

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: P196489

Luminaire Tested: **NAV-AF-01-D-UNV-AFL-7030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196489
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-7030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 3000K, 615mA LIGHTSQUARE WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3989.1 lumens
Efficiency: N/A
Efficacy: 117.3 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

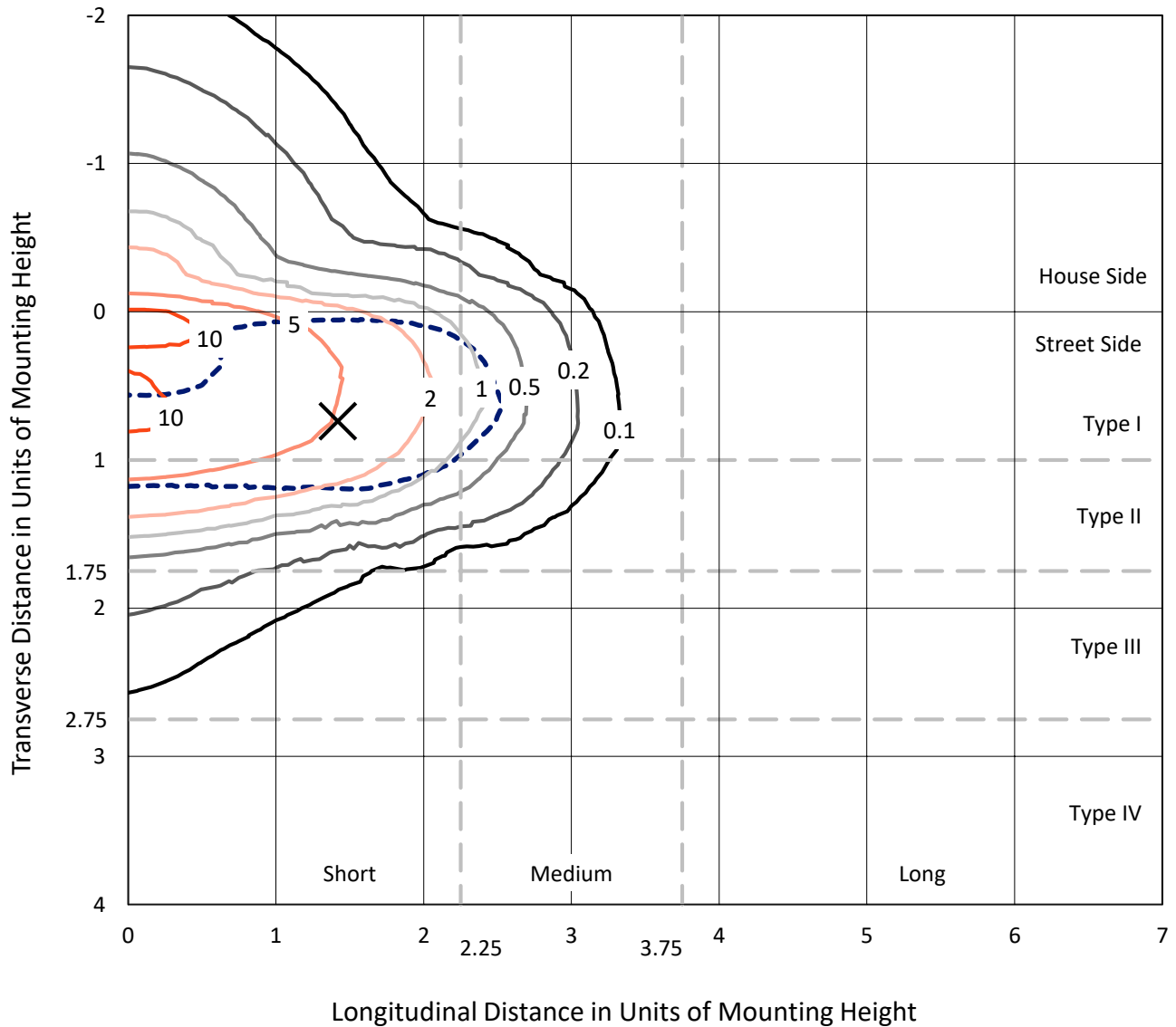


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Iso-Footcandle Lines of Horizontal Illumination

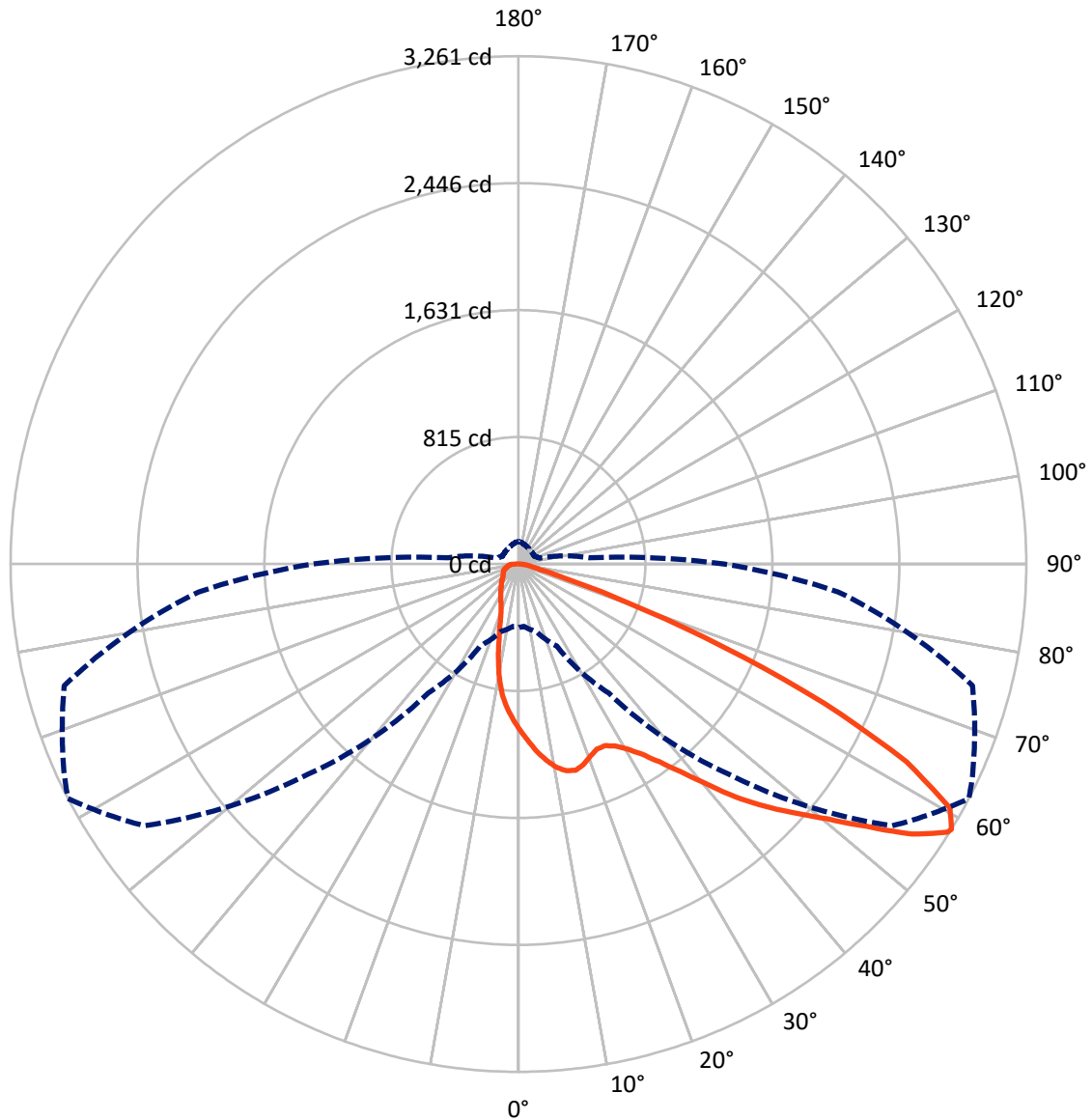
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 12.5 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	612.5	0.0	612.5
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	3376.6	0.0	3376.6
	% Fixture	84.6	0.0	84.6
Total	Lumens	3989.1	0.0	3989.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.2	2.4
10°-20°	240.3	6.0
20°-30°	389.4	9.8
30°-40°	621.6	15.6
40°-50°	904.2	22.7
50°-60°	946.2	23.7
60°-70°	576.8	14.5
70°-80°	161.3	4.0
80°-90°	54.1	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°	3989.1	100.0
0°-180°	3989.1	100.0



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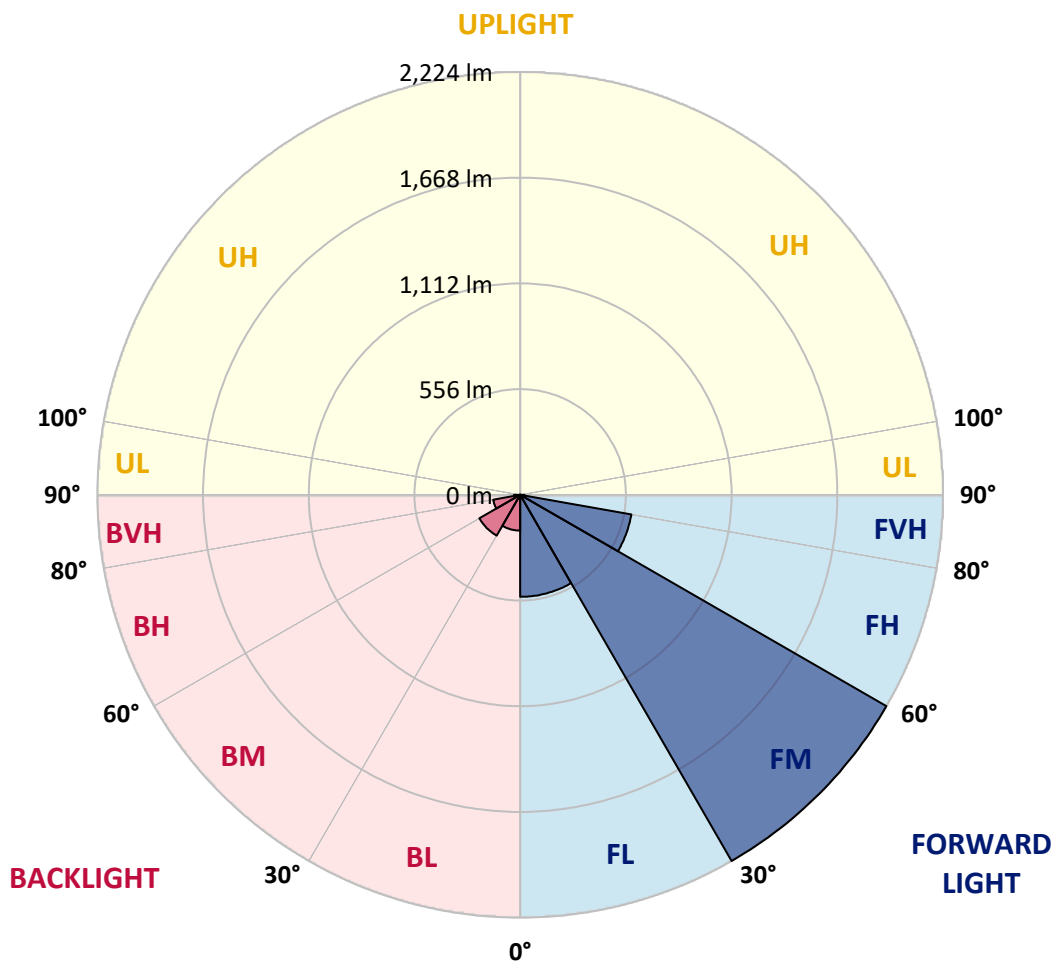
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	536.5	13.5			
FM	(30°-60°)	2224.3	55.8			
FH	(60°-80°)	593.9	14.9			G0/660
FVH	(80°-90°)	21.8	0.5			G1/100
