

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: P195781

Luminaire Tested: **NAV-AF-01-D-UNV-T2-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195781
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-01-D-UNV-T2-7050
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5000K, 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5980 lumens
Efficiency: N/A
Efficacy: 101.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B1 - U0 - G2

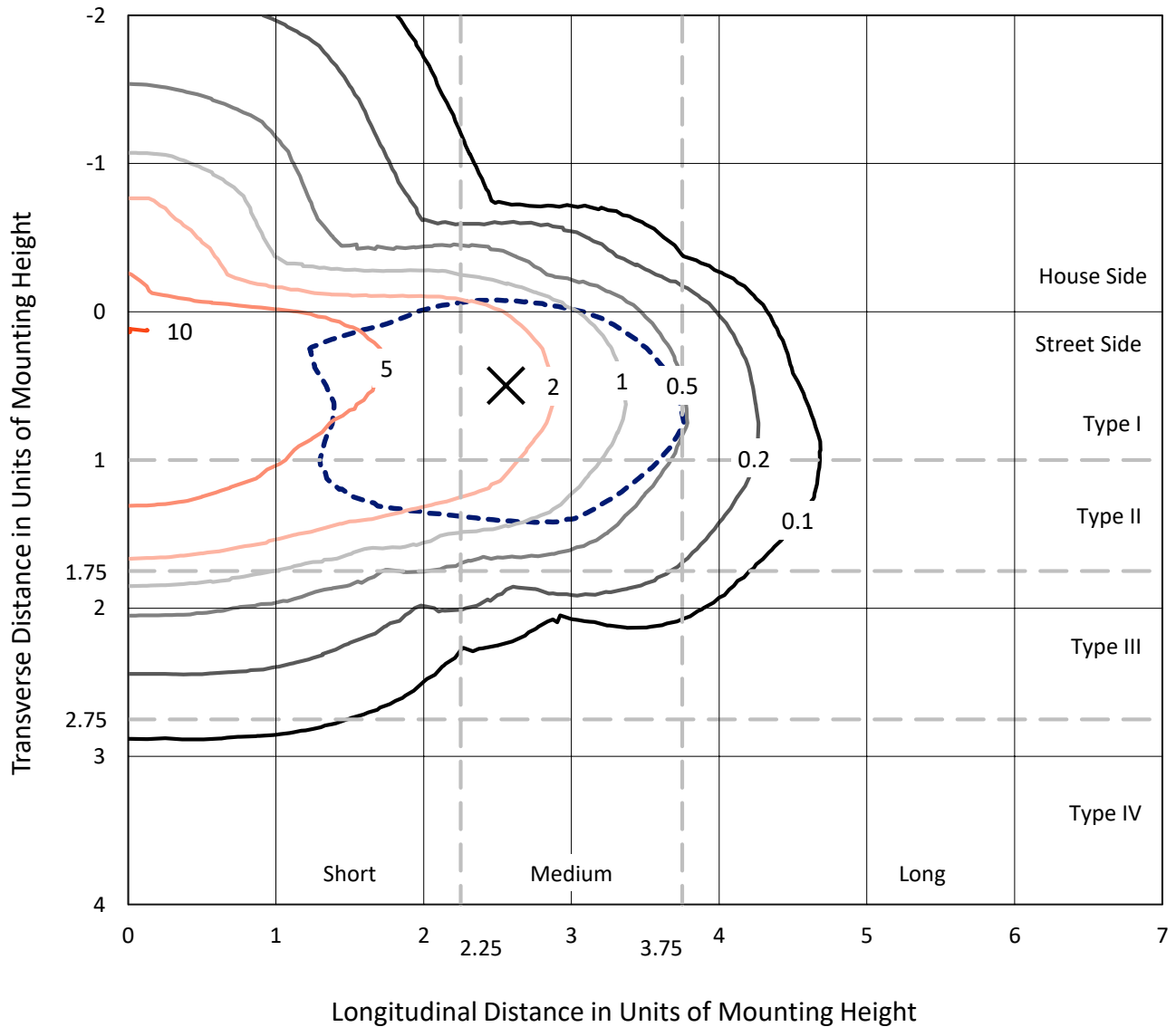
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

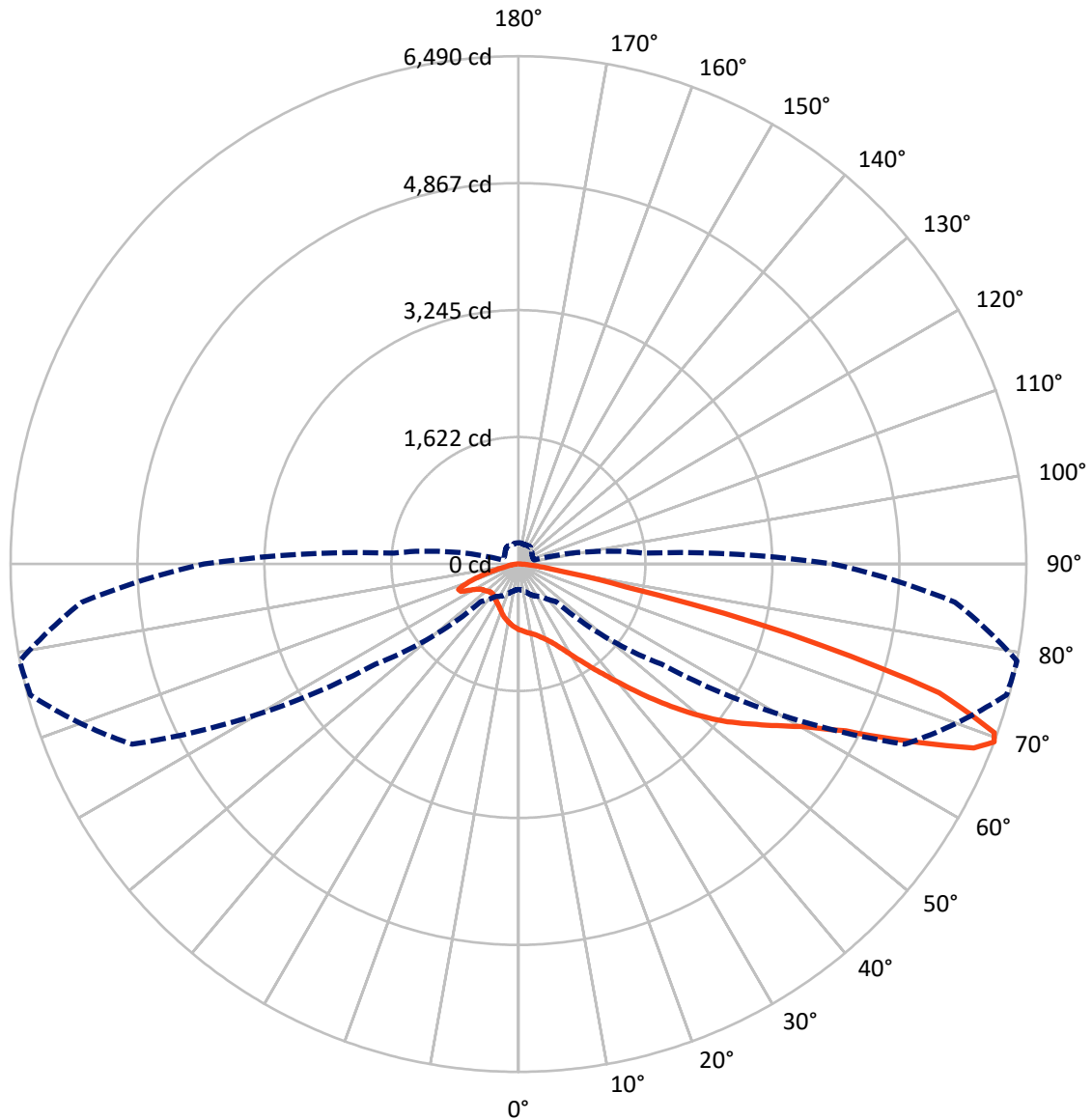
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10.1 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	1125.0	0.0	1125.0
	% Fixture	18.8	0.0	18.8
Street Side	Lumens	4855.1	0.0	4855.1
	% Fixture	81.2	0.0	81.2
Total	Lumens	5980.0	0.0	5980.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.8	1.3
10°-20°	223.0	3.7
20°-30°	368.6	6.2
30°-40°	596.8	10.0
40°-50°	953.4	15.9
50°-60°	1365.3	22.8
60°-70°	1521.2	25.4
70°-80°	761.0	12.7
80°-90°	112.9	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°	5980.0	100.0
0°-180°	5980.0	100.0



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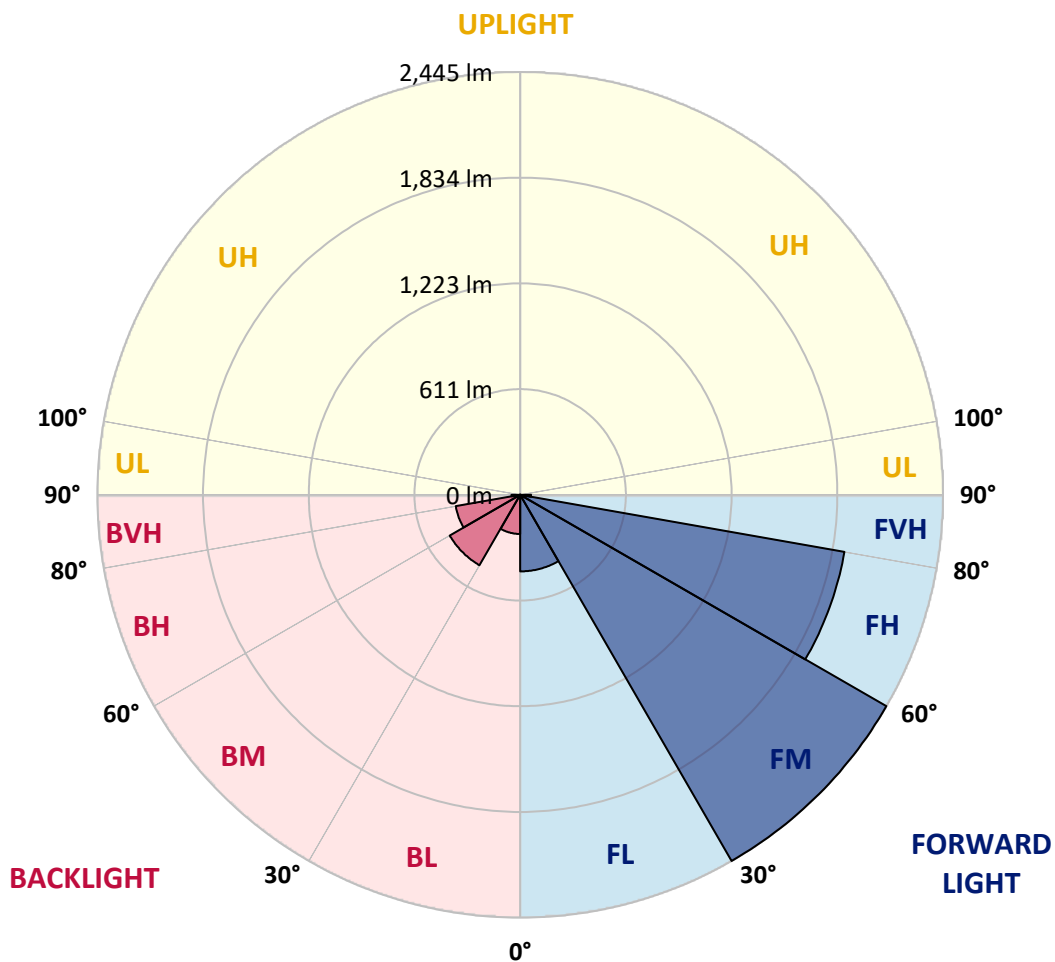
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	442.8	7.4			
FM (30°-60°)	2445.2	40.9			
FH (60°-80°)	1903.9	31.8			G2/5000
FVH (80°-90°)	63.1	1.1			G1/100
BL (0°-30°)	226.6	3.8	B1/500		
BM (30°-60°)	470.3	7.9	B1/1000		
