	992.3	989.8
7.5°	985.7	1000.9	1009.8	1005.7	993.0	977.3	962.1	953.2	944.5	939.3	940.9
10°	1004.1	1020.8	1021.2	1003.3	973.2	938.5	908.7	889.6	871.3	863.1	865.6
12.5°	1030.6	1047.2	1033.0	994.4	941.4	887.1	832.5	793.0	757.6	749.0	746.6
15°	1059.2	1072.2	1040.3	975.1	895.7	806.5	714.8	655.7	616.1	609.2	606.8
17.5°	1084.0	1091.3	1036.7	940.9	823.6	683.0	576.3	536.3	528.2	532.2	532.2
20°	1105.9	1103.5	1020.8	888.0	709.8	546.1	484.1	483.7	494.7	504.9	505.8
22.5°	1133.7	1114.6	995.6	809.3	574.1	455.6	445.0	455.6	467.8	479.2	480.4
25°	1166.7	1126.8	961.7	697.3	461.7	413.6	418.1	427.1	434.9	443.8	444.1
27.5°	1199.6	1136.1	914.1	565.6	400.6	386.8	391.5	395.3	397.2	403.0	403.0
30°	1238.0	1143.5	845.1	453.1	372.5	363.1	360.2	358.6	360.2	367.9	368.4
32.5°	1286.1	1156.5	751.0	388.8	359.5	346.4	331.7	323.5	329.3	343.1	345.6
35°	1340.7	1172.1	638.2	363.1	355.0	338.2	311.4	298.8	300.8	313.3	315.4
37.5°	1409.1	1191.9	526.9	356.9	359.5	337.4	302.0	284.1	275.2	275.5	275.2
40°	1496.8	1211.9	438.9	358.6	369.2	339.5	297.5	269.4	250.6	251.4	253.1
42.5°	1588.4	1225.1	383.1	363.5	381.0	342.3	295.9	255.1	238.8	252.6	265.3
45°	1695.6	1221.3	354.1	367.9	389.9	343.5	289.7	253.5	240.1	281.6	305.3
47.5°	1818.7	1205.4	337.8	370.1	392.5	343.1	285.2	258.7	250.2	322.4	349.2
50°	1952.4	1180.5	324.8	366.8	391.2	341.6	290.2	265.3	254.2	331.3	352.1
52.5°	2098.7	1157.7	311.4	359.5	385.1	336.6	296.3	262.4	242.9	305.3	321.1
55°	2271.8	1152.4	296.3	346.8	374.9	331.3	293.1	253.5	230.2	270.6	280.4
57.5°	2470.0	1185.5	276.7	331.3	361.1	320.6	285.2	248.6	225.7	246.2	251.4
60°	2721.3	1258.3	255.8	315.0	343.9	304.9	278.3	249.7	226.9	242.4	243.6
62.5°	2917.8	1324.0	237.2	295.0	321.1	285.7	271.0	251.1	230.6	247.4	245.3
65°	2989.0	1291.8	213.9	265.3	288.9	264.5	260.8	251.9	230.6	250.2	245.8
67°	2842.8	1138.2	192.0	235.6	258.4	245.8	251.1	248.6	226.6	249.7	242.0
67.5°	2773.1	1084.0	186.2	230.6	250.2	240.1	248.6	246.9	225.4	249.0	240.1
70°	2286.9	777.5	157.4	193.6	209.4	211.5	233.5	236.3	215.6	234.0	217.7
72.5°	1627.2	486.5	135.7	150.0	169.2	181.0	213.2	222.2	202.5	203.3	189.9
75°	805.2	261.2	121.1	115.7	131.6	150.8	185.8	202.5	183.3	169.6	165.1
77.5°	271.8	147.9	102.2	93.3	102.2	121.1	154.0	176.9	161.8	143.4	140.6
80°	140.6	107.6	79.9	75.0	80.7	93.8	120.6	147.1	138.1	139.0	114.5
82.5°	87.6	65.5	57.5	57.1	61.0	71.7	88.8	119.4	118.5	101.5	73.8
85°	40.8	37.9	36.7	37.9	39.2	40.8	57.9	85.2	90.0	54.6	48.5
87.5°	17.2	16.7	14.6	15.9	17.5	17.2	23.3	36.3	50.5	34.2	31.3
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)