

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: P270254

Luminaire Tested: **NAV-AF-01-D-UNV-AFL-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270254
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24160)
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-AFL-7027-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 2700K, 615mA LIGHTSQUARE WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3583.4 lumens
Efficiency: N/A
Efficacy: 105.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B1 - U0 - G1

Input Watts (W): 34
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

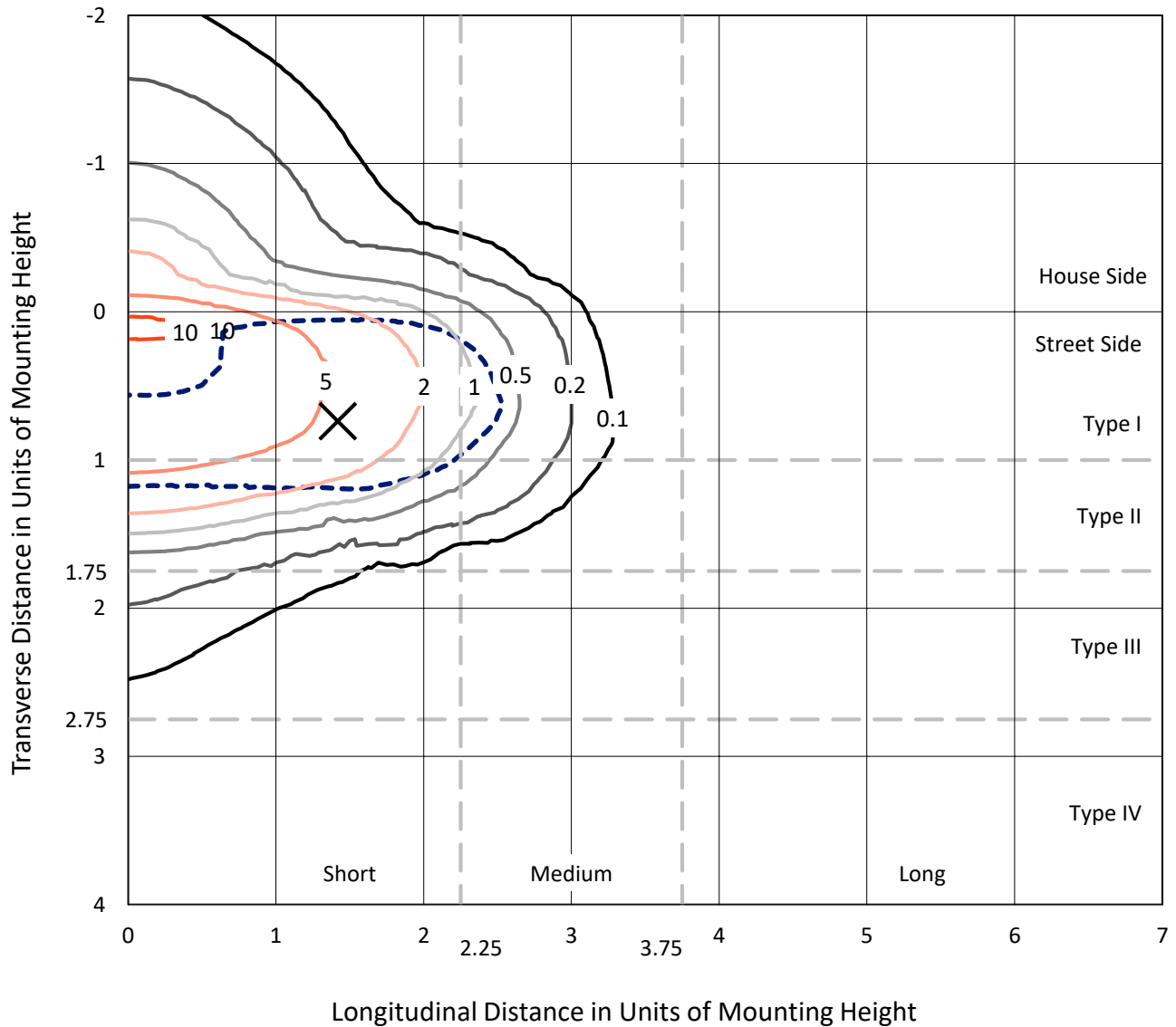


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Iso-Footcandle Lines of Horizontal Illumination

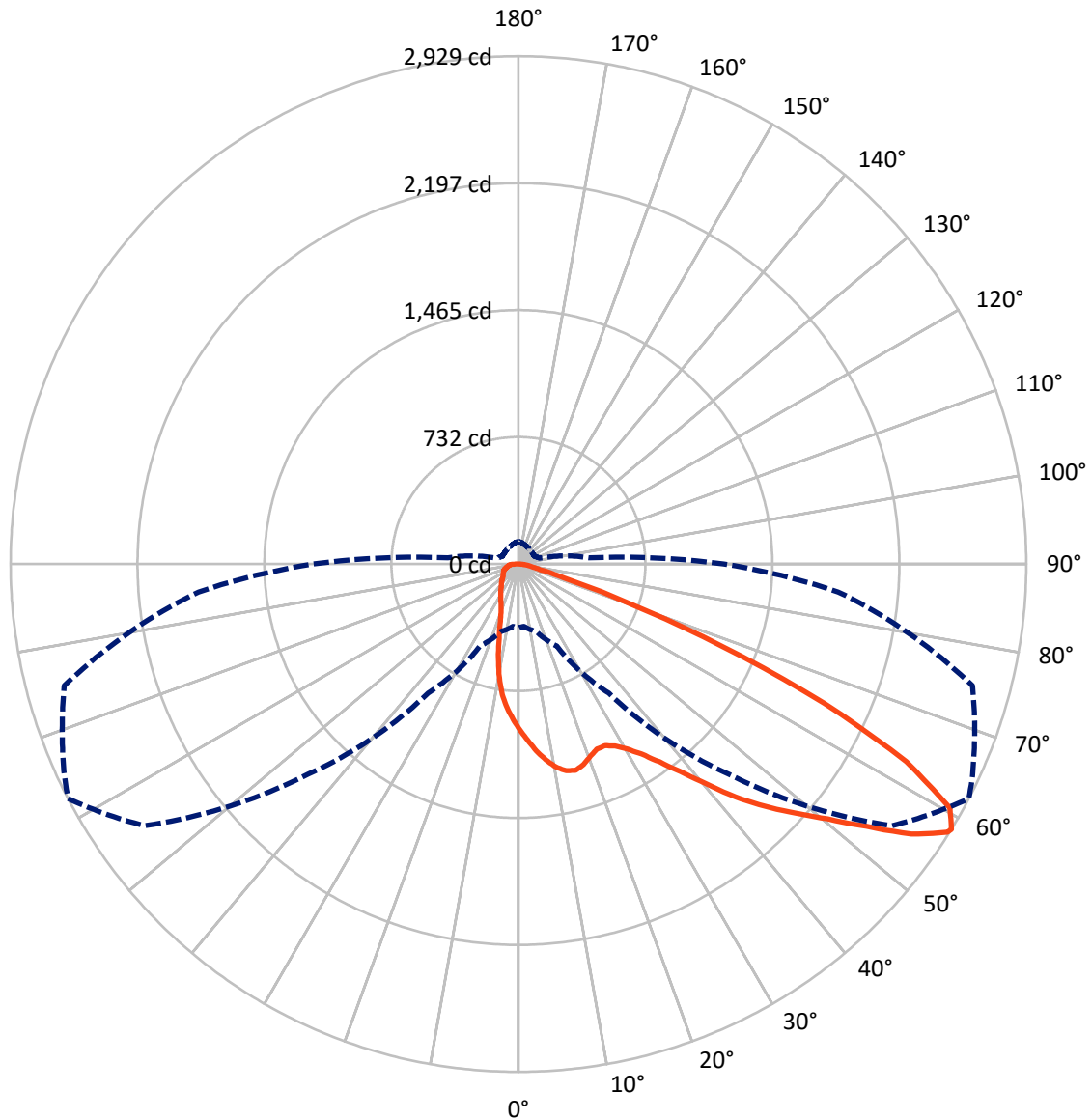
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11.2 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 62.5-Deg Lateral - - - Horizontal Cone Through 58-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	550.2	0.0	550.2
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	3033.2	0.0	3033.2
	% Fixture	84.6	0.0	84.6
Total	Lumens	3583.4	0.0	3583.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.5	2.4
10°-20°	215.8	6.0
20°-30°	349.8	9.8
30°-40°	558.4	15.6
40°-50°	812.3	22.7
50°-60°	850.0	23.7
60°-70°	518.2	14.5
70°-80°	144.9	4.0
80°-90°	48.6	1.4
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°	3583.4	100.0
0°-180°	3583.4	100.0