BL	(0°-30°)	188.3	4.7	B1/500		
BM	(30°-60°)	247.7	6.2	B1/1000		
BH	(60°-80°)	144.2	3.6	B1/500		G1/500
BVH	(80°-90°)	32.3	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°	1065.1	1065.1	1065.1	1065.1	1065.1	1065.1	1065.1	1065.1	1065.1	1065.1	1065.1
2.5°	1209.0	1208.2	1197.9	1191.3	1183.3	1164.8	1146.3	1132.6	1125.6	1098.9	1073.0
5°	1308.9	1305.8	1300.1	1293.0	1282.4	1259.2	1230.0	1204.9	1195.0	1147.5	1099.9
7.5°	1256.1	1260.8	1278.5	1298.4	1319.3	1320.8	1300.1	1270.2	1259.2	1196.0	1126.1
10°	1109.6	1107.7	1129.8	1168.7	1237.8	1306.0	1340.3	1325.6	1314.1	1241.8	1152.3
12.5°	1065.3	1064.8	1068.5	1078.5	1121.9	1215.6	1330.1	1362.0	1358.0	1290.5	1180.2
15°	1078.7	1079.3	1079.1	1080.2	1092.3	1136.9	1273.0	1374.2	1386.6	1338.5	1208.6
17.5°	1121.9	1120.1	1114.7	1108.7	1110.4	1126.4	1211.3	1353.2	1390.7	1381.5	1232.6
20°	1188.4	1188.4	1173.8	1157.0	1146.1	1149.5	1185.7	1317.3	1372.2	1417.8	1250.6
22.5°	1272.0	1273.2	1251.6	1221.1	1196.2	1186.7	1200.4	1290.7	1349.8	1451.5	1266.6
25°	1375.7	1375.5	1343.8	1300.1	1260.8	1238.1	1237.8	1291.9	1342.8	1490.9	1283.2
27.5°	1504.1	1492.4	1455.5	1393.4	1337.8	1303.1	1287.4	1323.3	1357.5	1539.3	1305.6
30°	1648.9	1636.9	1588.6	1508.9	1433.5	1382.9	1357.0	1377.6	1402.4	1600.8	1339.5
32.5°	1792.3	1795.0	1738.2	1648.1	1551.5	1480.1	1441.7	1454.5	1471.7	1676.1	1385.4
35°	2002.1	2001.9	1927.7	1815.3	1700.3	1601.5	1552.9	1559.6	1575.4	1782.3	1449.8
