

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: P197042

Luminaire Tested: **NAV-AF-02-D-UNV-SL2-8030-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197042  
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-02-D-UNV-SL2-8030-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 80 CRI, 3000K, 615mA LIGHTSQUARES 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: 6420 lumens  
Efficiency: N/A  
Efficacy: 97.3 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Medium - Semi-Cutoff  
BUG Rating: B1 - U0 - G2

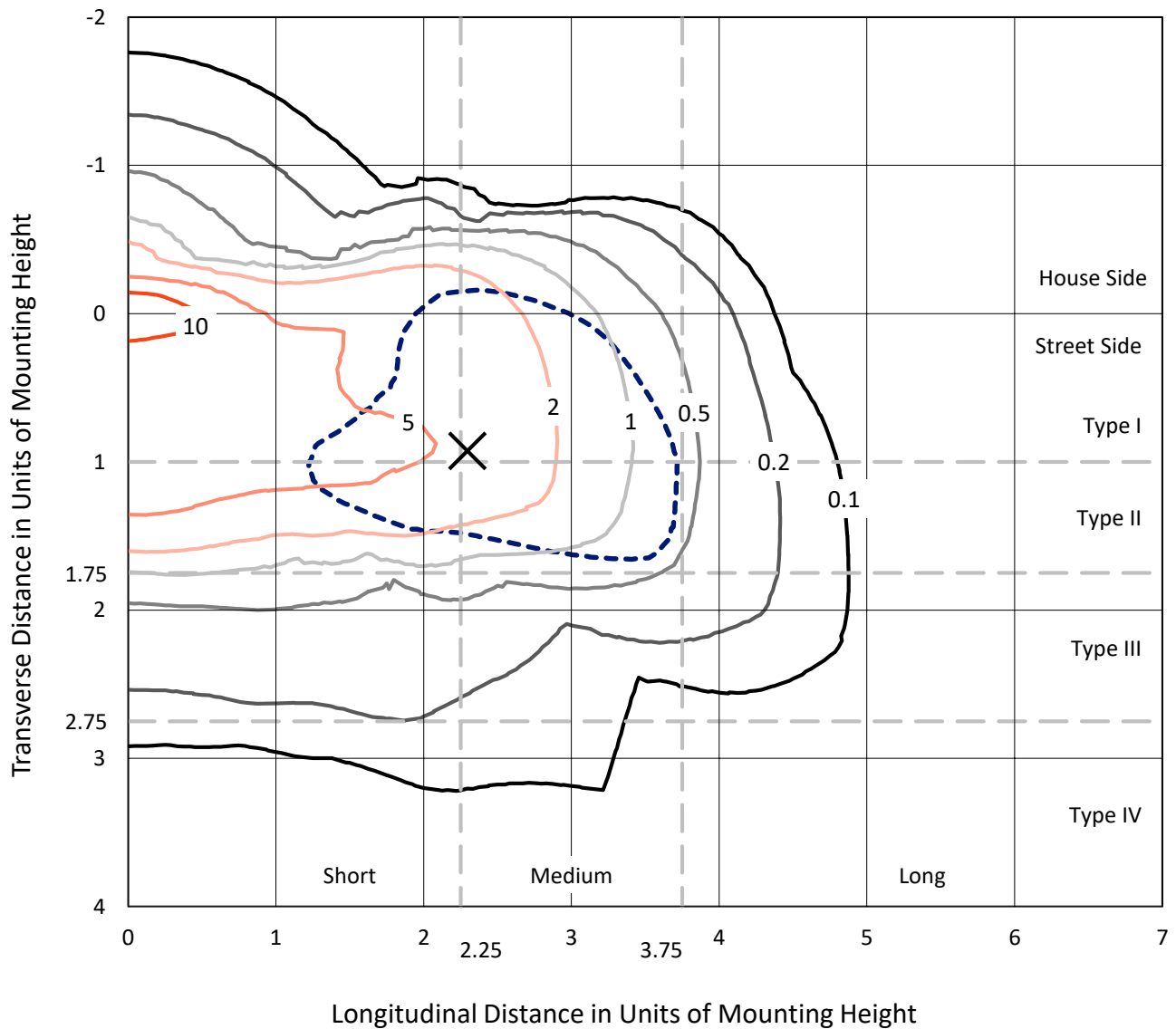
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

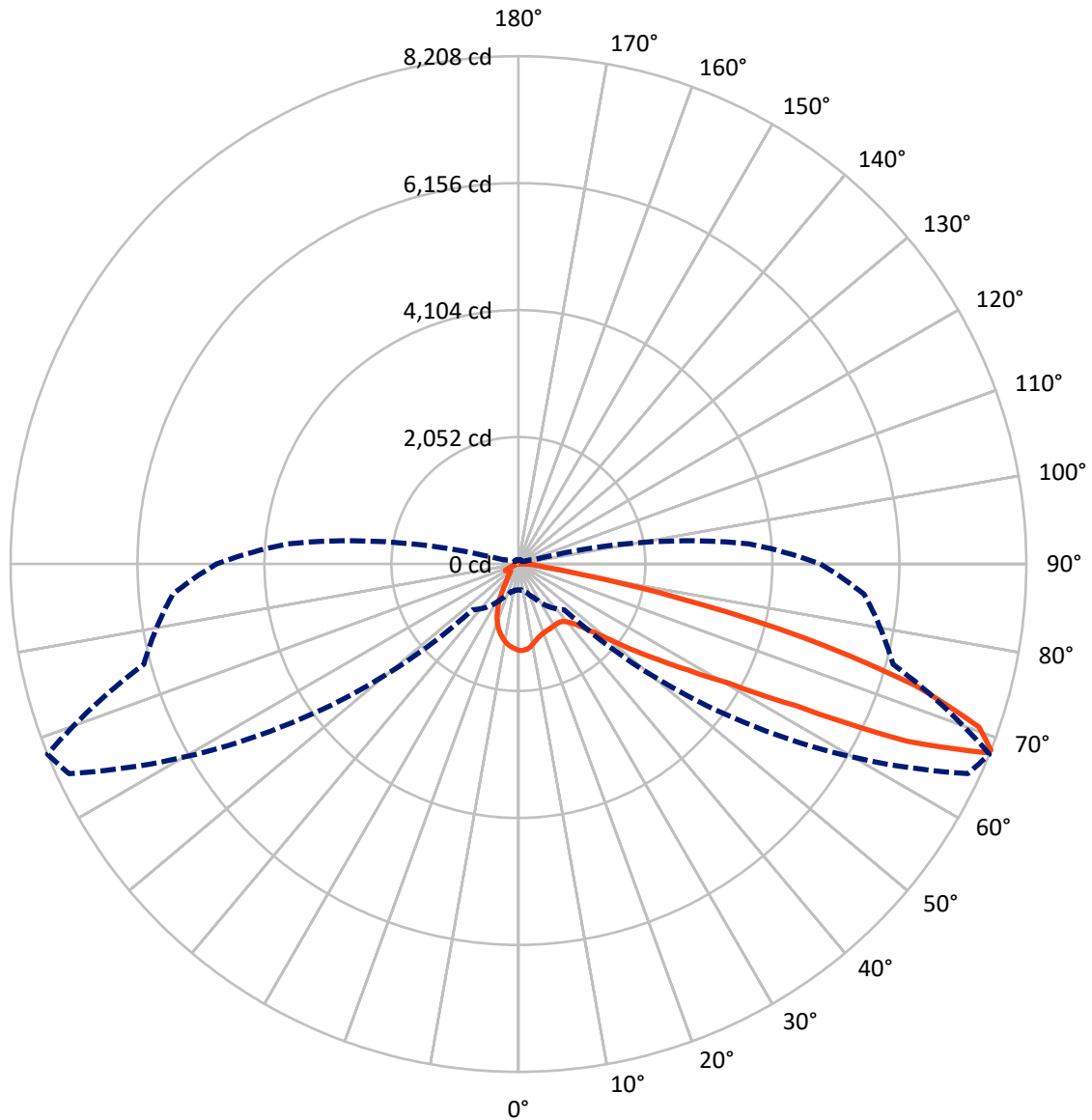
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 14 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
<b>House Side</b>	Lumens	1050.3	0.0	1050.3
	% Fixture	16.4	0.0	16.4
<b>Street Side</b>	Lumens	5369.7	0.0	5369.7
	% Fixture	83.6	0.0	83.6
<b>Total</b>	Lumens	6420.0	0.0	6420.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	119.7	1.9
10°-20°	277.6	4.3
20°-30°	375.5	5.8
30°-40°	529.4	8.2
40°-50°	870.5	13.6
50°-60°	1349.4	21.0
60°-70°	1749.6	27.3
70°-80°	1004.0	15.6
80°-90°	144.5	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°	6420.0	100.0
0°-180°	6420.0	100.0



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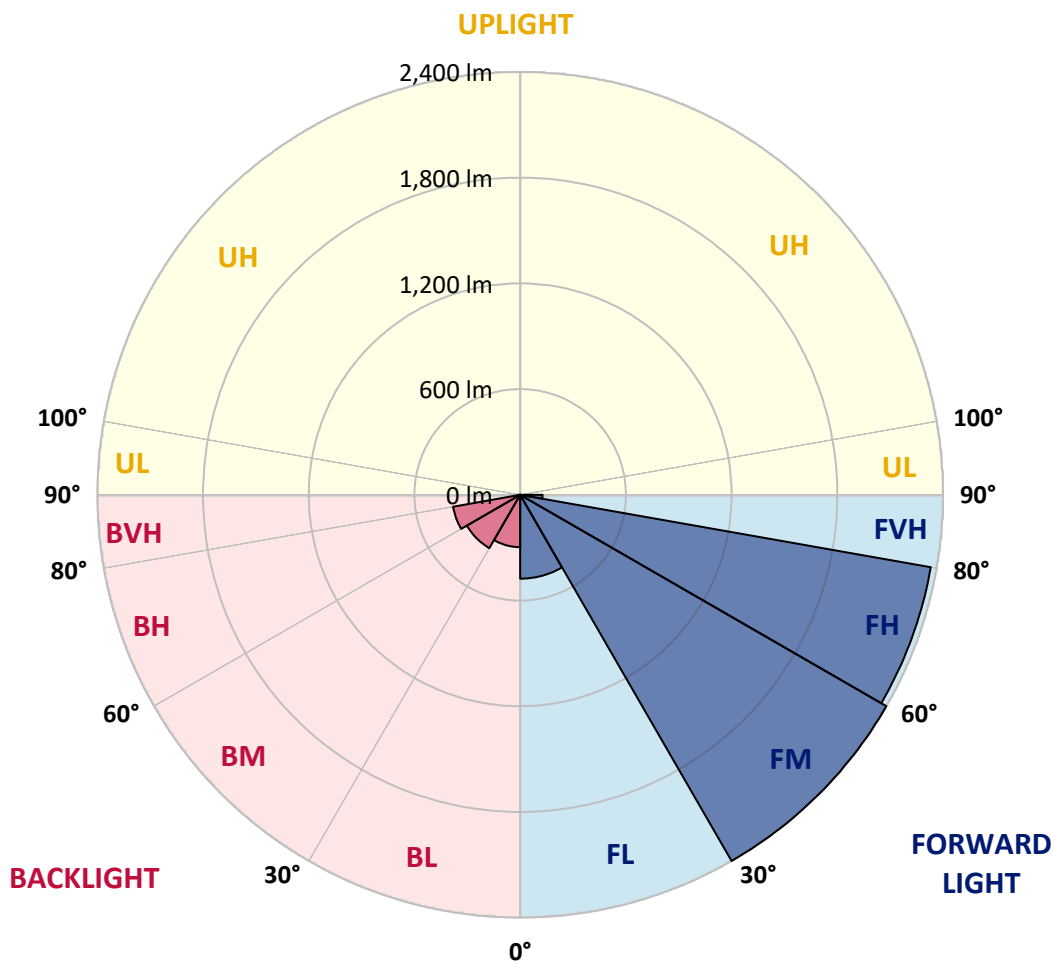
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	475.8	7.4			
FM	(30°-60°)	2399.9	37.4			
