

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: P270354

Luminaire Tested: **NAV-AF-02-D-UNV-SL3-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270354
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24262)
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-SL3-7027-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6963.6 lumens
Efficiency: N/A
Efficacy: 105.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 66
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

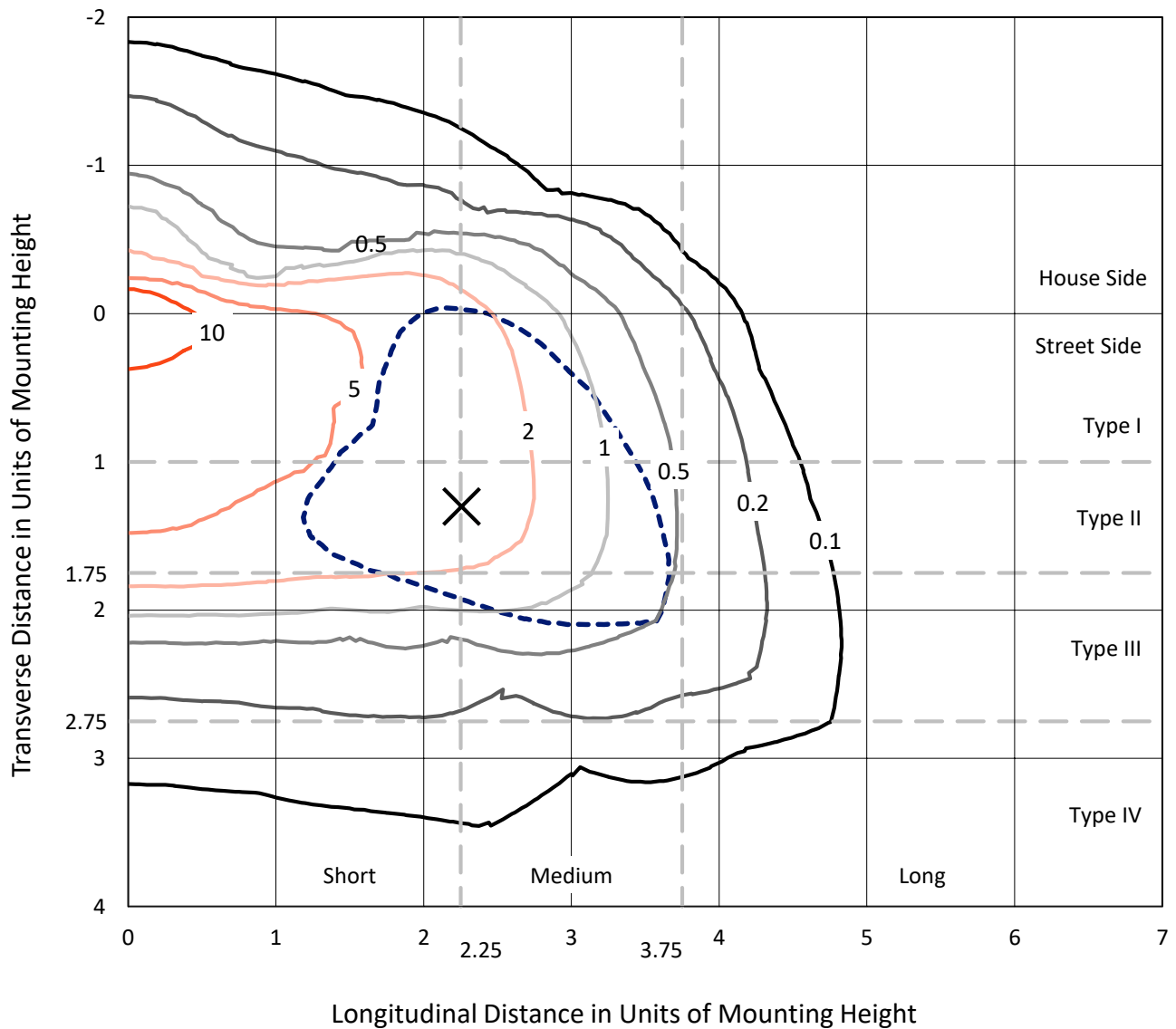


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Iso-Footcandle Lines of Horizontal Illumination

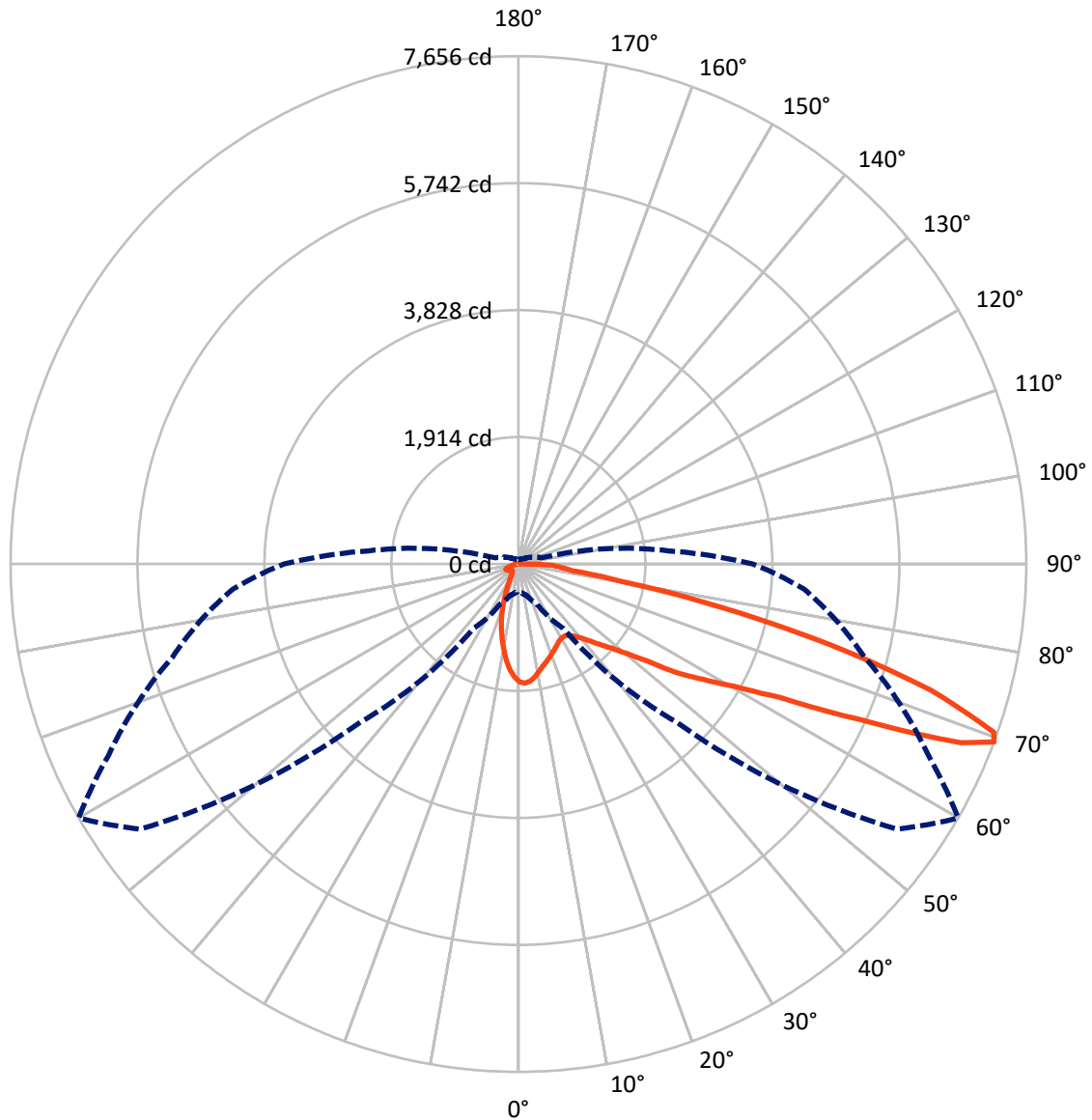
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 17.8 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	993.2	0.0	993.2
	% Fixture	14.3	0.0	14.3
Street Side	Lumens	5970.4	0.0	5970.4
	% Fixture	85.7	0.0	85.7
Total	Lumens	6963.6	0.0	6963.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.7	2.2
10°-20°	322.7	4.6
20°-30°	411.7	5.9
30°-40°	566.6	8.1
40°-50°	917.7	13.2
50°-60°	1440.3	20.7
60°-70°	1920.2	27.6
70°-80°	1068.1	15.3
80°-90°	165.7	2.4
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°	6963.6	100.0
0°-180°	6963.6	100.0

Coefficient of Utilization



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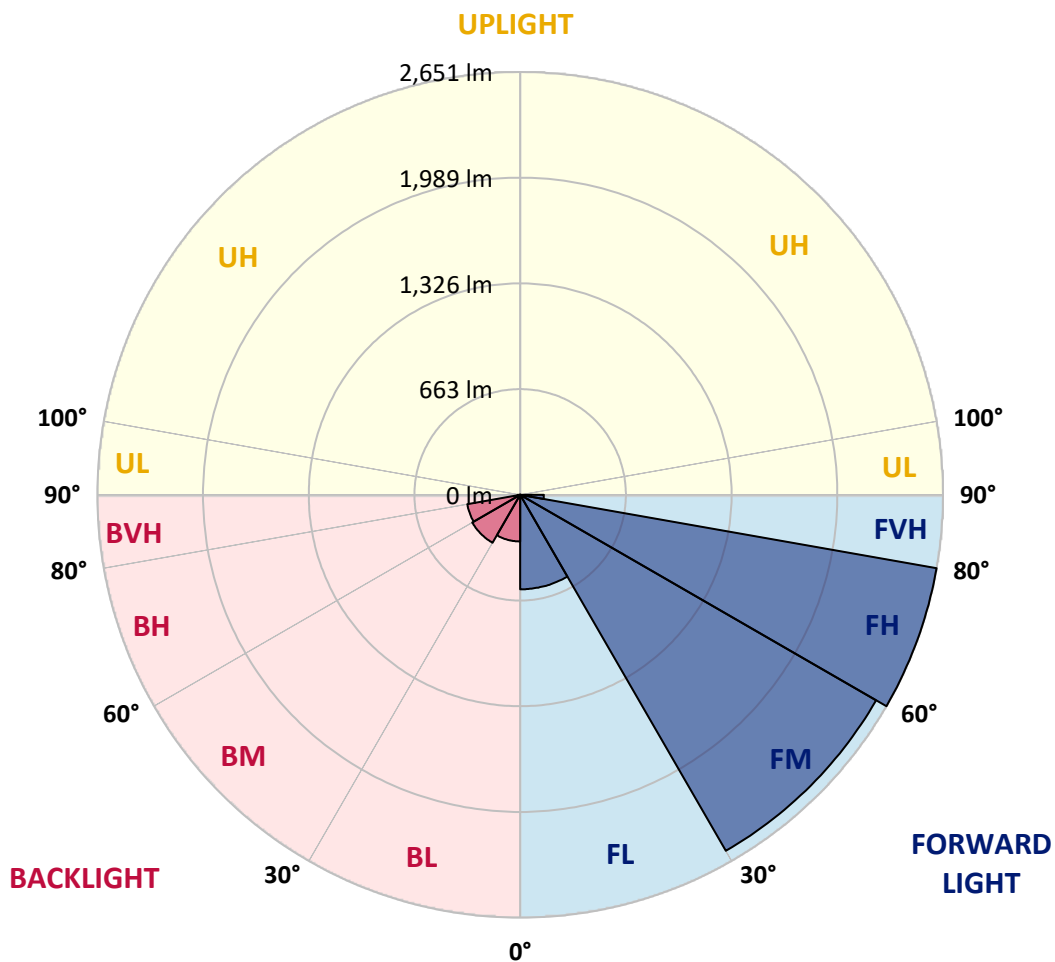
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	592.5	8.5			
FM	(30°-60°)	2577.6	37.0			
FH	(60°-80°)	2651.5	38.1			G2/5000