37.5°	2158.8	2156.2	2108.3	2009.0	1879.6	1761.2	1690.8	1691.8	1705.3	1915.7	1534.5
40°	2174.7	2174.3	2173.9	2159.7	2071.2	1959.6	1871.6	1853.4	1858.8	2057.4	1624.4
42.5°	2052.8	2071.0	2123.4	2203.6	2228.4	2169.8	2086.6	2045.9	2033.9	2219.8	1719.7
45°	1879.0	1888.2	1980.0	2160.5	2307.3	2367.2	2304.6	2218.8	2198.4	2377.9	1797.4
47.5°	1798.3	1794.2	1847.3	2044.1	2299.6	2524.2	2528.7	2388.2	2353.5	2514.3	1863.3
50°	1625.0	1619.8	1686.9	1872.8	2215.3	2602.3	2758.9	2572.6	2508.6	2644.0	1923.2
52.5°	1279.8	1274.7	1364.7	1604.4	2026.9	2573.2	2952.8	2799.0	2689.9	2768.8	1979.0
55°	832.7	833.2	919.0	1166.1	1640.2	2403.0	3043.9	3060.6	2938.1	2893.7	2024.1
57.5°	458.5	454.2	515.3	667.1	1128.4	2016.9	2968.0	3249.1	3185.2	3001.0	2056.8
58°	407.6	402.6	449.7	580.6	1011.7	1908.0	2929.9	3261.0	3216.8	3018.7	2061.5
60°	290.4	282.0	274.8	327.3	582.9	1375.7	2675.5	3183.5	3226.1	3054.1	2057.1
62.5°	244.8	235.1	209.1	207.1	274.5	672.9	2116.0	2795.7	2915.1	2972.5	1984.8
65°	227.4	217.7	183.4	171.3	186.3	290.4	1308.4	2158.8	2318.4	2689.1	1802.8
67.5°	214.9	203.4	166.8	150.9	153.8	173.7	555.2	1411.8	1596.9	2096.9	1446.3
70°	203.7	190.9	153.6	135.2	132.6	132.1	216.9	737.2	915.5	1372.2	968.8
72.5°	190.9	178.5	141.8	122.2	116.7	107.2	130.3	304.7	417.6	672.6	444.0
75°	172.5	162.2	128.9	111.5	101.9	87.0	96.2	146.1	180.0	257.6	206.2
77.5°	151.9	143.5	115.7	102.4	89.7	71.0	73.5	99.0	111.2	145.1	119.4
80°	107.4	110.5	100.9	90.2	79.0	57.4	56.6	72.5	79.8	97.5	80.3
