

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: P195637

Luminaire Tested: **NAV-AF-01-D-UNV-SL3-7050-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195637  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24263)  
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-SL3-7050-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 5000K, 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE III  
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5186 lumens  
Efficiency: N/A  
Efficacy: 87.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B1 - U0 - G2

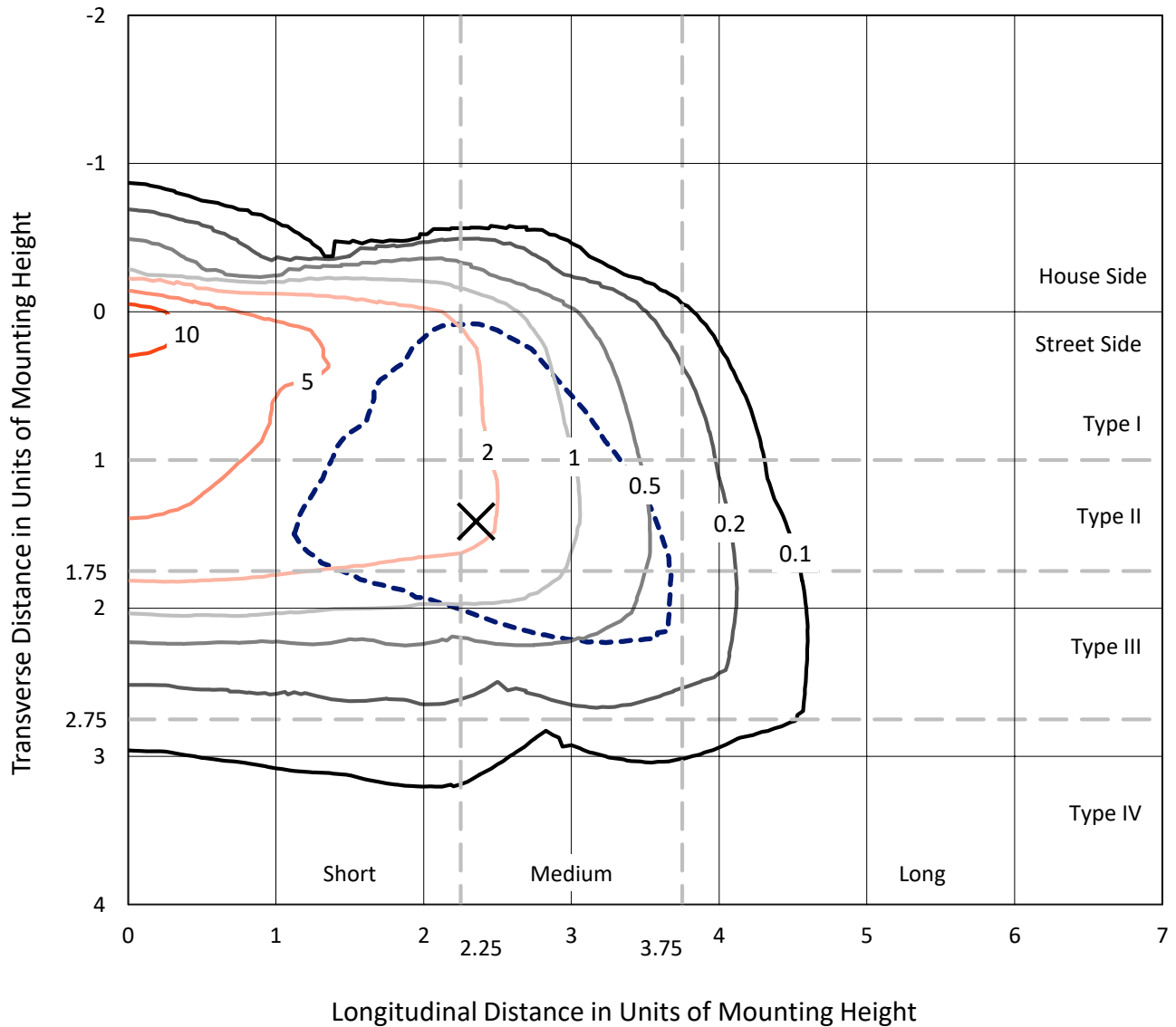
Input Watts (W): 59  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

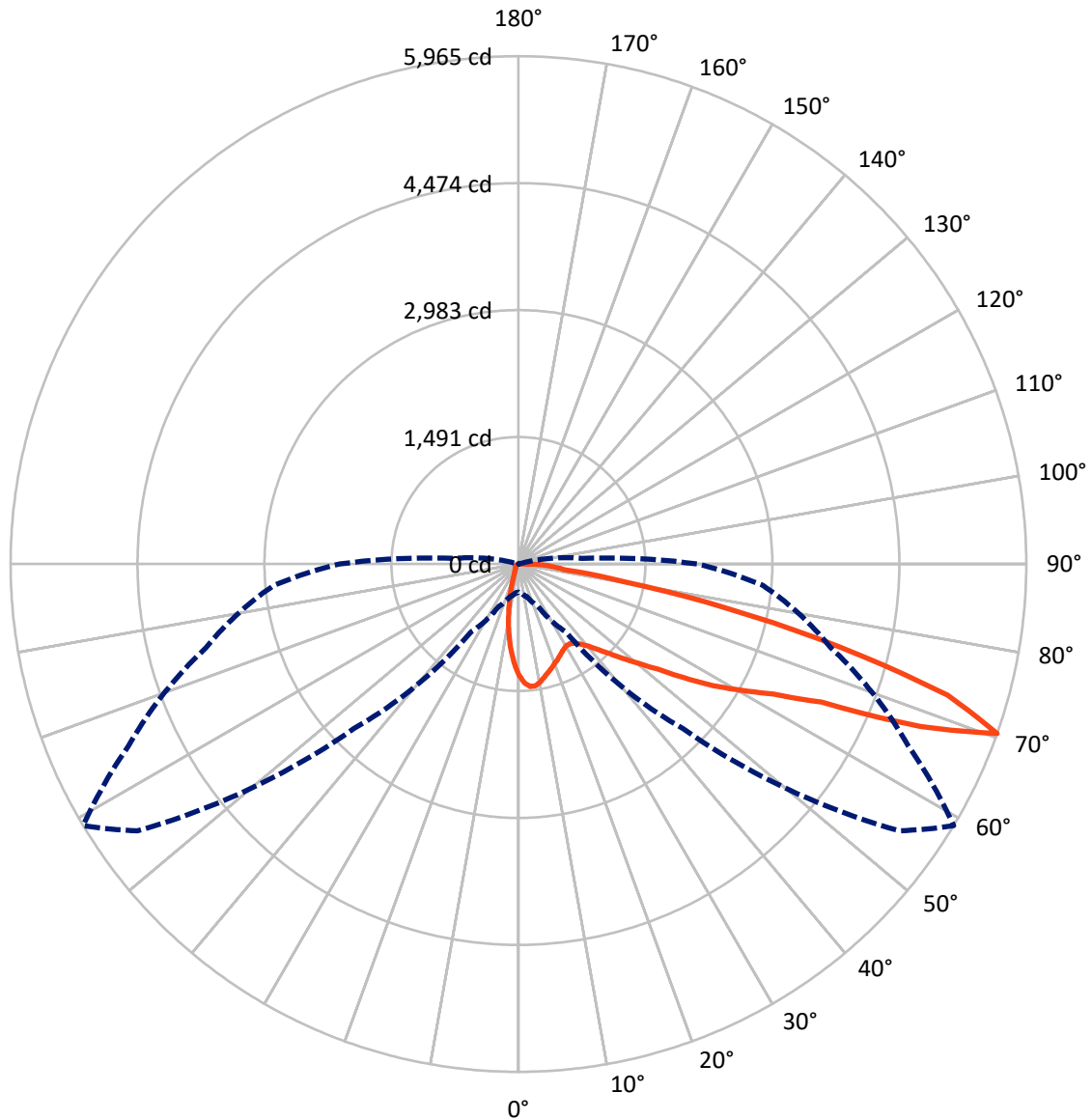
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 14 fc  
 Type III - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral    - - - Horizontal Cone Through 70-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	398.7	0.0	398.7
	% Fixture	7.7	0.0	7.7
<b>Street Side</b>	Lumens	4787.3	0.0	4787.3
	% Fixture	92.3	0.0	92.3
<b>Total</b>	Lumens	5186.0	0.0	5186.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	107.8	2.1
10°-20°	226.2	4.4
20°-30°	306.2	5.9
30°-40°	441.8	8.5
40°-50°	733.8	14.1
50°-60°	1122.4	21.6
60°-70°	1396.0	26.9
70°-80°	771.7	14.9
80°-90°	80.0	1.5
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°	5186.0	100.0
0°-180°	5186.0	100.0



