

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: P195619

Luminaire Tested: **NAV-AF-01-D-UNV-SL2-7050-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195619
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24257)
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-SL2-7050-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5000K, 1200mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE II SPILL
LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6570 lumens
Efficiency: N/A
Efficacy: 98.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B1 - U0 - G2

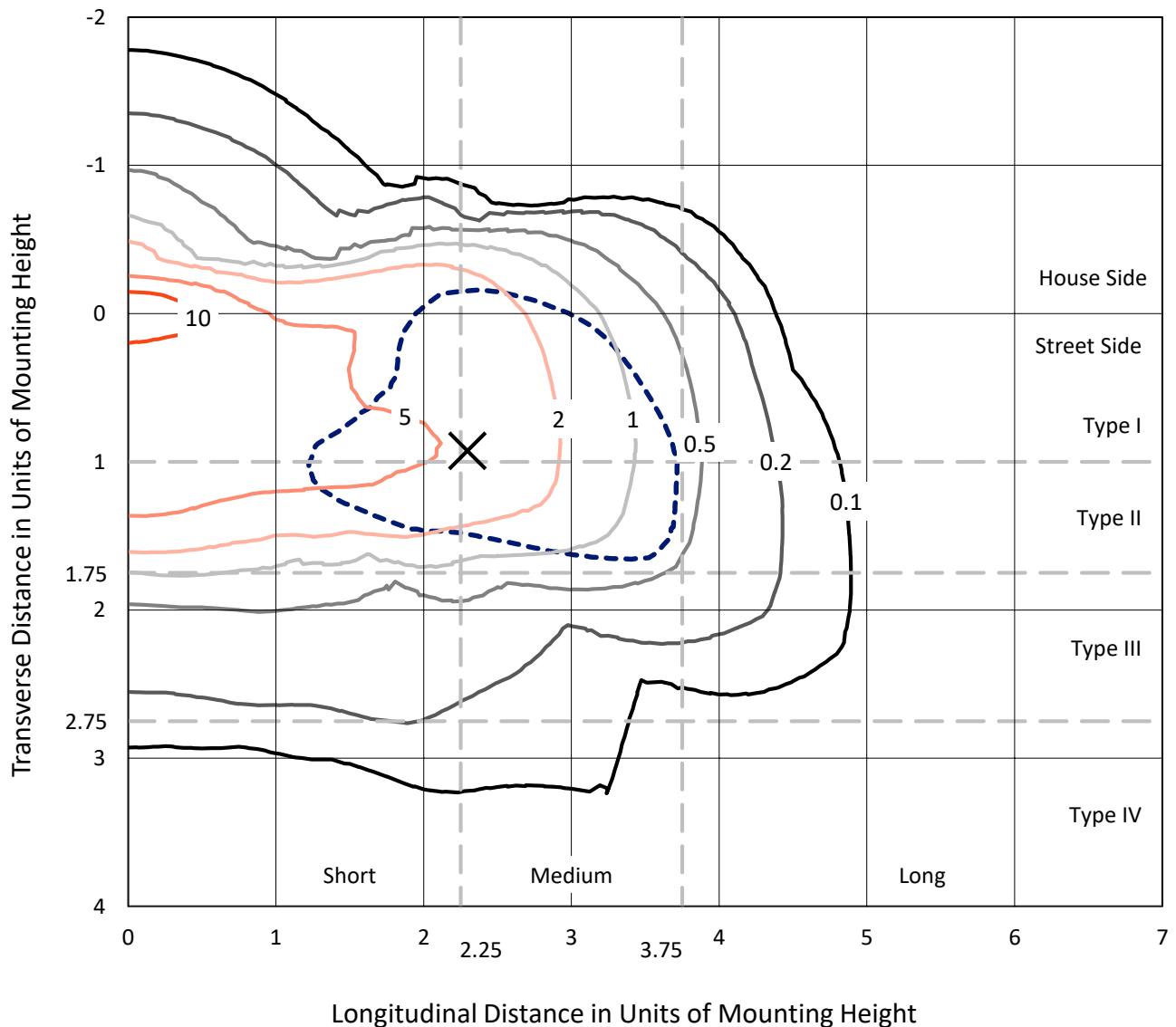
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

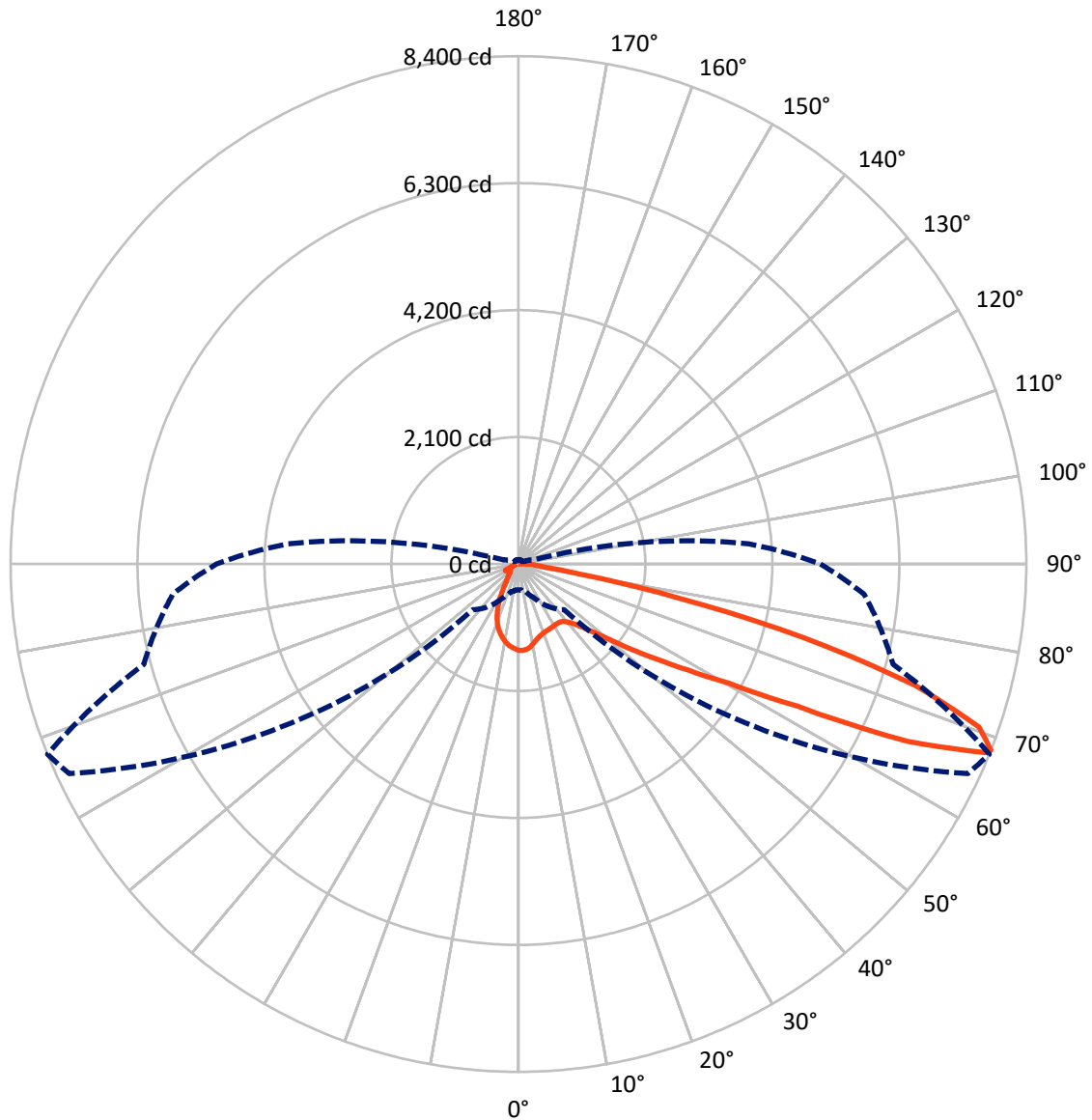
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 14.3 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1074.9	0.0	1074.9
	% Fixture	16.4	0.0	16.4
Street Side	Lumens	5495.1	0.0	5495.1
	% Fixture	83.6	0.0	83.6
Total	Lumens	6570.0	0.0	6570.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.5	1.9
10°-20°	284.1	4.3
20°-30°	384.2	5.8
30°-40°	541.8	8.2
40°-50°	890.8	13.6
50°-60°	1380.9	21.0
60°-70°	1790.4	27.3
70°-80°	1027.4	15.6
80°-90°	147.8	2.3
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°	6570.0	100.0
0°-180°	6570.0	100.0

Coefficient of Utilization



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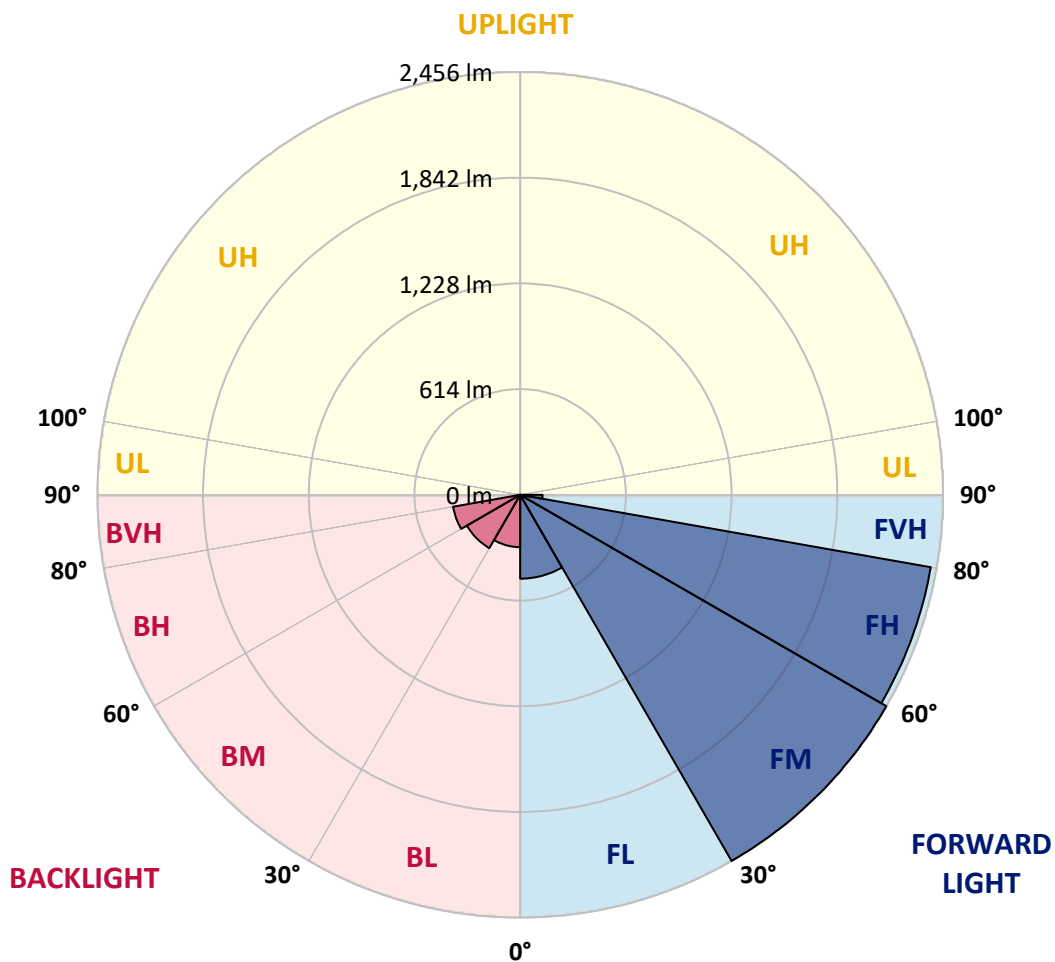
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	486.9	7.4			
FM	(30°-60°)	2456.0	37.4			
