

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: P195529

Luminaire Tested: **NAV-AF-01-D-UNV-AFL-7050-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195529
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-7050-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5000K, 615mA LIGHTSQUARE WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4124 lumens
Efficiency: N/A
Efficacy: 121.3 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

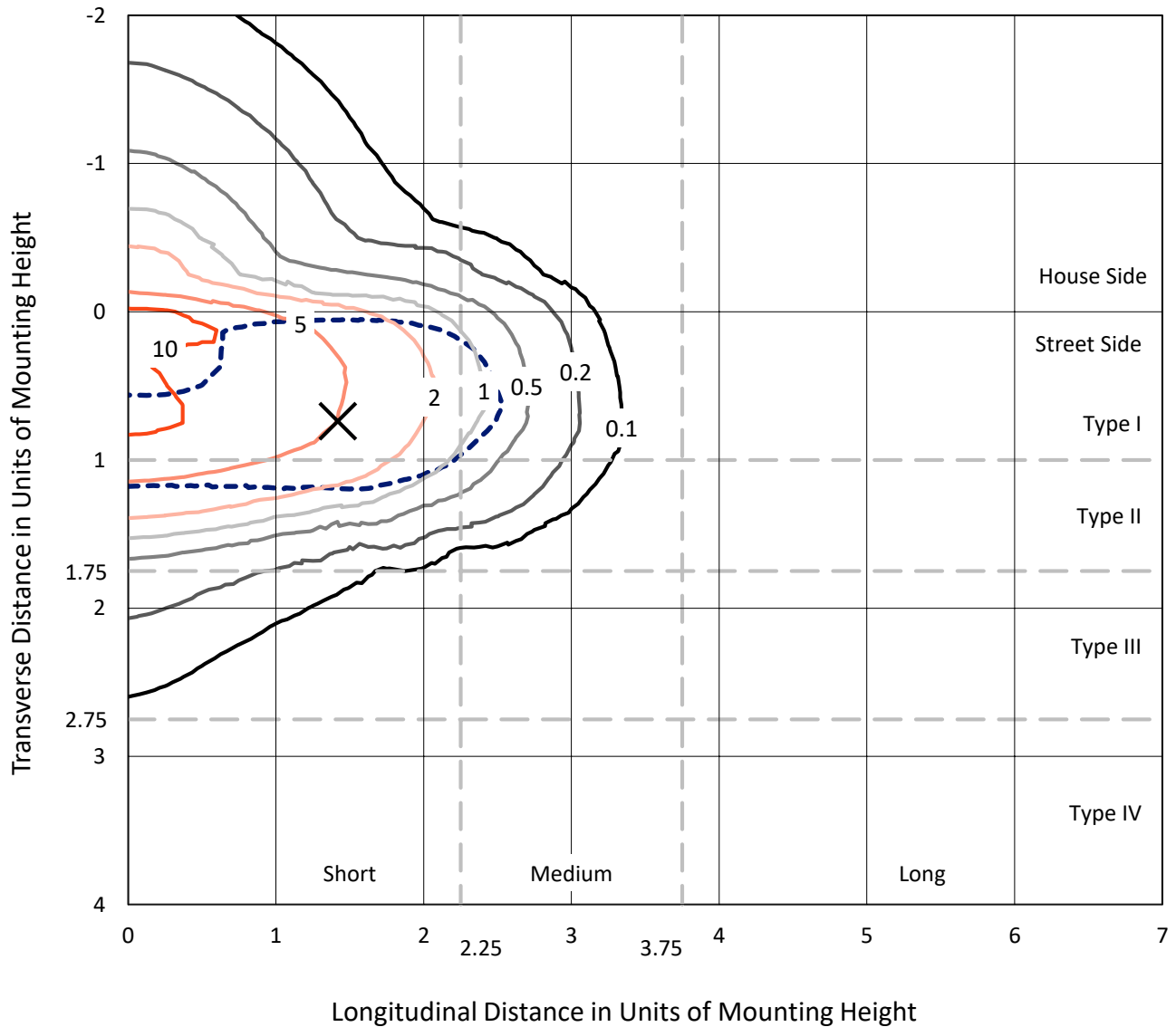


REPORT NUMBER: P195529

CATALOG NUMBER: NAV-AF-01-D-UNV-AFL-7050-600

Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

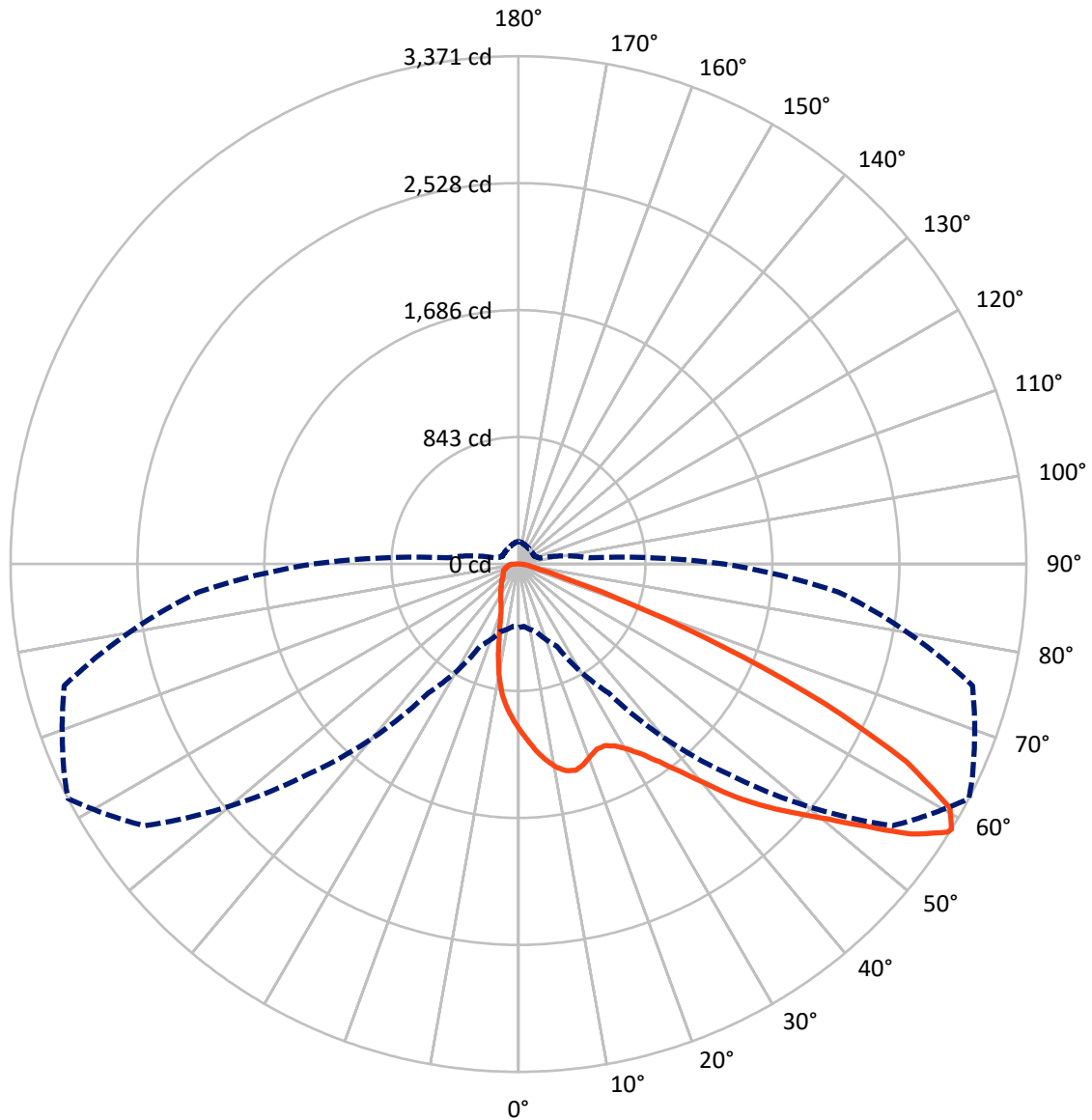


Based on 10 foot mounting height. Maximum calculated value = 12.9 fc
 Type II - Short - Full Cutoff

REPORT NUMBER: P195529

CATALOG NUMBER: NAV-AF-01-D-UNV-AFL-7050-600

Luminous Intensity Polar Plot



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

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CATALOG NUMBER: NAV-AF-01-D-UNV-AFL-7050-600

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	633.2	0.0	633.2
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	3490.8	0.0	3490.8
	% Fixture	84.6	0.0	84.6
Total	Lumens	4124.0	0.0	4124.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.4	2.4
10°-20°	248.4	6.0
20°-30°	402.5	9.8
30°-40°	642.7	15.6
40°-50°	934.8	22.7
50°-60°	978.2	23.7
60°-70°	596.3	14.5
70°-80°	166.8	4.0
80°-90°	55.9	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°	4124.0	100.0
0°-180°	4124.0	100.0