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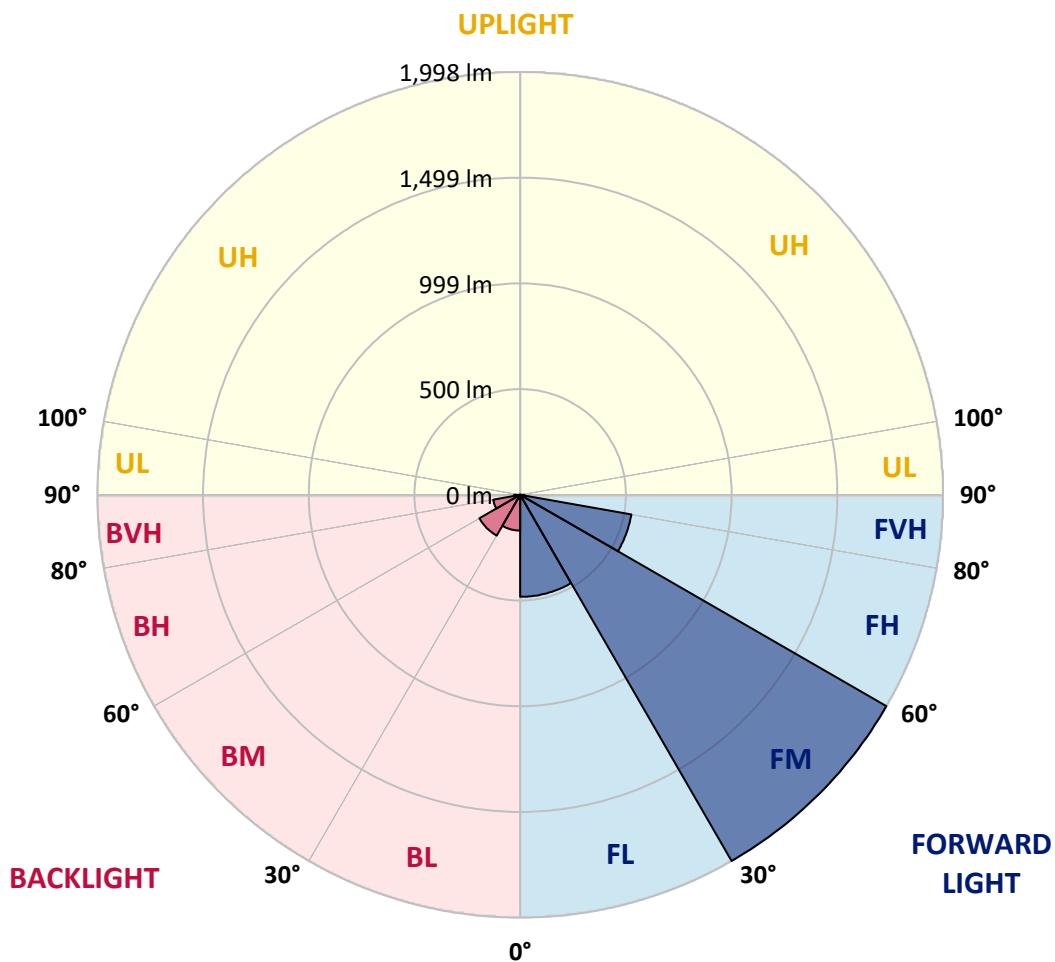
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	482.0	13.5			
FM	(30°-60°)	1998.1	55.8			
FH	(60°-80°)	533.5	14.9			G0/660
FVH	(80°-90°)	19.5	0.5			G1/100
BL	(0°-30°)	169.1	4.7	B1/500		
BM	(30°-60°)	222.5	6.2	B1/1000		
BH	(60°-80°)	129.5	3.6	B1/500		G1/500
BVH	(80°-90°)	29.0	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-G1

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	62.5°	65°	75°	85°
0°	956.8	956.8	956.8	956.8	956.8	956.8	956.8	956.8	956.8	956.8	956.8
2.5°	1086.1	1085.3	1076.1	1070.2	1063.0	1046.3	1029.7	1017.4	1011.1	987.1	963.9
5°	1175.8	1173.0	1167.9	1161.5	1152.0	1131.1	1104.9	1082.4	1073.5	1030.8	988.0
7.5°	1128.4	1132.6	1148.5	1166.4	1185.1	1186.5	1167.9	1141.0	1131.1	1074.4	1011.6
10°	996.8	995.1	1014.9	1049.8	1111.9	1173.2	1204.0	1190.8	1180.5	1115.5	1035.1
12.5°	957.0	956.5	959.8	968.8	1007.8	1092.0	1194.8	1223.5	1219.9	1159.3	1060.2
15°	969.0	969.5	969.4	970.3	981.2	1021.3	1143.5	1234.5	1245.6	1202.4	1085.7
17.5°	1007.8	1006.2	1001.3	996.0	997.5	1011.9	1088.1	1215.6	1249.3	1241.0	1107.3
20°	1067.5	1067.5	1054.4	1039.3	1029.5	1032.6	1065.1	1183.3	1232.7	1273.6	1123.4
22.5°	1142.6	1143.7	1124.3	1096.9	1074.6	1066.0	1078.3	1159.4	1212.5	1303.9	1137.8
25°	1235.8	1235.6	1207.1	1167.9	1132.6	1112.2	1111.9	1160.5	1206.2	1339.3	1152.7
27.5°	1351.1	1340.6	1307.5	1251.7	1201.8	1170.6	1156.5	1188.7	1219.4	1382.8	1172.8
30°	1481.2	1470.4	1427.0	1355.5	1287.7	1242.3	1219.0	1237.5	1259.8	1438.0	1203.3