BH (60°-80°)	378.2	6.3	B1/500		G1/500
BVH (80°-90°)	49.8	0.8			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 II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	839.2	839.2	839.2	839.2	839.2	839.2	839.2	839.2	839.2	839.2	839.2
2.5°	921.3	919.4	919.0	913.1	910.0	903.3	887.7	871.7	856.8	849.0	840.7
5°	998.4	994.5	992.5	982.8	974.2	959.3	934.6	909.2	882.6	868.9	852.5
7.5°	1045.0	1045.4	1045.4	1037.5	1028.9	1010.9	979.6	944.8	905.3	887.3	861.5
10°	1048.9	1049.3	1055.1	1057.1	1059.1	1049.7	1020.7	976.9	926.0	902.6	868.9
12.5°	1010.1	1012.9	1022.7	1036.8	1056.7	1066.9	1054.4	1011.3	952.6	924.1	883.0
15°	958.1	960.9	973.4	994.9	1027.0	1061.0	1078.6	1050.8	987.5	953.8	903.7
17.5°	932.7	935.8	944.4	961.6	992.9	1038.7	1091.5	1093.1	1028.5	989.8	928.4
20°	920.6	922.9	933.9	947.9	971.8	1015.6	1092.7	1137.7	1077.4	1032.4	958.5
22.5°	948.3	949.1	954.6	962.4	978.5	1012.1	1091.9	1183.9	1138.5	1086.0	997.2
25°	1029.7	1024.6	1020.7	1010.9	1014.8	1038.7	1104.4	1233.1	1216.7	1156.5	1048.9
27.5°	1126.0	1125.2	1115.0	1092.3	1077.8	1093.1	1140.0	1288.3	1312.6	1246.1	1116.6
30°	1233.1	1233.5	1223.0	1195.2	1165.9	1167.4	1196.8	1352.1	1427.2	1354.0	1199.9
32.5°	1345.4	1352.5	1332.9	1305.1	1269.5	1258.2	1278.1	1429.2	1559.8	1481.6	1296.5
35°	1479.6	1480.8	1459.3	1418.6	1383.0	1365.0	1383.4	1525.4	1712.8	1631.4	1414.3
37.5°	1618.9	1619.7	1597.4	1545.3	1500.4	1488.6	1509.0	1642.4	1874.8	1802.0	1552.8
