

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: P196664

Luminaire Tested: **NAV-AF-02-D-UNV-SL4-7030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196664
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24284)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-02-D-UNV-SL4-7030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL
LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9079.4 lumens
Efficiency: N/A
Efficacy: 106.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G3

Input Watts (W): 85
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

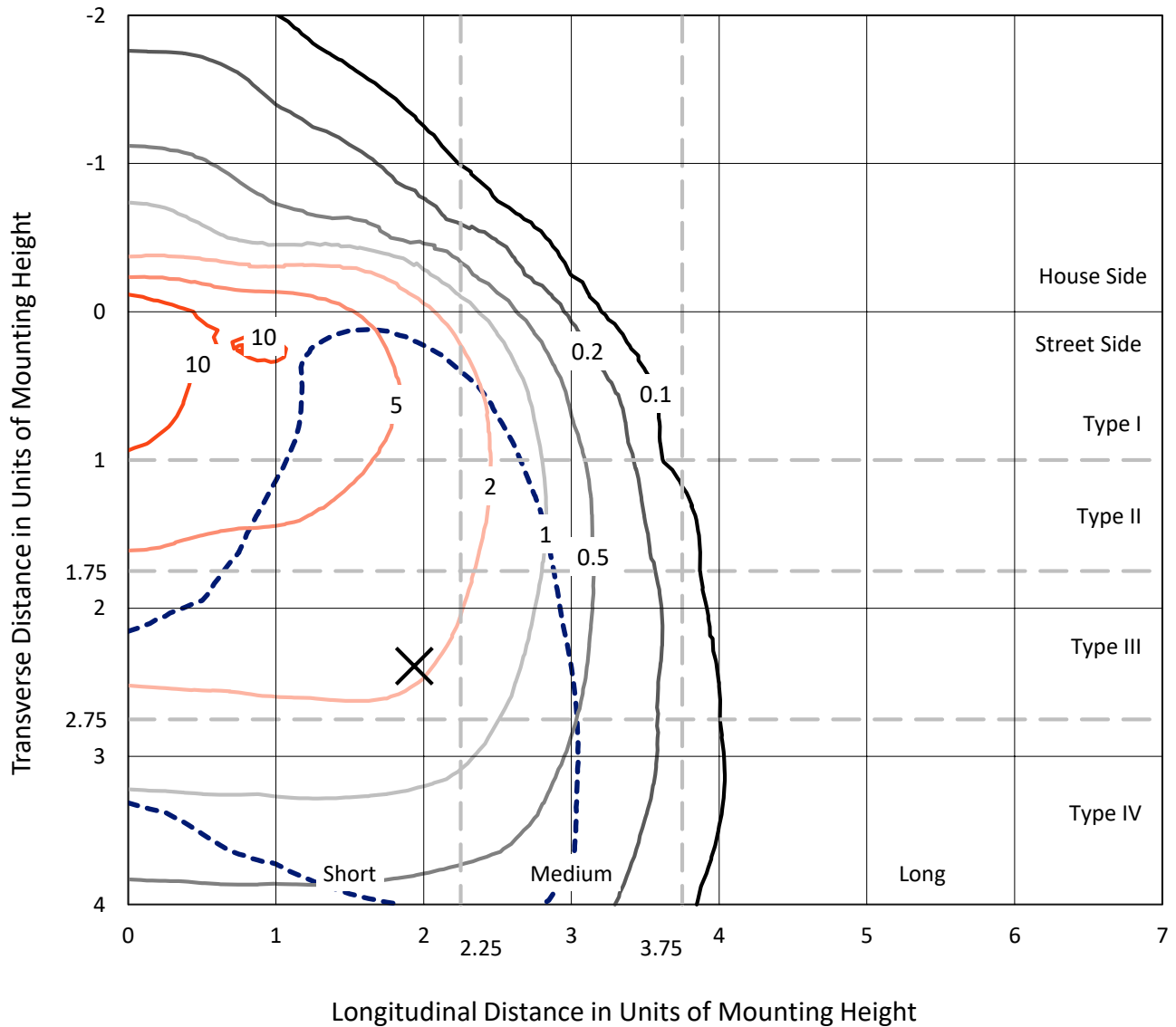


REPORT NUMBER: P196664

CATALOG NUMBER: NAV-AF-02-D-UNV-SL4-7030-800

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

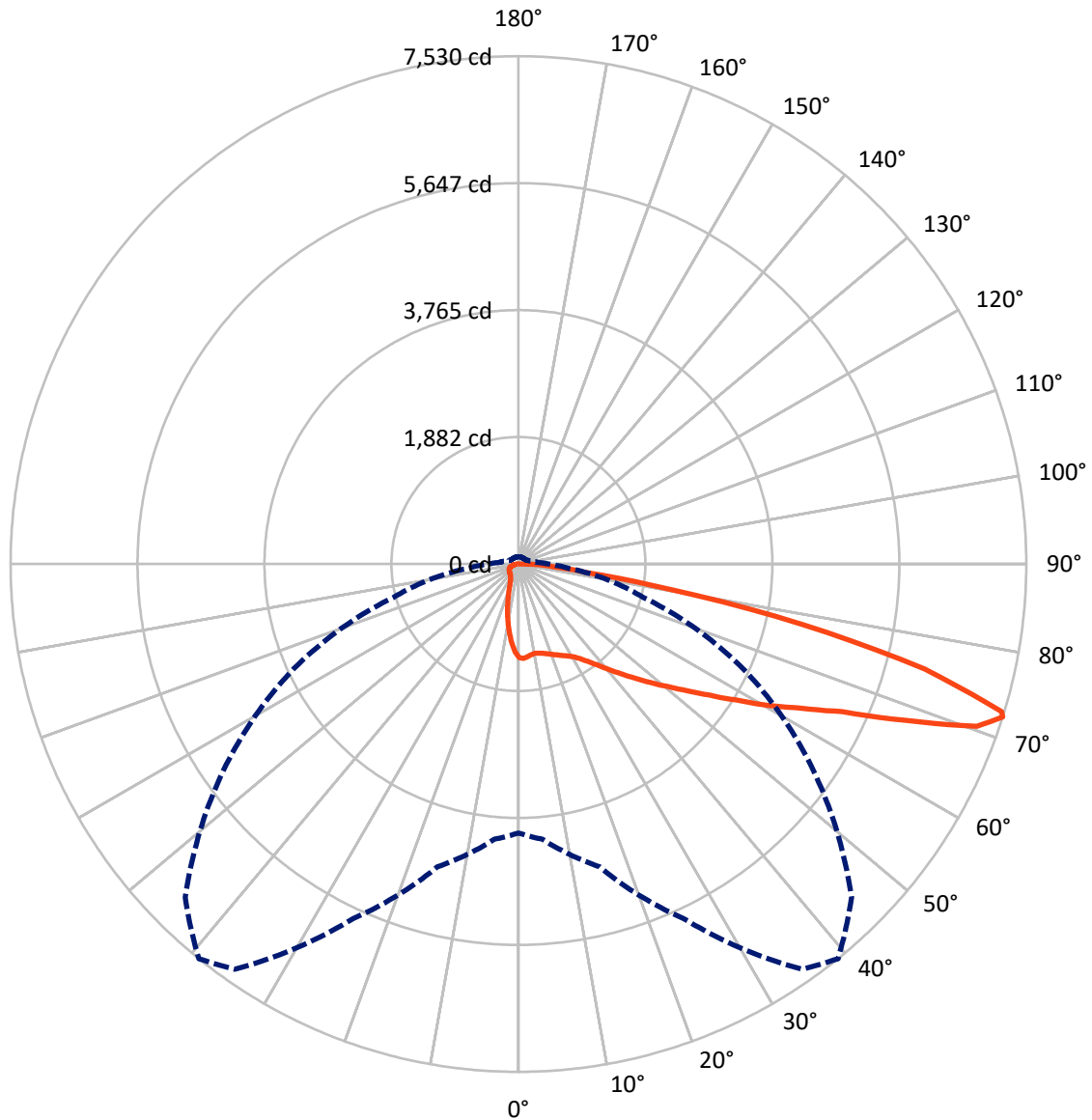


Based on 10 foot mounting height. Maximum calculated value = 13.9 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P196664