FVH	(80°-90°)	148.9	2.1			G2/225
BL	(0°-30°)	292.7	4.2	B1/500		
BM	(30°-60°)	347.0	5.0	B1/1000		
BH	(60°-80°)	336.8	4.8	B1/500		G1/500
BVH	(80°-90°)	16.8	0.2			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 III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	1776.8	1776.8	1776.8	1776.8	1776.8	1776.8	1776.8	1776.8	1776.8	1776.8	1776.8
2.5°	1824.1	1828.9	1828.9	1824.9	1822.8	1809.8	1802.2	1796.9	1787.4	1770.1	1754.5
5°	1758.9	1768.4	1772.4	1774.2	1785.7	1781.7	1782.1	1778.6	1770.5	1751.8	1726.4
7.5°	1639.2	1641.1	1648.2	1660.2	1688.4	1707.9	1724.0	1727.3	1725.5	1711.6	1675.9
10°	1521.4	1524.6	1533.0	1553.4	1580.3	1608.4	1643.3	1657.6	1668.3	1663.8	1618.7
12.5°	1423.5	1424.1	1433.3	1457.1	1487.0	1522.3	1569.6	1591.9	1617.4	1627.6	1577.2
15°	1329.3	1335.6	1344.6	1373.1	1410.2	1454.8	1509.3	1540.1	1573.7	1603.0	1545.1
17.5°	1257.8	1262.7	1268.1	1291.9	1334.7	1390.5	1457.9	1490.9	1535.3	1580.3	1511.9
20°	1218.6	1220.3	1216.3	1228.1	1264.2	1324.5	1402.6	1442.3	1495.0	1558.4	1478.0
22.5°	1210.6	1210.6	1195.9	1193.6	1209.7	1260.6	1345.4	1394.1	1458.4	1543.3	1447.7
25°	1248.0	1245.4	1217.7	1192.3	1186.4	1212.4	1291.0	1350.8	1427.1	1542.7	1424.9
27.5°	1319.2	1315.5	1281.2	1238.3	1201.3	1190.1	1249.0	1310.2	1402.6	1558.0	1413.4
30°	1407.6	1406.1	1371.4	1317.8	1256.5	1199.0	1232.5	1289.2	1386.1	1586.0	1412.9
32.5°	1504.4	1498.2	1476.8	1423.2	1343.7	1248.6	1242.3	1290.1	1381.7	1627.2	1423.2
35°	1607.5	1603.0	1597.7	1543.6	1454.4	1336.0	1285.6	1320.9	1403.5	1684.3	1452.2