40°	1732.7	1741.0	1723.4	1674.5	1629.1	1622.0	1651.4	1782.4	2081.7	2003.9	1717.5
42.5°	1861.9	1871.2	1850.1	1799.3	1763.3	1760.9	1806.7	1942.1	2287.5	2237.4	1904.1
45°	2007.4	2020.7	1991.3	1934.2	1903.7	1955.4	1958.1	2118.9	2524.6	2498.8	2114.2
47.5°	2166.2	2177.2	2153.3	2091.9	2058.6	2133.4	2106.4	2310.2	2780.8	2778.9	2341.5
50°	2288.7	2300.8	2303.2	2276.2	2241.3	2250.7	2269.1	2511.3	3036.3	3066.8	2576.6
52.5°	2266.4	2278.1	2330.9	2401.7	2457.7	2433.4	2455.7	2724.9	3283.2	3347.7	2800.0
55°	2086.4	2092.7	2191.7	2359.9	2598.1	2713.9	2715.5	2957.3	3517.9	3608.3	3012.1
57.5°	1762.1	1762.9	1891.6	2139.6	2516.4	2895.9	3125.5	3249.1	3762.8	3896.2	3275.0
60°	1246.8	1250.0	1399.8	1724.1	2223.3	2874.0	3566.4	3771.4	4046.5	4219.8	3613.8
62.5°	740.2	747.2	860.3	1120.5	1651.4	2592.3	3827.0	4700.6	4464.3	4694.3	4156.0
65°	481.6	487.5	555.2	685.8	975.7	1886.1	3741.3	5600.4	5255.0	5440.8	4935.3
67.5°	370.9	375.6	428.8	507.8	598.6	1019.5	2991.3	5789.0	6217.4	6275.3	5593.0
69°	325.9	329.8	368.9	444.8	503.9	674.9	2229.2	5446.7	6458.0	6489.7	5601.2
70°	302.0	305.2	341.9	407.7	462.8	538.7	1706.1	5049.2	6370.0	6451.0	5439.6
72.5°	248.8	251.6	277.8	328.2	378.3	383.8	755.9	3686.9	5363.7	5622.7	4603.2
75°	207.7	209.3	226.5	263.3	306.3	305.5	386.1	2088.4	3273.0	3581.7	2842.3
77.5°	173.3	174.5	185.8	208.5	241.8	240.6	271.9	901.4	1445.2	1394.3	978.5
80°	153.0	153.8	159.6	165.5	186.6	185.4	201.5	413.9	588.0	543.4	370.1
82.5°	116.2	117.8	147.5	150.2	144.8	139.7	140.5	241.0	301.2	274.3	198.7