CATALOG NUMBER: NAV-AF-02-D-UNV-SL4-7030-800

Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral - - - Horizontal Cone Through 72-Deg Vertical

REPORT NUMBER: P196664

CATALOG NUMBER: NAV-AF-02-D-UNV-SL4-7030-800

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1041.1	0.0	1041.1
	% Fixture	11.5	0.0	11.5
Street Side	Lumens	8038.4	0.0	8038.4
	% Fixture	88.5	0.0	88.5
Total	Lumens	9079.4	0.0	9079.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.2	1.3
10°-20°	299.4	3.3
20°-30°	466.6	5.1
30°-40°	718.4	7.9
40°-50°	1171.2	12.9
50°-60°	1819.9	20.0
60°-70°	2435.9	26.8
70°-80°	1751.8	19.3
80°-90°	297.0	3.3
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°	9079.4	100.0
0°-180°	9079.4	100.0



REPORT NUMBER: P196664

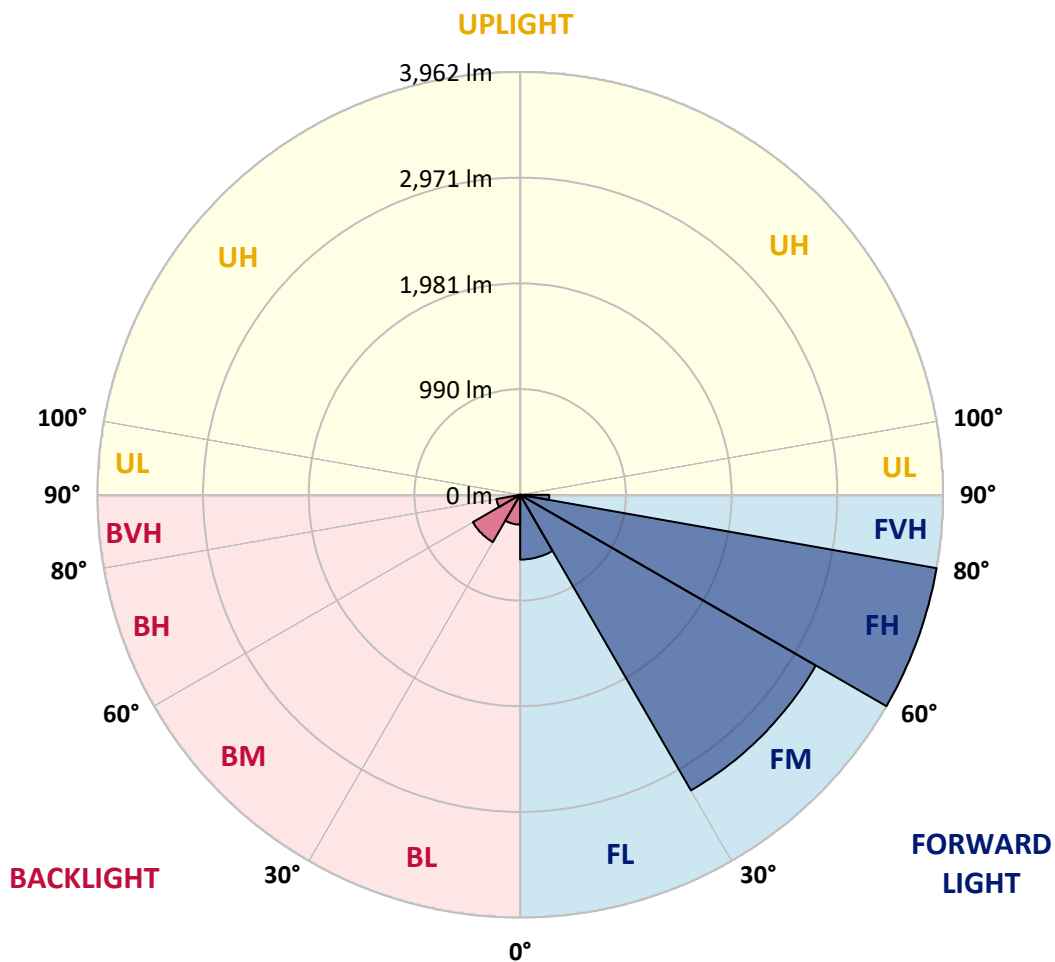
CATALOG NUMBER: NAV-AF-02-D-UNV-SL4-7030-800