FH	(60°-80°)	2366.7	36.9			G2/5000
FVH	(80°-90°)	127.2	2.0			G2/225
BL	(0°-30°)	296.9	4.6	B1/500		
BM	(30°-60°)	349.3	5.4	B1/1000		
BH	(60°-80°)	386.8	6.0	B1/500		G1/500
BVH	(80°-90°)	17.2	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°	1396.9	1396.9	1396.9	1396.9	1396.9	1396.9	1396.9	1396.9	1396.9	1396.9	1396.9
2.5°	1359.6	1370.5	1370.5	1378.5	1385.6	1391.5	1396.5	1396.5	1396.5	1393.2	1390.2
5°	1216.6	1231.3	1233.4	1253.5	1279.9	1312.2	1348.3	1380.2	1386.5	1398.2	1402.8
7.5°	1117.2	1121.8	1129.8	1143.6	1170.5	1210.3	1266.9	1338.2	1355.4	1392.3	1411.6
10°	1046.8	1050.5	1057.2	1071.1	1095.4	1131.5	1187.2	1279.9	1308.4	1373.9	1412.0
12.5°	995.2	998.1	1004.4	1017.0	1041.7	1074.0	1131.1	1227.5	1262.7	1355.4	1417.9
15°	954.9	959.9	965.0	977.1	1002.3	1033.3	1091.2	1189.3	1227.5	1340.7	1428.8
17.5°	939.0	941.5	942.3	948.6	971.3	1002.7	1060.6	1162.5	1201.9	1329.0	1437.2
20°	949.0	949.5	941.1	936.9	949.9	978.8	1035.0	1142.4	1182.6	1318.5	1440.5
22.5°	993.1	993.1	971.3	952.8	944.0	962.0	1017.8	1128.5	1172.2	1310.5	1440.5
25°	1077.0	1073.2	1039.2	1002.7	963.7	956.2	1006.9	1119.7	1164.2	1306.3	1435.1
27.5°	1187.2	1183.9	1140.7	1086.6	1016.1	968.8	1003.1	1112.6	1156.2	1300.1	1423.4
30°	1321.4	1318.5	1269.4	1198.6	1094.6	1008.6	1011.9	1107.6	1149.9	1289.6	1403.6
32.5°	1455.2	1453.6	1414.5	1342.0	1202.8	1076.1	1035.0	1106.7	1146.6	1277.0	1379.7
35°	1589.8	1589.8	1565.9	1504.7	1348.3	1177.6	1083.2	1122.2	1152.9	1270.3	1359.2
