

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: P195589

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195589  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24258)  
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-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 5000K, 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE II SPILL  
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4983 lumens  
Efficiency: N/A  
Efficacy: 84.5 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): 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

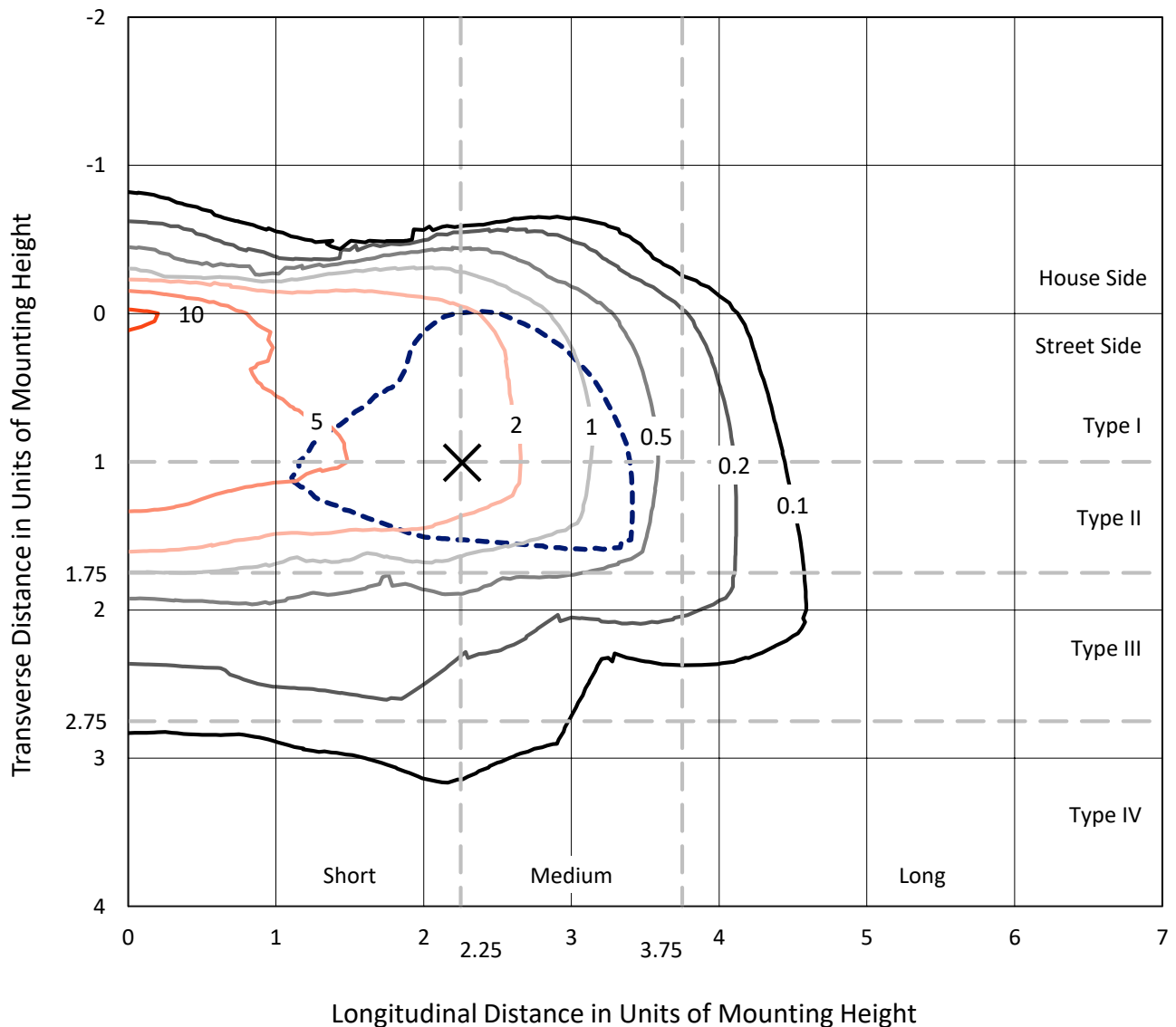


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### Iso-Footcandle Lines of Horizontal Illumination