85°	65.7	66.1	94.7	110.7	126.0	94.7	91.2	124.4	148.7	130.3	86.9
87.5°	29.3	30.5	45.4	52.4	68.1	55.6	52.0	52.8	64.2	53.2	34.4
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°	839.2	839.2	839.2	839.2	839.2	839.2	839.2	839.2	839.2	839.2	839.2
2.5°	832.9	826.3	810.6	794.6	778.5	768.4	757.8	748.0	744.1	743.7	736.3
5°	836.4	820.8	785.2	746.1	708.9	680.0	655.7	640.0	624.8	622.1	615.4
7.5°	837.6	812.2	754.3	691.7	635.0	595.1	570.8	560.2	552.8	550.8	548.5
10°	837.2	801.2	719.9	634.2	569.6	539.5	530.5	532.9	536.0	537.5	537.5
12.5°	843.5	796.1	685.4	580.2	527.4	512.9	519.9	532.1	541.5	545.4	546.2
15°	854.8	793.0	647.5	533.2	497.6	501.2	518.4	536.0	549.3	555.2	556.7
17.5°	868.9	788.7	603.7	494.5	480.4	492.6	514.9	537.2	553.2	560.6	561.8
20°	884.6	782.5	558.3	465.6	465.2	480.4	502.7	527.8	545.0	553.2	552.8
22.5°	905.7	776.6	516.0	444.4	448.3	462.4	480.8	503.5	519.6	527.0	525.4
25°	933.9	771.1	478.1	425.7	429.2	438.6	451.5	468.7	480.0	483.9	481.2
27.5°	971.8	766.8	448.3	408.4	408.1	412.4	420.2	429.6	435.0	433.9	429.6
30°	1018.4	762.5	426.4	393.2	387.7	387.3	390.8	396.3	399.8	392.8	389.3
32.5°	1070.4	755.1	406.9	379.9	370.1	366.6	368.1	375.6	390.1	383.0	380.3
35°	1131.8	746.5	387.3	365.4	358.0	351.3	352.5	368.5	412.4	407.3	404.5
37.5°	1205.8	738.6	369.3	349.8	349.4	341.2	340.4	359.5	418.2	407.3	404.9
40°	1294.6	737.1	353.3	332.5	338.8	335.7	332.9	344.7	385.8	363.5	359.1