FH	(60°-80°)	2422.0	36.9			G2/5000
FVH	(80°-90°)	130.2	2.0			G2/225
BL	(0°-30°)	303.9	4.6	B1/500		
BM	(30°-60°)	357.5	5.4	B1/1000		
BH	(60°-80°)	395.9	6.0	B1/500		G1/500
BVH	(80°-90°)	17.6	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-G2

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	1429.6	1429.6	1429.6	1429.6	1429.6	1429.6	1429.6	1429.6	1429.6	1429.6	1429.6
2.5°	1391.4	1402.5	1402.5	1410.7	1418.0	1424.0	1429.1	1429.1	1429.1	1425.7	1422.7
5°	1245.0	1260.1	1262.2	1282.8	1309.8	1342.9	1379.8	1412.4	1418.8	1430.9	1435.6
7.5°	1143.3	1148.0	1156.2	1170.4	1197.8	1238.6	1296.5	1369.5	1387.1	1424.9	1444.6
10°	1071.2	1075.1	1081.9	1096.1	1121.0	1157.9	1215.0	1309.8	1339.0	1406.0	1445.0
12.5°	1018.4	1021.4	1027.9	1040.7	1066.1	1099.1	1157.5	1256.2	1292.2	1387.1	1451.0
15°	977.2	982.4	987.5	1000.0	1025.7	1057.5	1116.7	1217.1	1256.2	1372.1	1462.2
17.5°	960.9	963.5	964.4	970.8	994.0	1026.2	1085.4	1189.7	1230.0	1360.0	1470.8
20°	971.2	971.6	963.1	958.8	972.1	1001.7	1059.2	1169.1	1210.3	1349.3	1474.2
22.5°	1016.3	1016.3	994.0	975.1	966.1	984.5	1041.6	1154.9	1199.5	1341.2	1474.2
25°	1102.1	1098.3	1063.5	1026.2	986.2	978.5	1030.4	1145.9	1191.4	1336.9	1468.6
27.5°	1215.0	1211.6	1167.3	1112.0	1039.9	991.4	1026.6	1138.6	1183.2	1330.4	1456.6
30°	1352.3	1349.3	1299.1	1226.6	1120.1	1032.2	1035.6	1133.4	1176.8	1319.7	1436.4
32.5°	1489.2	1487.5	1447.6	1373.4	1230.9	1101.3	1059.2	1132.6	1173.4	1306.8	1412.0
35°	1627.0	1627.0	1602.5	1539.9	1379.8	1205.1	1108.6	1148.5	1179.8	1300.0	1390.9