37.5°	1738.8	1733.9	1742.8	1684.0	1586.0	1450.9	1358.9	1382.5	1448.2	1767.4	1506.2
40°	1972.4	1958.0	1933.2	1842.5	1739.7	1591.4	1464.6	1468.2	1524.6	1878.5	1592.9
42.5°	2356.0	2309.9	2186.3	2019.7	1901.8	1754.8	1602.7	1585.7	1629.9	2025.5	1718.7
45°	2740.4	2688.6	2479.6	2213.1	2069.8	1930.4	1773.3	1732.7	1761.1	2196.5	1880.8
47.5°	2988.8	2963.2	2727.4	2406.4	2245.7	2121.4	1968.4	1901.4	1922.0	2390.3	2080.8
50°	3061.6	3039.7	2854.3	2557.7	2411.8	2352.4	2209.9	2121.1	2124.6	2616.8	2320.7
52.5°	3006.9	2998.1	2875.2	2651.5	2564.5	2595.7	2544.4	2420.8	2391.2	2865.1	2580.7
55°	2934.3	2937.4	2889.9	2745.8	2719.9	2822.6	2982.1	2882.4	2757.3	3123.5	2851.2
57.5°	2705.2	2707.4	2831.5	2925.3	3016.4	3140.6	3322.7	3280.7	3135.2	3402.6	3154.4
60°	2178.2	2195.6	2472.0	2888.2	3355.3	3767.0	3811.7	3739.4	3537.0	3724.2	3548.7
62.5°	1556.3	1571.9	1892.0	2507.3	3315.6	4476.2	4714.6	4426.9	4082.3	4205.1	4103.3
65°	817.5	814.9	1062.8	1732.7	2792.7	4640.5	6137.3	5647.9	5000.9	4866.4	4639.0
67.5°	456.8	471.5	567.5	874.0	1820.1	4084.1	7045.9	7190.3	6278.0	5391.1	4615.9
69°	422.5	427.4	491.6	675.6	1186.4	3369.6	6967.9	7656.0	6816.5	5393.3	4318.5
70°	410.3	415.7	474.2	622.4	996.7	2761.0	6683.4	7601.5	6947.3	5273.7	4047.9
72.5°	367.9	375.1	431.8	559.6	839.9	1423.2	5383.5	6506.2	6293.0	4609.3	3138.8
75°	313.9	325.9	411.8	555.5	795.8	904.8	3590.2	4847.3	4683.8	3296.4	1780.8
77.5°	130.0	131.3	180.0	406.8	835.1	865.8	1929.5	3070.3	2718.1	1445.5	536.3
80°	90.6	88.8	89.7	118.8	673.8	871.6	990.0	1561.6	1213.7	381.3	250.9