32.5°	1610.0	1612.5	1561.4	1480.5	1393.7	1329.6	1295.1	1306.6	1322.0	1505.6	1244.5
35°	1798.5	1798.3	1731.7	1630.7	1527.4	1438.6	1395.0	1401.0	1415.2	1601.0	1302.4
37.5°	1939.3	1936.9	1893.9	1804.7	1688.5	1582.1	1518.9	1519.8	1531.9	1720.9	1378.4
40°	1953.5	1953.2	1952.8	1940.1	1860.6	1760.3	1681.3	1664.9	1669.8	1848.2	1459.2
42.5°	1844.0	1860.4	1907.5	1979.5	2001.8	1949.1	1874.4	1837.8	1827.1	1994.1	1544.8
45°	1687.9	1696.2	1778.6	1940.8	2072.7	2126.5	2070.2	1993.2	1974.8	2136.1	1614.6
47.5°	1615.4	1611.7	1659.4	1836.2	2065.7	2267.5	2271.5	2145.3	2114.2	2258.6	1673.8
50°	1459.7	1455.1	1515.4	1682.3	1990.0	2337.7	2478.3	2311.0	2253.5	2375.1	1727.6
52.5°	1149.7	1145.1	1225.9	1441.2	1820.8	2311.5	2652.5	2514.4	2416.4	2487.2	1777.7
55°	748.0	748.5	825.5	1047.5	1473.4	2158.6	2734.4	2749.4	2639.3	2599.4	1818.3
57.5°	411.9	408.0	462.9	599.3	1013.6	1811.8	2666.2	2918.7	2861.3	2695.8	1847.6
58°	366.1	361.7	404.0	521.6	908.8	1714.0	2631.9	2929.4	2889.7	2711.7	1851.9
60°	260.9	253.3	246.9	294.0	523.6	1235.8	2403.4	2859.8	2898.0	2743.5	1847.9
62.5°	219.9	211.2	187.8	186.0	246.6	604.5	1900.8	2511.4	2618.6	2670.2	1783.0
65°	204.3	195.6	164.7	153.9	167.4	260.9	1175.3	1939.3	2082.6	2415.6	1619.5
67.5°	193.0	182.7	149.8	135.6	138.2	156.0	498.7	1268.2	1434.5	1883.7	1299.2
70°	183.0	171.5	138.0	121.5	119.1	118.7	194.8	662.2	822.4	1232.7	870.3
72.5°	171.5	160.3	127.4	109.8	104.8	96.3	117.0	273.7	375.1	604.2	398.8
75°	155.0	145.7	115.8	100.2	91.5	78.2	86.4	131.2	161.7	231.4	185.2