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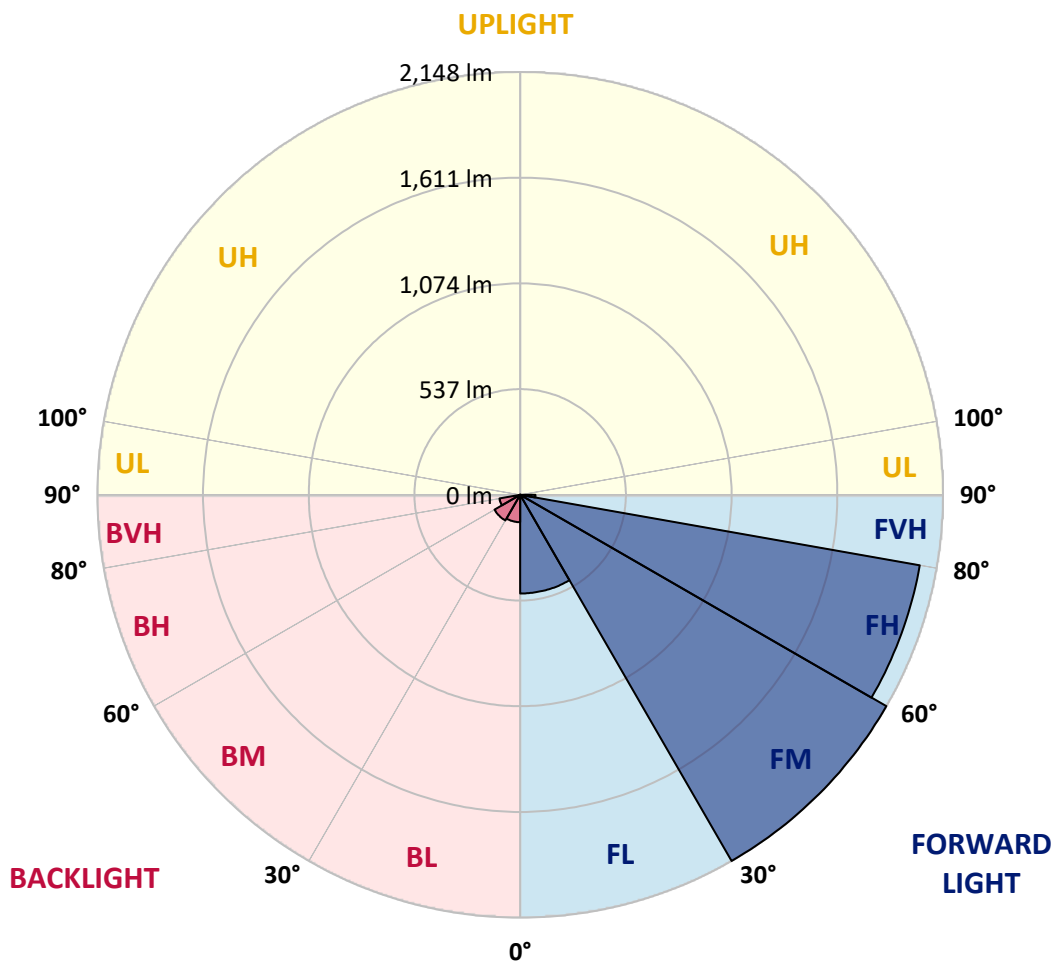
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	501.2	9.7			
FM	(30°-60°)	2147.6	41.4			
FH	(60°-80°)	2060.8	39.7			G2/5000
FVH	(80°-90°)	77.7	1.5			G1/100
BL	(0°-30°)	138.9	2.7	B1/500		
BM	(30°-60°)	150.5	2.9	B0/220		
BH	(60°-80°)	106.9	2.1	B0/110		G0/110
BVH	(80°-90°)	2.3	0.0			G0/10
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°	59°	65°	75°	85°
0°	1311.4	1311.4	1311.4	1311.4	1311.4	1311.4	1311.4	1311.4	1311.4	1311.4	1311.4
2.5°	1482.3	1480.0	1470.2	1468.2	1457.3	1435.4	1409.9	1399.8	1379.0	1346.2	1309.8
5°	1507.0	1508.1	1508.9	1504.6	1503.0	1485.1	1456.9	1444.8	1417.0	1363.0	1296.5
7.5°	1414.6	1417.8	1427.5	1431.8	1450.6	1457.7	1451.8	1444.0	1422.1	1358.3	1264.8
10°	1317.2	1323.1	1333.7	1340.7	1363.8	1382.6	1406.4	1408.4	1403.7	1342.6	1229.2
12.5°	1233.5	1239.0	1250.7	1264.8	1288.3	1312.5	1348.1	1360.6	1376.3	1332.5	1203.8
15°	1161.5	1163.1	1174.4	1192.0	1222.9	1256.2	1298.4	1316.8	1347.3	1328.6	1184.2
17.5°	1098.5	1098.9	1106.4	1122.4	1160.0	1203.8	1253.1	1277.3	1316.0	1323.1	1167.0
20°	1057.1	1056.7	1057.1	1065.7	1098.9	1151.0	1210.8	1236.2	1285.9	1316.4	1149.4
22.5°	1043.0	1041.0	1032.0	1028.9	1050.0	1095.8	1167.4	1200.6	1258.9	1314.5	1136.5
25°	1060.2	1059.0	1039.8	1021.9	1023.8	1052.4	1123.2	1163.9	1237.8	1321.5	1133.3
27.5°	1115.7	1113.4	1084.1	1048.8	1026.5	1031.6	1090.3	1133.0	1221.0	1338.7	1137.7