Coefficient of Utilization



REPORT NUMBER: P195529

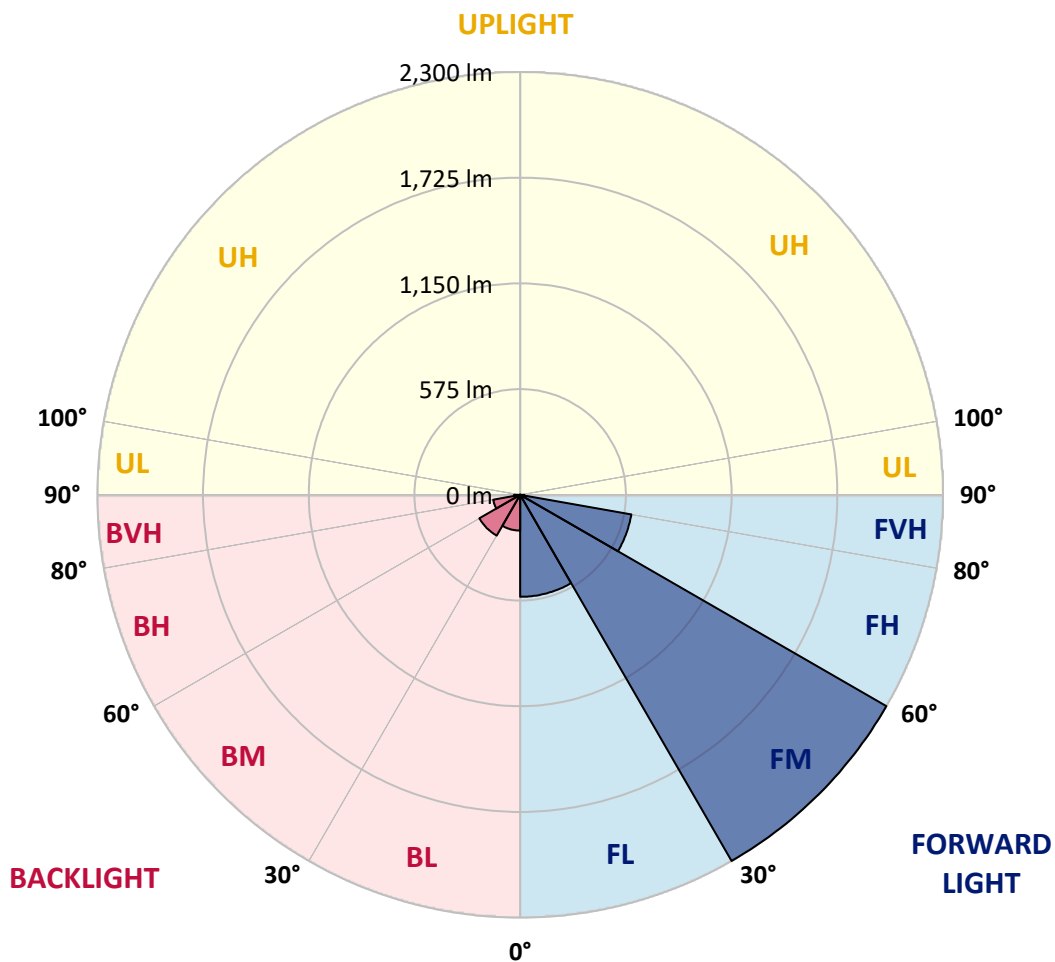
CATALOG NUMBER: NAV-AF-01-D-UNV-AFL-7050-600

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	554.7	13.5			
FM	(30°-60°)	2299.6	55.8			
FH	(60°-80°)	614.0	14.9			G0/660
FVH	(80°-90°)	22.5	0.5			G1/100
BL	(0°-30°)	194.6	4.7	B1/500		
BM	(30°-60°)	256.1	6.2	B1/1000		
BH	(60°-80°)	149.1	3.6	B1/500		G1/500
BVH	(80°-90°)	33.4	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