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	606.5	6.7			
FM	(30°-60°)	3198.0	35.2			
FH	(60°-80°)	3961.5	43.6			G2/5000
FVH	(80°-90°)	272.4	3.0			G3/500
BL	(0°-30°)	278.7	3.1	B1/500		
BM	(30°-60°)	511.6	5.6	B1/1000		
BH	(60°-80°)	226.2	2.5	B1/500		G1/500
BVH	(80°-90°)	24.6	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G3

Type IV Short





REPORT NUMBER: P196664

CATALOG NUMBER: NAV-AF-02-D-UNV-SL4-7030-800

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	1386.6	1386.6	1386.6	1386.6	1386.6	1386.6	1386.6	1386.6	1386.6	1386.6	1386.6
2.5°	1416.4	1417.1	1415.2	1409.8	1404.8	1402.5	1398.2	1390.9	1381.1	1374.4	1368.9
5°	1403.0	1404.8	1403.7	1394.4	1386.0	1381.1	1374.4	1364.0	1351.2	1345.7	1333.0
7.5°	1392.7	1393.9	1390.3	1379.8	1363.4	1357.3	1345.2	1331.8	1320.2	1312.2	1297.0
10°	1385.4	1386.6	1383.5	1373.2	1355.0	1347.6	1333.0	1318.3	1303.1	1293.3	1276.2
12.5°	1375.0	1377.4	1377.4	1372.7	1360.4	1355.5	1340.8	1325.0	1311.0	1300.6	1279.3
15°	1373.2	1376.2	1381.7	1381.1	1377.4	1373.8	1362.3	1346.4	1334.2	1322.0	1295.9
17.5°	1388.4	1395.1	1406.0	1409.8	1407.4	1399.4	1386.0	1371.3	1358.0	1346.4	1314.1
20°	1426.8	1430.5	1446.9	1454.2	1442.0	1430.5	1412.8	1393.9	1381.7	1372.7	1331.1
22.5°	1484.8	1489.6	1503.0	1503.6	1478.1	1464.0	1441.4	1418.3	1406.7	1403.0	1354.3
25°	1577.3	1576.2	1579.8	1564.6	1518.2	1501.8	1474.4	1447.5	1439.6	1446.9	1388.4
27.5°	1688.3	1685.3	1673.7	1634.1	1563.9	1542.6	1509.8	1485.9	1485.9	1503.0	1434.8
30°	1816.3	1813.2	1775.5	1709.1	1618.2	1593.9	1559.1	1534.1	1546.9	1579.8	1497.5
32.5°	1951.6	1940.7	1887.6	1798.6	1695.6	1668.8	1635.3	1609.7	1634.1	1690.1	1587.7
35°	2078.9	2072.8	2007.6	1902.2	1795.5	1773.1	1749.9	1718.2	1757.2	1844.3	1715.2
37.5°	2210.7	2205.7	2125.8	2013.7	1917.5	1902.2	1882.7	1860.8	1923.5	2038.1	1887.6