30°	1188.5	1188.9	1157.6	1115.0	1062.5	1033.6	1072.7	1113.0	1209.6	1364.6	1147.0
32.5°	1269.5	1269.1	1246.8	1197.5	1130.6	1069.6	1080.5	1114.6	1211.2	1402.5	1165.0
35°	1353.2	1348.9	1341.5	1298.1	1219.8	1132.6	1116.1	1141.2	1227.6	1452.6	1195.6
37.5°	1449.8	1448.3	1455.7	1409.9	1330.1	1225.3	1178.7	1195.6	1269.1	1526.5	1244.8
40°	1603.6	1595.0	1598.5	1536.3	1454.5	1350.1	1266.4	1270.7	1335.2	1624.3	1322.7
42.5°	1896.6	1861.8	1796.5	1679.9	1591.5	1488.6	1381.0	1373.6	1428.7	1742.9	1425.2
45°	2246.7	2206.8	2042.1	1838.3	1728.4	1637.2	1522.6	1502.7	1543.7	1884.1	1557.4
47.5°	2539.0	2496.0	2277.7	2003.8	1867.7	1790.6	1679.5	1656.0	1681.4	2048.0	1716.3
50°	2638.7	2614.9	2423.2	2141.5	2008.1	1962.7	1876.3	1837.1	1843.4	2224.8	1901.7
52.5°	2593.0	2584.8	2456.4	2235.8	2138.0	2152.9	2091.8	2050.7	2043.7	2418.1	2106.7
55°	2496.3	2492.4	2429.8	2288.2	2252.6	2326.9	2394.2	2358.6	2292.1	2623.5	2276.1
57.5°	2358.2	2373.1	2418.1	2389.2	2393.5	2510.8	2675.1	2693.5	2594.1	2787.0	2401.7
60°	1989.3	2029.2	2235.4	2497.5	2698.2	2816.7	2976.0	3010.4	2850.0	2898.9	2546.8
62.5°	1470.6	1527.7	1821.5	2303.1	2866.0	3398.5	3376.2	3360.9	3094.1	3048.7	2810.9
65°	863.8	930.7	1179.1	1799.6	2612.9	3772.5	4123.4	3912.2	3466.2	3360.1	3231.4
67.5°	430.3	430.7	543.0	949.9	1931.0	3511.5	5214.1	5092.1	4257.2	3819.0	3397.3
70°	331.0	340.0	401.8	552.0	976.5	2735.0	5464.1	5965.2	5052.2	3798.7	2882.5