37.5°	1788.6	1780.7	1736.2	1672.9	1531.6	1309.3	1161.2	1155.0	1177.2	1281.6	1352.5
40°	2096.5	2073.4	1962.3	1855.7	1731.6	1477.9	1275.3	1218.3	1231.7	1320.2	1368.4
42.5°	2418.5	2382.0	2234.8	2064.6	1938.3	1685.9	1425.0	1321.0	1320.6	1394.8	1419.2
45°	2694.9	2676.0	2516.7	2300.7	2174.5	1919.9	1614.2	1473.7	1458.6	1510.6	1516.9
47.5°	2855.5	2842.9	2746.9	2550.6	2454.6	2196.3	1854.1	1685.5	1656.9	1688.0	1678.3
50°	2811.1	2823.2	2795.5	2695.3	2755.7	2584.6	2159.8	1975.7	1921.6	1952.6	1929.1
52.5°	2577.1	2609.8	2634.5	2653.8	2928.9	3104.2	2543.9	2338.0	2293.1	2287.7	2265.0
55°	2155.6	2207.6	2285.6	2427.3	2882.4	3521.5	3214.9	2776.3	2710.8	2676.4	2685.3
57.5°	1467.0	1545.8	1714.0	1983.6	2640.4	3699.3	4207.2	3342.4	3231.7	3109.2	3137.8
60°	808.1	874.0	1074.0	1345.8	2088.1	3672.9	5086.6	4262.5	3914.0	3589.4	3648.1
62.5°	523.0	537.2	686.1	919.3	1281.6	3242.6	5575.2	5800.4	5061.8	4222.7	4305.3
65°	420.2	430.3	503.2	741.5	892.8	2086.0	5597.0	7395.7	6908.8	5083.2	5085.7
67.5°	410.6	415.2	457.5	623.6	837.5	1135.7	4837.9	8024.7	8137.5	6099.0	5607.9
68°	416.4	421.9	464.7	604.3	837.1	1046.8	4471.4	8015.1	8208.4	6268.8	5607.9
70°	367.4	374.1	473.9	625.3	801.4	900.0	3061.8	7589.4	7900.6	6659.2	5321.0
72.5°	192.1	186.6	234.4	493.6	902.1	937.7	1617.5	6340.5	6703.7	6167.3	4597.2
75°	149.7	136.3	131.3	195.0	793.5	972.5	939.4	4506.6	4780.9	4445.8	3072.8
77.5°	140.9	124.6	114.9	115.3	349.3	1011.9	759.9	2652.1	2652.1	2120.8	980.5
80°	113.2	98.1	91.8	104.8	168.6	932.7	793.0	1208.6	1030.8	548.1	270.1