82.5°	74.1	76.3	82.3	71.3	63.8	44.6	41.6	50.4	54.1	58.9	38.9
85°	52.9	51.4	57.2	51.2	46.9	28.4	26.7	31.9	34.2	35.9	18.7
87.5°	32.1	31.9	32.9	26.4	24.5	14.4	13.2	15.2	16.2	15.8	9.0
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°	1065.1	1065.1	1065.1	1065.1	1065.1	1065.1	1065.1	1065.1	1065.1	1065.1	1065.1
2.5°	1063.3	1051.1	1024.5	1003.0	979.8	962.1	944.4	934.3	923.5	917.2	916.4
5°	1075.0	1050.1	993.2	940.4	886.1	837.2	789.3	753.9	725.1	708.5	707.6
7.5°	1088.0	1048.9	961.1	869.6	772.9	676.7	591.6	531.5	492.9	474.9	473.6
10°	1097.9	1043.7	921.9	779.6	626.3	499.1	421.8	386.4	374.8	371.7	371.3
12.5°	1110.0	1039.8	872.6	664.2	478.7	379.9	356.5	354.2	356.7	358.3	358.5
15°	1121.1	1032.6	806.0	536.3	374.8	339.6	340.1	344.8	349.7	352.1	352.3
17.5°	1126.4	1014.9	718.5	422.7	327.9	321.3	327.1	333.3	337.8	339.6	339.6
20°	1126.4	986.5	617.1	342.3	303.4	304.7	311.6	316.5	317.4	315.9	315.1
22.5°	1121.6	951.3	518.3	298.8	283.4	288.2	293.7	290.4	278.7	269.8	268.0
25°	1117.4	909.7	423.4	271.9	266.0	272.3	270.0	247.8	229.9	220.6	219.2
27.5°	1110.4	859.4	344.0	250.1	249.1	254.0	231.8	210.5	201.5	196.4	195.5
30°	1108.7	804.8	288.0	230.6	232.4	225.4	200.0	193.0	190.9	188.3	187.0
32.5°	1114.5	750.2	252.8	214.7	216.5	193.5	183.8	184.7	184.5	181.1	179.7
35°	1130.1	697.1	230.3	200.2	195.2	173.2	174.5	177.5	177.5	173.2	171.7
37.5°	1157.5	647.7	216.2	187.9	170.8	162.8	166.1	170.0	170.0	167.0	165.7
40°	1186.7	599.7	205.4	178.3	155.3	155.5	158.9	161.8	163.1	163.6	162.6