77.5°	136.5	128.9	103.9	92.0	80.6	63.8	66.0	88.9	99.9	130.3	107.3
80°	96.5	99.3	90.6	81.0	71.0	51.6	50.8	65.1	71.7	87.6	72.1
82.5°	66.6	68.5	73.9	64.0	57.3	40.1	37.4	45.3	48.6	52.9	34.9
85°	47.5	46.2	51.4	46.0	42.1	25.5	24.0	28.7	30.7	32.2	16.8
87.5°	28.8	28.7	29.6	23.7	22.0	12.9	11.9	13.7	14.6	14.2	8.1
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°	956.8	956.8	956.8	956.8	956.8	956.8	956.8	956.8	956.8	956.8	956.8
2.5°	955.2	944.2	920.3	901.0	880.2	864.3	848.4	839.3	829.6	823.9	823.2
5°	965.7	943.3	892.2	844.8	796.0	752.1	709.0	677.2	651.4	636.4	635.6
7.5°	977.4	942.2	863.4	781.2	694.3	607.9	531.4	477.4	442.8	426.6	425.4
10°	986.2	937.6	828.1	700.3	562.6	448.3	378.9	347.1	336.7	333.9	333.5
12.5°	997.1	934.1	783.9	596.7	430.0	341.3	320.2	318.2	320.4	321.9	322.0
15°	1007.1	927.6	724.0	481.8	336.7	305.1	305.5	309.7	314.1	316.3	316.5
17.5°	1011.9	911.7	645.4	379.7	294.6	288.6	293.8	299.4	303.4	305.1	305.1
20°	1011.9	886.2	554.3	307.5	272.5	273.7	279.9	284.3	285.1	283.8	283.1
22.5°	1007.5	854.6	465.6	268.4	254.6	258.9	263.8	260.9	250.4	242.4	240.7
25°	1003.8	817.2	380.3	244.2	238.9	244.6	242.5	222.6	206.5	198.2	196.9
27.5°	997.5	772.0	309.0	224.7	223.8	228.2	208.2	189.1	181.0	176.4	175.6
30°	996.0	723.0	258.7	207.1	208.8	202.5	179.7	173.4	171.5	169.2	168.0
32.5°	1001.2	673.9	227.1	192.9	194.5	173.8	165.1	165.9	165.7	162.7	161.4
35°	1015.2	626.2	206.9	179.8	175.3	155.6	156.8	159.4	159.4	155.6	154.2
37.5°	1039.8	581.8	194.2	168.8	153.4	146.2	149.2	152.7	152.7	150.0	148.8