82.5°	76.4	75.5	79.1	74.6	228.2	989.2	827.9	814.0	571.6	205.4	119.7
85°	50.5	49.0	64.8	67.9	108.5	785.5	890.4	640.0	425.9	109.9	50.9
87.5°	24.6	25.1	37.1	46.1	57.6	248.7	852.9	505.9	329.0	47.8	20.5
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°	1776.8	1776.8	1776.8	1776.8	1776.8	1776.8	1776.8	1776.8	1776.8	1776.8	1776.8
2.5°	1748.2	1734.7	1722.8	1707.6	1696.0	1686.2	1672.7	1672.3	1670.0	1673.3	1674.1
5°	1709.4	1687.0	1653.2	1615.2	1588.4	1553.1	1518.7	1507.0	1494.2	1492.9	1496.8
7.5°	1650.8	1616.1	1558.0	1499.9	1441.9	1382.5	1326.3	1297.6	1269.9	1261.5	1265.5
10°	1585.7	1541.4	1452.6	1358.0	1276.2	1187.7	1102.1	1046.6	996.2	974.8	980.2
12.5°	1534.8	1478.5	1353.4	1230.7	1108.2	981.5	868.5	759.1	676.6	639.5	641.7
15°	1490.9	1419.1	1260.6	1097.2	943.9	770.2	613.5	486.7	414.4	387.6	386.7
17.5°	1443.7	1356.6	1163.7	973.0	774.2	559.6	410.9	335.7	307.2	298.2	298.2
20°	1393.2	1292.3	1062.3	837.7	595.7	390.8	308.9	280.0	269.2	266.5	266.2
22.5°	1346.3	1229.3	960.5	693.5	430.8	296.5	263.1	251.9	250.1	252.3	252.3
25°	1309.3	1173.9	857.3	541.7	313.5	248.3	234.0	232.7	239.4	247.5	248.7
27.5°	1281.6	1124.4	755.6	395.7	246.4	216.1	211.2	217.0	232.7	248.7	251.9
30°	1262.4	1082.0	633.7	284.5	205.4	189.4	191.6	201.8	225.6	250.1	256.7
32.5°	1253.9	1047.7	510.9	218.4	175.4	166.5	172.4	185.8	210.4	234.8	242.9
35°	1261.8	1022.6	397.4	181.3	153.6	147.0	153.6	167.4	183.6	195.7	200.5
37.5°	1291.0	1013.6	299.1	160.7	139.2	132.6	138.0	147.3	154.5	159.0	161.2