37.5°	1830.4	1822.3	1776.8	1712.0	1567.3	1339.9	1188.4	1181.9	1204.7	1311.6	1384.1
40°	2145.4	2121.8	2008.1	1899.1	1772.1	1512.4	1305.1	1246.7	1260.5	1351.0	1400.4
42.5°	2475.0	2437.7	2287.1	2112.8	1983.6	1725.3	1458.3	1351.9	1351.5	1427.4	1452.3
45°	2757.9	2738.5	2575.5	2354.4	2225.3	1964.8	1651.9	1508.1	1492.7	1545.9	1552.3
47.5°	2922.2	2909.4	2811.1	2610.2	2511.9	2247.6	1897.4	1724.8	1695.7	1727.4	1717.5
50°	2876.7	2889.2	2860.9	2758.3	2820.1	2645.0	2210.2	2021.8	1966.5	1998.2	1974.2
52.5°	2637.3	2670.7	2696.1	2715.8	2997.3	3176.7	2603.4	2392.6	2346.7	2341.1	2318.0
55°	2205.9	2259.2	2339.0	2484.1	2949.7	3603.8	3290.0	2841.1	2774.2	2739.0	2748.0
57.5°	1501.2	1581.9	1754.0	2030.0	2702.1	3785.7	4305.5	3420.5	3307.2	3181.9	3211.1
60°	827.0	894.4	1099.1	1377.2	2136.8	3758.7	5205.4	4362.1	4005.5	3673.3	3733.4
62.5°	535.2	549.8	702.1	940.7	1311.6	3318.4	5705.4	5935.9	5180.1	4321.3	4405.9
65°	430.0	440.3	515.0	758.8	913.7	2134.7	5727.7	7568.5	7070.2	5202.0	5204.6
67.5°	420.2	424.9	468.2	638.2	857.1	1162.2	4950.9	8212.2	8327.7	6241.5	5738.9
68°	426.2	431.7	475.5	618.4	856.6	1071.2	4575.8	8202.3	8400.2	6415.3	5738.9
70°	376.0	382.8	485.0	639.9	820.1	921.0	3133.4	7766.7	8085.2	6814.8	5445.3
72.5°	196.6	191.0	239.9	505.1	923.1	959.6	1655.3	6488.7	6860.3	6311.4	4704.6
75°	153.2	139.5	134.3	199.6	812.0	995.3	961.3	4611.9	4892.6	4549.7	3144.5
77.5°	144.2	127.5	117.6	118.0	357.5	1035.6	777.7	2714.1	2714.1	2170.3	1003.4