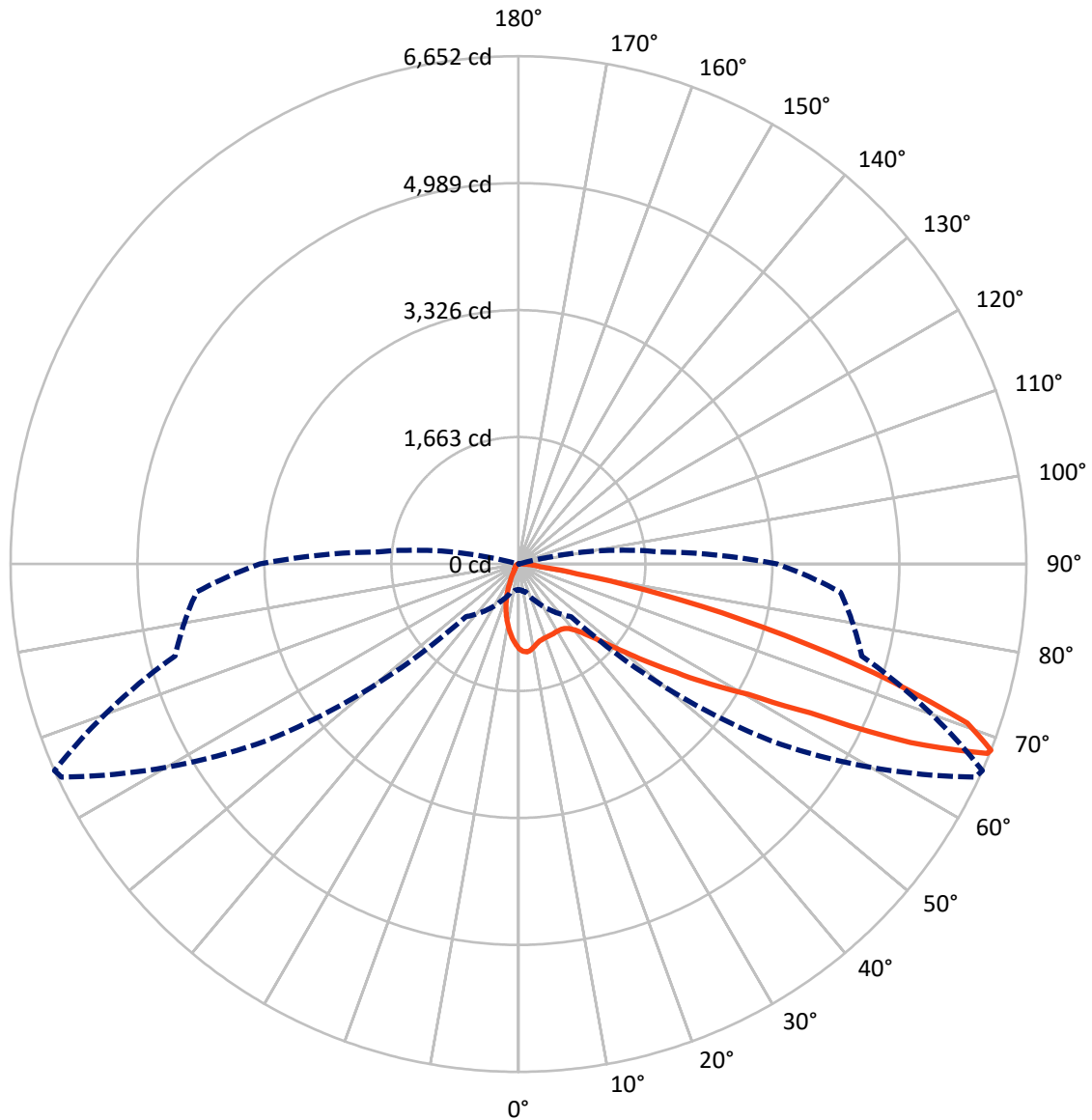
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11.1 fc  
 Type II - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral    - - - Horizontal Cone Through 68-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	504.7	0.0	504.7
	% Fixture	10.1	0.0	10.1
<b>Street Side</b>	Lumens	4478.3	0.0	4478.3
	% Fixture	89.9	0.0	89.9
<b>Total</b>	Lumens	4983.0	0.0	4983.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	91.0	1.8
10°-20°	195.8	3.9
20°-30°	283.8	5.7
30°-40°	434.4	8.7
40°-50°	743.0	14.9
50°-60°	1162.2	23.3
60°-70°	1338.3	26.9
70°-80°	669.7	13.4
80°-90°	64.9	1.3
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°	4983.0	100.0
0°-180°	4983.0	100.0