40°	1352.0	1023.0	234.5	150.0	131.3	123.6	125.0	129.4	134.3	138.0	138.3
42.5°	1449.4	1053.8	208.5	146.1	126.4	116.5	114.4	117.5	122.8	127.6	128.5
45°	1579.0	1105.2	205.8	147.3	124.1	110.8	106.3	109.5	116.5	124.5	125.9
47.5°	1746.5	1186.4	218.4	154.5	125.5	107.5	100.9	104.1	113.5	124.1	125.9
50°	1944.7	1298.9	241.6	165.2	131.7	107.5	98.6	101.4	111.2	123.2	125.0
52.5°	2178.2	1455.8	265.7	176.0	140.7	111.6	99.6	99.2	108.1	119.3	121.5
55°	2435.8	1650.5	289.0	185.3	145.5	117.0	101.8	96.5	103.7	112.6	114.4
57.5°	2739.1	1917.1	329.6	194.3	148.2	121.0	104.6	93.8	97.7	104.1	105.5
60°	3150.4	2308.6	408.5	209.5	153.3	122.8	104.9	91.1	90.6	95.1	95.6
62.5°	3686.6	2767.1	484.0	227.4	163.0	123.2	103.1	89.3	84.8	86.1	86.1
65°	4068.0	2936.0	462.2	242.5	171.9	122.8	101.4	87.9	80.4	78.2	78.2
67.5°	3850.9	2593.4	392.5	246.4	172.8	117.9	97.3	84.8	76.4	71.0	71.0
69°	3532.1	2273.3	360.4	239.4	165.6	112.1	92.9	81.7	73.8	67.5	67.5
70°	3272.3	2030.9	340.6	230.9	157.2	107.2	88.8	78.6	71.0	65.7	65.1
72.5°	2443.0	1355.3	291.1	199.2	129.0	90.6	77.8	70.1	63.9	60.2	60.2
75°	1289.2	679.2	238.5	162.6	99.6	72.4	63.9	59.0	55.3	54.9	54.4
77.5°	422.5	307.2	171.4	122.3	73.2	56.2	50.9	47.8	47.3	49.0	49.0
80°	228.2	183.6	110.3	82.6	50.9	42.0	39.3	38.8	40.2	42.8	42.8
82.5°	110.8	90.6	65.7	50.9	34.9	30.8	30.8	31.3	33.1	36.2	36.2
85°	47.8	42.8	38.0	28.6	21.4	19.3	21.9	24.2	25.4	27.7	28.6
87.5°	22.7	20.1	17.3	11.1	9.4	9.8	11.6	14.4	17.0	18.8	19.3
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)