80°	115.9	100.4	94.0	107.3	172.5	954.5	811.6	1236.9	1054.9	560.9	276.4
82.5°	76.4	68.2	68.7	87.1	130.9	637.3	939.9	610.7	458.8	248.5	162.7
85°	48.5	41.6	46.4	60.9	97.9	284.1	930.4	424.5	303.9	139.5	81.1
87.5°	24.5	18.9	23.2	31.8	59.7	81.5	766.1	379.0	225.3	57.9	44.2
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°	1429.6	1429.6	1429.6	1429.6	1429.6	1429.6	1429.6	1429.6	1429.6	1429.6	1429.6
2.5°	1422.7	1413.3	1408.5	1400.8	1391.4	1381.9	1375.5	1372.5	1370.8	1371.6	1371.2
5°	1433.0	1420.6	1400.4	1371.6	1342.0	1310.7	1286.7	1268.2	1256.6	1253.2	1252.3
7.5°	1440.7	1422.7	1384.9	1332.6	1281.9	1227.0	1180.2	1142.9	1117.6	1106.0	1105.5
10°	1439.4	1416.3	1356.6	1279.4	1205.1	1124.4	1051.0	988.4	942.9	921.0	920.1
12.5°	1440.7	1409.0	1321.9	1217.1	1110.7	995.3	886.2	788.8	721.0	688.8	687.5
15°	1445.9	1401.2	1286.2	1147.6	1000.4	837.3	681.5	559.2	497.4	476.4	476.4
17.5°	1445.5	1388.4	1245.0	1066.9	869.5	651.1	465.2	389.7	383.7	403.0	406.0
20°	1436.9	1367.8	1191.8	971.2	715.9	450.6	315.4	304.7	352.8	406.0	412.0
22.5°	1423.6	1341.2	1130.4	860.1	536.9	293.6	243.3	259.6	324.9	391.0	400.4
25°	1405.1	1309.0	1060.1	730.9	357.1	211.2	203.0	223.2	269.1	313.3	320.2
27.5°	1378.1	1268.2	983.2	591.0	227.9	173.8	176.8	191.0	210.7	229.6	233.5
30°	1344.2	1220.6	899.5	436.0	173.0	155.4	160.5	169.1	177.7	189.7	192.3
32.5°	1309.8	1172.1	812.4	299.6	151.1	145.5	150.6	155.4	162.7	170.8	172.5
35°	1278.9	1127.0	722.7	209.0	141.6	139.1	141.6	144.6	151.9	160.1	160.9
37.5°	1256.6	1090.1	629.2	165.2	136.0	133.5	134.8	136.0	144.6	156.6	157.9