82.5°	74.6	66.7	67.1	85.1	127.9	622.8	918.4	596.8	448.3	242.8	158.9
85°	47.4	40.7	45.3	59.6	95.6	277.6	909.2	414.8	296.9	136.3	79.3
87.5°	23.9	18.5	22.6	31.0	58.3	79.7	748.6	370.3	220.2	56.6	43.2
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°	1396.9	1396.9	1396.9	1396.9	1396.9	1396.9	1396.9	1396.9	1396.9	1396.9	1396.9
2.5°	1390.2	1381.0	1376.4	1368.8	1359.6	1350.4	1344.1	1341.2	1339.5	1340.3	1339.9
5°	1400.3	1388.1	1368.4	1340.3	1311.4	1280.8	1257.3	1239.3	1227.9	1224.6	1223.7
7.5°	1407.8	1390.2	1353.3	1302.2	1252.7	1199.0	1153.3	1116.8	1092.0	1080.7	1080.3
10°	1406.6	1383.9	1325.6	1250.2	1177.6	1098.8	1027.0	965.8	921.4	900.0	899.1
12.5°	1407.8	1376.8	1291.7	1189.3	1085.3	972.5	866.0	770.8	704.5	673.1	671.8
15°	1412.9	1369.3	1256.9	1121.4	977.6	818.2	666.0	546.4	486.1	465.5	465.5
17.5°	1412.5	1356.7	1216.6	1042.6	849.7	636.2	454.6	380.8	374.9	393.8	396.7
20°	1404.1	1336.5	1164.6	949.0	699.5	440.3	308.2	297.8	344.7	396.7	402.6
22.5°	1391.1	1310.5	1104.6	840.4	524.6	286.9	237.8	253.7	317.5	382.0	391.3
25°	1373.0	1279.1	1035.9	714.2	348.9	206.3	198.4	218.1	262.9	306.1	312.9
27.5°	1346.6	1239.3	960.8	577.5	222.7	169.8	172.8	186.6	205.9	224.4	228.1
30°	1313.5	1192.7	879.0	426.1	169.0	151.8	156.8	165.2	173.6	185.4	187.9
32.5°	1279.9	1145.3	793.9	292.7	147.6	142.2	147.2	151.8	158.9	166.9	168.6
35°	1249.7	1101.3	706.2	204.2	138.4	135.9	138.4	141.3	148.5	156.4	157.3
37.5°	1227.9	1065.2	614.8	161.5	132.9	130.4	131.7	132.9	141.3	153.1	154.3