42.5°	1213.1	549.7	193.9	167.8	148.4	150.1	151.6	153.8	159.1	162.6	162.0
45°	1228.6	499.7	181.5	154.8	143.5	144.3	143.9	147.8	154.0	159.3	159.3
47.5°	1242.9	458.5	171.3	141.8	138.9	138.9	137.3	141.4	147.1	153.3	153.8
50°	1256.3	431.8	164.0	131.8	132.9	132.1	131.6	135.4	143.1	150.6	151.9
52.5°	1270.0	422.9	157.6	124.7	126.6	125.6	126.2	131.4	140.1	147.8	149.1
55°	1289.1	428.6	150.9	119.6	120.6	120.4	122.4	128.4	136.1	143.9	144.3
57.5°	1312.9	449.5	145.1	116.0	114.9	116.5	119.6	125.4	132.9	142.1	142.8
58°	1317.5	454.5	144.1	114.9	113.7	116.0	119.2	124.7	132.4	142.1	142.8
60°	1324.9	472.2	141.6	113.0	109.5	113.4	117.5	122.9	131.4	143.3	144.9
62.5°	1290.0	475.8	140.8	110.7	105.0	110.0	114.7	121.0	130.3	147.6	150.9
65°	1169.0	439.8	135.6	107.0	101.2	107.2	112.2	119.4	133.4	160.3	161.8
67.5°	938.4	365.3	122.9	101.2	97.0	104.1	110.3	119.4	134.6	162.2	163.4
70°	645.1	274.5	107.0	94.9	92.0	100.0	109.5	122.2	130.3	153.6	150.6
72.5°	337.1	190.9	93.8	87.7	86.0	96.4	116.7	119.4	125.4	143.3	140.4
75°	169.8	129.9	82.5	79.5	79.3	95.3	130.7	114.9	120.1	134.8	141.4
77.5°	100.2	101.7	73.5	71.8	73.1	93.0	130.9	110.5	114.1	124.1	131.1
80°	68.7	84.0	66.5	66.1	67.0	85.5	120.6	105.0	107.2	117.5	124.9
82.5°	38.7	46.3	58.4	61.6	61.0	70.0	104.3	95.5	98.3	138.9	146.9
85°	18.7	28.0	48.8	57.6	52.1	46.7	84.7	84.7	85.5	99.4	100.7
87.5°	7.0	12.4	32.9	45.7	36.4	28.0	57.6	60.1	66.8	68.9	70.3
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)