40°	1253.6	1065.6	534.3	148.5	131.8	128.3	127.5	128.3	139.5	153.2	154.5
42.5°	1282.8	1066.9	441.6	141.6	128.3	124.5	121.0	122.7	132.6	143.3	144.2
45°	1351.9	1097.0	361.4	138.6	125.3	122.3	117.2	118.0	122.7	128.3	129.2
47.5°	1473.8	1162.6	300.0	136.9	122.7	120.2	113.7	111.2	111.6	114.6	114.6
50°	1668.6	1272.5	262.7	135.2	120.6	115.9	108.6	103.4	102.1	103.9	104.3
52.5°	1959.2	1460.9	244.6	131.8	116.7	110.3	102.1	97.0	94.8	96.6	96.6
55°	2351.9	1761.8	236.0	127.0	112.0	103.4	96.1	91.8	90.1	91.4	91.4
57.5°	2799.5	2152.7	250.6	120.6	106.0	96.1	91.0	88.0	86.7	88.0	88.4
60°	3331.2	2664.3	351.1	112.4	99.6	89.7	86.7	85.0	84.1	85.4	85.4
62.5°	4038.1	3345.0	543.3	106.0	92.7	83.7	82.8	82.0	81.1	82.4	82.4
65°	4801.2	3964.3	559.2	102.1	86.7	78.5	79.0	79.0	78.1	79.4	79.4
67.5°	5044.1	3910.6	312.4	97.4	79.4	73.4	75.1	75.1	74.7	76.0	75.5
68°	4992.6	3825.6	272.1	96.1	78.1	72.1	73.8	74.2	73.8	75.1	74.7
70°	4608.9	3358.7	179.0	88.8	72.5	67.8	70.4	70.8	70.4	72.1	71.7
72.5°	3804.6	2519.2	132.2	77.7	65.7	62.2	64.8	65.2	65.7	67.4	67.0
75°	2416.2	1391.4	104.3	66.1	58.8	55.8	58.4	59.7	60.5	63.1	61.8
77.5°	661.8	422.3	84.5	56.2	50.6	49.4	51.1	52.8	53.6	56.7	54.5
80°	231.8	186.7	70.4	47.6	42.1	41.6	43.3	45.1	45.9	48.5	45.9
82.5°	140.8	121.9	56.2	37.3	33.0	32.6	34.8	36.5	37.3	37.3	35.6
85°	73.4	64.4	41.2	26.2	22.7	21.5	25.3	27.5	27.9	27.5	26.2
87.5°	41.2	36.5	21.9	12.4	10.3	10.7	13.3	16.3	17.6	17.2	16.3
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)