42.5°	1401.8	744.1	341.5	316.1	326.7	334.1	329.0	331.8	348.6	328.6	325.1
45°	1527.0	763.3	332.9	301.6	313.8	332.9	327.1	324.7	327.5	316.5	314.2
47.5°	1672.9	797.3	327.1	289.5	301.6	329.8	326.3	321.6	320.4	314.2	312.6
50°	1829.0	843.1	323.2	278.6	290.7	324.3	325.9	319.2	317.3	314.5	313.8
52.5°	1983.9	892.8	318.5	269.2	281.7	317.7	326.3	316.9	314.2	312.6	311.8
55°	2138.1	944.4	309.9	260.9	275.0	309.9	325.9	313.8	310.6	310.6	310.6
57.5°	2338.0	1023.1	298.5	254.3	266.4	299.7	320.8	310.2	305.9	306.3	306.7
60°	2626.7	1154.9	286.0	246.9	255.1	287.9	313.0	304.0	298.9	300.5	300.9
62.5°	3109.1	1385.3	268.8	236.3	243.3	275.4	302.8	295.4	290.7	293.4	293.8
65°	3752.3	1664.3	246.1	223.0	231.2	261.3	289.9	285.2	280.1	286.8	286.4
67.5°	4144.7	1746.0	222.2	208.9	219.5	246.5	273.9	271.9	268.4	280.1	279.3
69°	4016.0	1598.2	208.5	199.9	211.3	236.3	263.7	262.9	260.2	271.5	270.7
70°	3816.0	1460.1	199.9	194.0	207.0	230.0	257.0	257.0	254.3	264.1	262.1
72.5°	3065.3	1082.9	180.0	179.2	192.1	212.8	239.0	241.0	239.4	243.0	241.0
75°	1799.6	652.6	160.4	162.8	174.1	194.4	219.1	220.7	219.1	218.7	219.1
77.5°	624.0	292.6	141.6	145.1	154.9	175.7	197.2	200.3	198.0	195.2	196.0
80°	244.1	170.2	121.3	126.4	134.6	154.5	175.3	177.2	173.7	173.3	170.2
82.5°	146.7	103.7	94.3	102.5	112.7	134.2	151.4	150.6	147.9	163.9	143.6
85°	63.8	57.5	68.9	77.1	82.2	100.5	127.9	124.4	117.8	103.7	101.3
87.5°	25.8	29.7	37.9	45.8	49.3	64.9	87.6	84.5	85.7	70.4	70.0
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)