REPORT NUMBER: P195529

CATALOG NUMBER: NAV-AF-01-D-UNV-AFL-7050-600

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	62.5°	65°	75°	85°
0°	1101.1	1101.1	1101.1	1101.1	1101.1	1101.1	1101.1	1101.1	1101.1	1101.1	1101.1
2.5°	1249.8	1249.0	1238.5	1231.5	1223.3	1204.2	1185.1	1170.9	1163.7	1136.1	1109.3
5°	1353.2	1350.1	1344.1	1336.7	1325.8	1301.9	1271.7	1245.7	1235.4	1186.4	1137.2
7.5°	1298.5	1303.4	1321.7	1342.3	1364.0	1365.5	1344.1	1313.2	1301.9	1236.4	1164.2
10°	1147.2	1145.2	1168.1	1208.3	1279.7	1350.3	1385.6	1370.4	1358.6	1283.8	1191.3
12.5°	1101.3	1100.8	1104.7	1115.0	1159.8	1256.8	1375.1	1408.1	1403.9	1334.1	1220.2
15°	1115.3	1115.8	1115.5	1116.8	1129.2	1175.3	1316.0	1420.7	1433.6	1383.8	1249.5
17.5°	1159.8	1158.0	1152.4	1146.2	1148.0	1164.5	1252.4	1399.0	1437.7	1428.2	1274.3
20°	1228.7	1228.7	1213.5	1196.2	1184.8	1188.5	1225.8	1361.9	1418.6	1465.8	1292.8
22.5°	1315.0	1316.3	1293.9	1262.4	1236.7	1226.9	1241.0	1334.3	1395.4	1500.6	1309.3
25°	1422.2	1422.0	1389.2	1344.1	1303.4	1280.0	1279.7	1335.6	1388.2	1541.3	1326.6
27.5°	1555.0	1542.9	1504.7	1440.5	1383.1	1347.2	1331.0	1368.1	1403.4	1591.3	1349.8
30°	1704.7	1692.3	1642.3	1559.9	1482.0	1429.7	1402.9	1424.3	1449.8	1655.0	1384.9
32.5°	1852.9	1855.8	1797.0	1703.9	1603.9	1530.2	1490.5	1503.7	1521.5	1732.8	1432.3
35°	2069.9	2069.7	1992.9	1876.6	1757.8	1655.7	1605.5	1612.4	1628.7	1842.6	1498.8
37.5°	2231.8	2229.2	2179.7	2076.9	1943.1	1820.7	1748.0	1749.0	1763.0	1980.5	1586.4
40°	2248.3	2247.8	2247.5	2232.8	2141.3	2025.9	1934.9	1916.1	1921.7	2126.9	1679.5
42.5°	2122.3	2141.1	2195.2	2278.2	2303.7	2243.1	2157.1	2115.0	2102.7	2294.9	1777.9
45°	1942.6	1952.2	2047.0	2233.6	2385.4	2447.3	2382.6	2293.9	2272.8	2458.4	1858.1
47.5°	1859.1	1855.0	1909.9	2113.2	2377.4	2609.7	2614.3	2468.9	2433.1	2599.3	1926.4
50°	1680.0	1674.6	1743.9	1936.2	2290.3	2690.3	2852.2	2659.7	2593.4	2733.4	1988.2
52.5°	1323.0	1317.8	1410.9	1658.6	2095.5	2660.2	3052.7	2893.7	2780.8	2862.5	2046.0
55°	860.9	861.4	950.0	1205.5	1695.7	2484.4	3146.8	3164.1	3037.5	2991.6	2092.6
57.5°	474.0	469.6	532.8	689.7	1166.5	2085.1	3068.4	3358.9	3292.9	3102.5	2126.4
58°	421.4	416.3	465.0	600.3	1045.9	1972.5	3029.0	3371.3	3325.7	3120.8	2131.3
60°	300.3	291.5	284.0	338.4	602.6	1422.2	2766.1	3291.1	3335.2	3157.4	2126.6
62.5°	253.1	243.1	216.2	214.2	283.8	695.7	2187.5	2890.3	3013.8	3073.1	2051.9
65°	235.1	225.0	189.7	177.1	192.5	300.3	1352.6	2231.8	2396.8	2780.0	1863.7
67.5°	222.2	210.3	172.4	155.9	159.0	179.6	574.0	1459.6	1650.8	2167.9	1495.2
70°	210.6	197.4	158.8	139.7	137.1	136.6	224.2	762.1	946.4	1418.6	1001.6
72.5°	197.4	184.5	146.7	126.3	120.6	110.8	134.8	315.0	431.7	695.4	459.0
75°	178.4	167.8	133.3	115.2	105.4	90.0	99.5	151.0	186.1	266.2	213.2
77.5°	157.0	148.5	119.6	105.9	92.8	73.5	76.0	102.3	115.0	150.0	123.5
80°	111.1	114.2	104.4	93.3	81.7	59.3	58.5	75.0	82.5	100.8	83.0
82.5°	76.5	78.9	85.1	73.7	66.0	46.1	43.0	52.1	55.9	60.8	40.2
85°	54.6	53.1	59.0	52.8	48.5	29.4	27.6	33.0	35.3	37.1	19.3
87.5°	33.2	33.0	34.0	27.3	25.3	14.9	13.7	15.7	16.8	16.2	9.3
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: P195529