72.5°	280.5	286.4	357.6	480.4	730.0	1501.5	4730.2	5272.8	4820.9	3209.5	2124.7
75°	201.9	206.6	316.5	435.8	672.1	744.9	3244.7	3910.6	3617.2	2257.7	1169.3
77.5°	50.1	49.7	110.3	353.7	601.3	620.5	1861.8	2507.7	2075.4	924.4	300.5
80°	22.3	21.5	25.0	74.3	559.4	585.6	818.8	1266.4	796.1	149.8	91.9
82.5°	15.6	14.9	15.6	27.4	187.0	543.4	494.9	548.9	291.5	51.2	39.1
85°	5.1	4.7	8.6	23.1	52.4	313.4	482.8	410.0	216.7	21.9	26.2
87.5°	0.8	0.8	3.1	12.5	15.3	104.5	283.2	284.0	97.4	12.9	11.7
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°	1311.4	1311.4	1311.4	1311.4	1311.4	1311.4	1311.4	1311.4	1311.4	1311.4	1311.4
2.5°	1291.4	1268.3	1235.8	1203.4	1174.0	1143.9	1119.7	1108.3	1103.2	1096.2	1080.9
5°	1261.7	1219.8	1148.6	1078.6	1013.2	950.7	897.1	866.5	833.7	832.1	816.1
7.5°	1213.9	1154.5	1042.2	933.4	833.7	738.2	656.1	602.9	566.5	543.8	528.1
10°	1160.7	1084.4	935.8	782.8	647.1	519.5	413.9	345.1	303.2	282.1	269.9
12.5°	1118.5	1022.6	830.9	638.5	468.3	322.0	223.8	173.7	151.4	142.8	138.9
15°	1082.1	965.9	732.7	509.4	312.6	185.0	129.5	113.1	109.5	109.5	109.1
17.5°	1045.3	911.1	637.3	382.6	196.8	121.3	102.1	99.8	100.2	101.3	101.3
20°	1010.5	859.1	545.4	272.7	129.1	97.0	92.7	91.9	93.1	94.7	94.3
22.5°	982.3	813.3	459.3	187.4	99.4	88.0	85.3	84.1	84.9	86.1	85.7
25°	962.4	774.2	380.3	130.7	86.5	80.2	77.1	75.5	74.7	75.5	75.1
27.5°	950.3	741.4	305.9	98.2	77.5	72.4	68.5	65.3	63.4	63.4	62.6
30°	942.4	710.4	239.8	81.4	70.0	64.6	59.1	54.8	51.6	50.9	50.5