40°	2357.5	2347.8	2247.3	2135.0	2059.4	2052.1	2041.8	2035.7	2136.9	2307.5	2105.8
42.5°	2523.9	2505.0	2375.2	2268.5	2214.2	2220.3	2214.9	2239.3	2394.1	2618.4	2365.5
45°	2714.1	2676.3	2502.6	2410.6	2385.5	2409.9	2421.5	2483.7	2698.2	2977.4	2655.5
47.5°	2892.1	2843.3	2642.1	2564.8	2578.7	2620.8	2653.7	2763.3	3031.6	3332.1	2951.7
50°	3056.0	3001.2	2791.5	2724.4	2792.6	2852.4	2920.7	3075.5	3386.4	3697.3	3223.5
52.5°	3177.3	3137.7	2940.8	2898.7	3038.3	3117.6	3226.7	3422.3	3744.8	4045.3	3466.1
55°	3271.1	3249.8	3086.5	3098.7	3316.2	3429.6	3561.9	3786.8	4123.8	4357.3	3661.2
57.5°	3379.6	3363.8	3252.8	3340.0	3661.2	3803.9	3959.9	4209.8	4484.6	4632.1	3814.2
60°	3494.2	3494.2	3438.2	3630.8	4092.8	4256.0	4411.5	4606.0	4844.2	4879.6	3876.4
62.5°	3580.8	3603.4	3623.5	3940.3	4502.3	4705.2	4875.9	5062.4	5216.7	5001.5	3730.1
65°	3706.3	3754.4	3867.9	4298.2	5009.4	5275.1	5505.6	5662.2	5518.3	4904.5	3252.8
67.5°	3922.1	3993.4	4234.8	4830.8	5786.0	6183.8	6407.6	6137.0	5459.2	4294.4	2491.6
70°	4116.6	4217.1	4629.8	5506.7	6795.3	7208.5	7105.4	6026.6	4754.6	3148.0	1532.9
72°	3987.3	4097.0	4648.0	5801.1	7334.6	7529.7	6986.6	5341.0	3674.1	1921.1	755.7
72.5°	3902.6	4016.6	4588.9	5793.8	7349.3	7488.8	6821.4	5068.5	3335.1	1681.0	611.3
75°	3260.2	3357.6	3945.9	5134.9	6476.5	6220.4	5323.3	3280.3	1532.9	543.0	314.4
77.5°	2128.9	2203.3	2720.8	3557.6	4536.5	4290.2	3240.1	1535.9	574.7	329.8	236.4
80°	1069.6	1122.6	1456.1	1870.5	2448.3	2252.7	1495.6	743.0	384.6	238.3	185.8
82.5°	744.2	792.9	1002.6	955.0	1023.3	990.4	703.3	619.8	287.7	150.6	97.6
85°	624.1	674.6	829.5	680.8	557.1	507.7	504.0	585.7	190.1	74.4	82.3
87.5°	544.3	621.0	684.5	497.3	382.2	337.1	371.2	537.0	60.3	40.9	25.0
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: P196664