40°	1066.0	538.7	184.5	160.2	139.5	139.7	142.7	145.3	146.5	147.0	146.1
42.5°	1089.7	493.8	174.2	150.7	133.3	134.8	136.2	138.2	142.9	146.1	145.5
45°	1103.7	448.9	163.0	139.1	128.9	129.6	129.3	132.8	138.3	143.1	143.1
47.5°	1116.5	411.9	153.9	127.4	124.8	124.8	123.3	127.0	132.1	137.7	138.2
50°	1128.5	387.9	147.3	118.4	119.4	118.7	118.2	121.6	128.5	135.3	136.5
52.5°	1140.8	379.9	141.6	112.0	113.7	112.8	113.4	118.0	125.9	132.8	133.9
55°	1158.0	385.0	135.6	107.4	108.3	108.2	110.0	115.3	122.3	129.3	129.6
57.5°	1179.4	403.8	130.3	104.2	103.2	104.7	107.4	112.6	119.4	127.6	128.3
58°	1183.5	408.3	129.4	103.2	102.1	104.2	107.1	112.0	118.9	127.6	128.3
60°	1190.2	424.2	127.2	101.5	98.4	101.9	105.6	110.4	118.0	128.7	130.2
62.5°	1158.8	427.4	126.5	99.4	94.3	98.8	103.0	108.7	117.0	132.6	135.6
65°	1050.1	395.1	121.8	96.1	90.9	96.3	100.8	107.3	119.8	144.0	145.3
67.5°	843.0	328.2	110.4	90.9	87.1	93.5	99.1	107.3	120.9	145.7	146.8
70°	579.5	246.6	96.1	85.2	82.6	89.8	98.4	109.8	117.0	138.0	135.3
72.5°	302.8	171.5	84.3	78.8	77.3	86.6	104.8	107.3	112.6	128.7	126.1
75°	152.5	116.7	74.1	71.4	71.2	85.6	117.4	103.2	107.9	121.1	127.0
77.5°	90.0	91.4	66.0	64.5	65.7	83.5	117.6	99.3	102.5	111.5	117.8
80°	61.7	75.5	59.7	59.4	60.2	76.8	108.3	94.3	96.3	105.6	112.2
82.5°	34.8	41.6	52.5	55.3	54.8	62.9	93.7	85.8	88.3	124.8	132.0
85°	16.8	25.2	43.8	51.7	46.8	42.0	76.1	76.1	76.8	89.3	90.5
87.5°	6.3	11.1	29.6	41.1	32.7	25.2	51.7	54.0	60.0	61.9	63.2
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)