32.5°	942.0	683.8	179.2	72.0	63.0	56.7	50.1	44.6	41.1	40.3	39.9
35°	951.8	662.3	131.8	64.9	56.7	49.3	41.9	36.0	32.9	32.9	32.5
37.5°	977.3	649.8	99.8	59.5	51.6	43.0	35.2	29.7	27.0	27.8	27.8
40°	1024.6	647.5	81.4	55.2	47.3	37.6	28.6	24.3	23.1	24.3	24.3
42.5°	1097.0	660.0	72.4	52.0	43.4	32.1	23.9	20.7	20.3	21.5	21.5
45°	1191.2	684.6	67.3	49.3	39.1	26.6	20.0	18.0	17.6	19.2	19.2
47.5°	1305.5	717.9	62.6	46.2	34.8	21.9	16.8	15.3	15.3	16.8	17.2
50°	1440.8	762.9	57.9	43.0	31.3	18.4	14.1	12.9	13.3	14.9	15.3
52.5°	1596.5	818.0	53.6	40.3	27.4	14.9	11.7	11.0	11.3	12.9	13.3
55°	1730.7	866.2	48.5	37.6	22.3	12.1	9.8	9.4	9.8	11.7	11.7
57.5°	1847.7	912.3	43.8	33.3	17.6	9.8	7.8	7.8	8.6	10.6	11.0
60°	2003.0	985.1	39.9	28.2	13.3	7.4	6.3	6.7	7.8	9.4	9.8
62.5°	2278.0	1108.7	34.8	23.5	9.8	5.9	5.1	5.5	7.0	9.0	9.4
65°	2622.3	1225.7	28.9	19.6	7.4	4.3	3.9	5.1	7.0	9.0	9.4
67.5°	2587.1	1066.1	22.7	15.6	5.5	3.5	3.1	4.7	6.7	9.0	9.4
70°	2098.1	747.2	16.8	10.6	4.3	3.1	3.1	4.7	6.7	8.6	9.0
72.5°	1455.3	415.9	12.9	7.0	3.9	3.1	2.7	4.3	6.3	8.6	9.0
75°	692.5	127.5	10.2	5.1	3.5	2.7	2.3	4.3	6.3	8.6	9.0
77.5°	133.0	32.5	8.2	4.3	3.1	2.7	2.3	3.9	6.3	8.2	8.6
80°	45.0	14.5	6.7	3.9	3.1	2.7	2.3	3.9	5.9	7.8	8.2
82.5°	24.6	8.2	5.9	3.5	3.1	2.3	2.0	3.5	5.5	7.8	8.2
85°	19.2	5.9	4.7	3.5	3.1	2.3	2.0	3.5	5.5	7.4	7.8
87.5°	9.8	4.3	3.9	3.5	3.1	2.3	2.0	3.1	5.1	7.0	7.8
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)