CATALOG NUMBER: NAV-AF-02-D-UNV-SL4-7030-800

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1386.6	1386.6	1386.6	1386.6	1386.6	1386.6	1386.6	1386.6	1386.6	1386.6	1386.6
2.5°	1359.7	1358.0	1348.8	1334.8	1324.4	1317.7	1304.9	1304.3	1305.5	1294.6	1298.9
5°	1321.4	1314.1	1290.3	1258.0	1231.8	1206.8	1179.4	1170.2	1162.3	1145.8	1147.7
7.5°	1281.2	1268.4	1226.9	1173.9	1123.3	1077.0	1031.3	1008.7	991.6	970.3	970.3
10°	1257.3	1237.3	1173.9	1096.5	1016.0	948.4	880.1	839.2	809.4	782.0	780.1
12.5°	1256.2	1225.7	1137.3	1030.7	920.3	825.2	732.0	669.2	624.8	592.4	589.4
15°	1265.9	1223.2	1106.8	969.1	830.2	706.4	591.2	511.4	454.6	418.7	415.0
17.5°	1274.4	1220.2	1073.9	904.4	742.3	591.8	463.8	381.0	327.3	298.1	295.0
20°	1282.3	1213.6	1031.9	836.3	645.5	484.6	362.6	295.6	260.2	243.7	242.0
22.5°	1293.9	1207.5	988.0	759.5	550.3	394.3	299.3	251.1	232.1	224.3	223.1
25°	1312.9	1208.0	945.3	680.8	463.3	328.6	259.1	229.1	218.8	213.3	213.3
27.5°	1340.3	1215.3	903.2	600.9	389.5	283.4	235.2	217.5	210.9	206.6	205.4
30°	1380.5	1228.7	858.8	525.4	330.9	252.3	221.2	210.4	204.8	201.1	200.5
32.5°	1439.1	1252.5	811.8	456.4	286.5	230.4	210.9	204.2	200.0	196.8	196.2
35°	1526.2	1294.6	766.1	398.0	254.8	214.5	202.3	196.8	194.5	193.2	192.7
37.5°	1654.1	1362.3	722.9	352.3	234.1	204.2	193.8	190.7	189.6	189.6	189.6
40°	1815.1	1451.2	683.9	320.0	222.5	196.2	187.7	185.3	185.3	185.8	185.8
42.5°	2010.7	1562.7	650.3	298.1	215.8	190.7	183.4	182.3	181.6	181.6	182.3
45°	2238.0	1694.4	629.6	281.1	210.9	187.7	180.4	179.8	177.3	176.1	176.1
47.5°	2466.6	1835.2	628.4	271.2	204.8	184.1	177.3	177.3	172.5	170.0	170.7
50°	2679.9	1961.3	641.8	268.8	201.1	178.5	174.3	175.0	168.3	165.2	164.6
52.5°	2851.7	2057.7	658.3	271.8	201.1	173.7	168.8	171.9	164.6	160.9	160.3
55°	2984.6	2124.6	664.3	278.5	203.5	169.5	164.0	168.8	163.4	158.4	158.4
57.5°	3079.8	2146.1	638.2	281.6	207.3	168.8	159.1	168.3	165.2	159.1	159.1
60°	3045.0	2022.3	540.7	270.0	206.6	167.6	155.3	169.5	171.3	164.6	164.6
62.5°	2773.8	1692.0	434.0	243.7	196.2	163.4	151.1	168.3	175.6	173.0	171.9
65°	2258.2	1240.9	336.4	212.7	178.5	154.2	142.0	157.3	165.7	168.3	168.8
67.5°	1591.4	785.7	261.4	181.1	156.7	140.8	131.6	139.0	142.0	143.2	145.7
70°	870.4	425.4	207.8	152.4	134.1	127.4	120.7	121.3	120.0	118.9	120.0
72°	437.0	277.9	175.6	132.3	118.9	114.6	111.6	109.7	109.7	107.8	108.5
72.5°	376.1	258.4	169.5	127.4	115.2	111.6	109.2	107.3	106.6	105.4	106.1
75°	250.5	204.8	141.4	106.6	98.2	95.7	96.9	95.0	95.7	94.5	95.0
77.5°	202.3	176.1	120.0	90.2	84.1	80.5	82.9	83.5	84.6	83.5	82.9
80°	169.5	149.9	100.5	74.4	70.2	67.0	68.3	72.5	73.1	69.5	68.9
82.5°	109.7	120.7	79.2	57.9	53.6	52.5	55.5	59.8	60.9	56.0	54.8
85°	92.0	96.9	57.3	39.7	35.4	34.1	40.2	44.5	47.5	42.6	41.4
87.5°	25.5	47.5	28.1	18.9	15.9	15.9	19.5	23.2	27.5	28.1	28.1
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)