40°	1225.0	1041.3	522.1	145.1	128.7	125.4	124.6	125.4	136.3	149.7	151.0
42.5°	1253.5	1042.6	431.5	138.4	125.4	121.6	118.3	119.9	129.6	140.1	140.9
45°	1321.0	1071.9	353.1	135.5	122.5	119.5	114.5	115.3	119.9	125.4	126.2
47.5°	1440.1	1136.1	293.1	133.8	119.9	117.4	111.1	108.6	109.0	112.0	112.0
50°	1630.5	1243.4	256.7	132.1	117.8	113.2	106.1	101.1	99.8	101.5	101.9
52.5°	1914.4	1427.5	239.0	128.7	114.1	107.8	99.8	94.8	92.7	94.4	94.4
55°	2298.2	1721.5	230.7	124.1	109.5	101.1	93.9	89.7	88.1	89.3	89.3
57.5°	2735.6	2103.6	244.9	117.8	103.6	93.9	88.9	86.0	84.7	86.0	86.4
60°	3255.2	2603.5	343.0	109.9	97.3	87.6	84.7	83.0	82.2	83.5	83.5
62.5°	3945.9	3268.6	530.9	103.6	90.6	81.8	80.9	80.1	79.3	80.5	80.5
65°	4691.5	3873.8	546.4	99.8	84.7	76.7	77.2	77.2	76.3	77.6	77.6
67.5°	4928.9	3821.3	305.3	95.2	77.6	71.7	73.4	73.4	73.0	74.2	73.8
68°	4878.6	3738.3	265.9	93.9	76.3	70.5	72.1	72.6	72.1	73.4	73.0
70°	4503.7	3282.0	174.9	86.8	70.9	66.3	68.8	69.2	68.8	70.5	70.0
72.5°	3717.8	2461.7	129.2	75.9	64.2	60.8	63.3	63.7	64.2	65.8	65.4
75°	2361.1	1359.6	101.9	64.6	57.5	54.5	57.0	58.3	59.1	61.6	60.4
77.5°	646.7	412.7	82.6	54.9	49.5	48.2	49.9	51.6	52.4	55.4	53.3
80°	226.5	182.4	68.8	46.6	41.1	40.7	42.4	44.0	44.9	47.4	44.9
82.5°	137.6	119.1	54.9	36.5	32.3	31.9	34.0	35.6	36.5	36.5	34.8
85°	71.7	62.9	40.3	25.6	22.2	21.0	24.7	26.8	27.3	26.8	25.6
87.5°	40.3	35.6	21.4	12.2	10.1	10.5	13.0	15.9	17.2	16.8	15.9
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)