CATALOG NUMBER: NAV-AF-01-D-UNV-AFL-7050-600

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1101.1	1101.1	1101.1	1101.1	1101.1	1101.1	1101.1	1101.1	1101.1	1101.1	1101.1
2.5°	1099.3	1086.6	1059.1	1036.9	1012.9	994.6	976.3	966.0	954.7	948.2	947.5
5°	1111.4	1085.6	1026.9	972.2	916.0	865.5	816.0	779.4	749.5	732.5	731.5
7.5°	1124.8	1084.3	993.6	899.0	799.0	699.5	611.6	549.5	509.6	491.0	489.7
10°	1135.1	1078.9	953.1	806.0	647.5	516.0	436.1	399.5	387.4	384.3	383.8
12.5°	1147.5	1075.0	902.1	686.6	494.9	392.8	368.6	366.3	368.8	370.4	370.6
15°	1159.1	1067.6	833.3	554.4	387.4	351.0	351.6	356.5	361.6	363.9	364.2
17.5°	1164.5	1049.3	742.8	436.9	338.9	332.2	338.2	344.6	349.2	351.0	351.0
20°	1164.5	1019.9	637.9	353.9	313.7	315.0	322.2	327.1	328.1	326.6	325.8
22.5°	1159.6	983.5	535.8	308.8	293.1	298.0	303.6	300.3	288.2	278.9	277.1
25°	1155.2	940.5	437.6	281.2	275.0	281.5	279.1	256.2	237.6	228.1	226.6
27.5°	1148.0	888.4	355.7	258.5	257.5	262.6	239.7	217.5	208.3	203.1	202.1
30°	1146.2	832.0	297.7	238.4	240.2	233.0	206.7	199.5	197.4	194.6	193.3
32.5°	1152.1	775.6	261.4	221.9	223.7	200.0	190.0	191.0	190.7	187.1	185.8
35°	1168.4	720.7	238.2	207.0	201.8	179.1	180.4	183.5	183.5	179.1	177.6
37.5°	1196.7	669.6	223.5	194.3	176.6	168.3	171.7	175.8	175.8	172.7	171.4
40°	1226.9	619.9	212.4	184.3	160.6	160.8	164.2	167.3	168.6	169.1	168.0
42.5°	1254.2	568.3	200.5	173.5	153.4	155.2	156.7	159.0	164.4	168.0	167.5
45°	1270.2	516.5	187.6	160.1	148.5	149.2	148.7	152.8	159.3	164.7	164.7
47.5°	1284.9	474.0	177.1	146.7	143.6	143.6	142.0	146.1	152.1	158.5	159.0
50°	1298.8	446.4	169.6	136.3	137.4	136.6	136.1	140.0	147.9	155.7	157.0
52.5°	1312.9	437.1	162.9	128.9	130.9	129.9	130.4	135.8	144.9	152.8	154.1
55°	1332.8	443.1	155.9	123.7	124.7	124.5	126.6	132.7	140.7	148.7	149.2
57.5°	1357.3	464.7	150.0	119.9	118.8	120.4	123.7	129.6	137.4	146.9	147.7
58°	1362.2	469.9	149.0	118.8	117.5	119.9	123.2	128.9	136.9	146.9	147.7
60°	1369.6	488.2	146.4	116.8	113.1	117.3	121.4	127.1	135.8	148.2	149.7
62.5°	1333.6	491.8	145.6	114.4	108.5	113.7	118.6	125.0	134.8	152.6	155.9
65°	1208.6	454.7	140.2	110.6	104.6	110.8	116.0	123.5	137.9	165.7	167.3
67.5°	970.1	377.6	127.1	104.6	100.3	107.5	113.9	123.5	139.2	167.8	168.8
70°	667.0	283.8	110.6	98.2	95.1	103.4	113.1	126.3	134.8	158.8	155.7
72.5°	348.5	197.4	96.9	90.7	88.9	99.7	120.6	123.5	129.6	148.2	145.1
75°	175.5	134.3	85.3	82.2	82.0	98.5	135.1	118.8	124.2	139.4	146.1
77.5°	103.6	105.2	76.0	74.2	75.5	96.1	135.3	114.2	118.0	128.4	135.6
80°	70.9	86.9	68.8	68.3	69.3	88.4	124.7	108.5	110.8	121.4	129.1
82.5°	40.0	47.9	60.3	63.7	63.1	72.4	107.7	98.7	101.6	143.6	151.8
85°	19.3	28.9	50.5	59.5	53.9	48.2	87.6	87.6	88.4	102.8	104.1
87.5°	7.2	12.9	34.0	47.2	37.6	28.9	59.5	62.1	69.1	71.1	72.7
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)