**Coefficient of Utilization**



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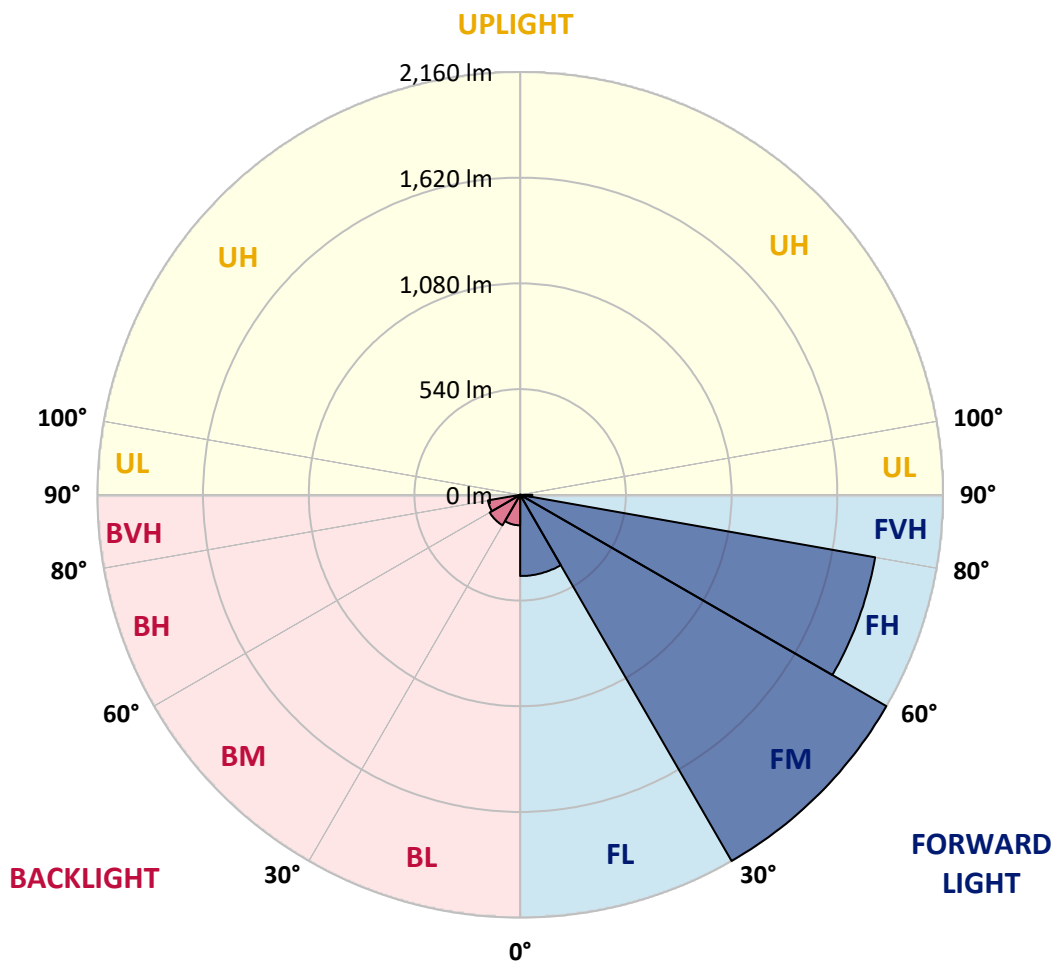
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	414.8	8.3			
FM	(30°-60°)	2159.9	43.3			
FH	(60°-80°)	1841.2	36.9			G2/5000
FVH	(80°-90°)	62.4	1.3			G1/100
BL	(0°-30°)	155.8	3.1	B1/500		
BM	(30°-60°)	179.7	3.6	B0/220		
BH	(60°-80°)	166.8	3.3	B1/500		G1/500
BVH	(80°-90°)	2.5	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 II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	1110.2	1110.2	1110.2	1110.2	1110.2	1110.2	1110.2	1110.2	1110.2	1110.2	1110.2
2.5°	1167.7	1168.5	1168.1	1169.2	1168.5	1162.6	1156.3	1143.0	1144.2	1127.0	1107.8
5°	1085.5	1092.2	1098.8	1105.5	1121.5	1135.6	1152.4	1156.3	1156.3	1141.5	1113.3
7.5°	1001.8	1002.2	1009.6	1018.6	1040.1	1066.0	1105.1	1140.3	1141.1	1145.0	1114.1
10°	938.8	940.8	945.9	955.6	977.2	1002.6	1046.4	1101.6	1105.9	1134.8	1106.3
12.5°	889.9	892.3	897.8	909.1	928.7	954.9	1001.0	1064.0	1069.9	1125.0	1103.9
15°	852.4	855.5	859.8	871.2	892.3	920.1	970.5	1039.0	1046.0	1121.1	1111.3
17.5°	836.7	836.7	836.3	844.2	865.3	893.5	946.3	1025.7	1034.7	1124.2	1123.9
20°	843.4	842.2	834.0	832.0	844.9	873.1	927.1	1017.1	1027.2	1130.1	1139.1
22.5°	878.6	876.2	857.9	842.6	838.7	857.5	914.2	1011.2	1023.3	1142.2	1159.5
25°	953.3	946.3	920.8	886.4	855.5	853.6	905.2	1008.1	1021.0	1156.3	1181.8
27.5°	1050.3	1048.4	1007.7	961.5	902.1	866.5	902.4	1005.7	1018.6	1166.5	1199.7
30°	1170.8	1171.6	1124.6	1064.4	974.4	902.8	911.1	1004.5	1017.8	1167.3	1207.6
32.5°	1295.2	1296.0	1256.9	1192.3	1073.4	965.4	935.3	1010.0	1022.2	1164.1	1207.2
35°	1414.9	1416.1	1392.6	1340.6	1205.6	1052.3	981.1	1028.8	1037.4	1166.1	1206.4
37.5°	1566.3	1571.0	1542.0	1493.5	1371.5	1179.8	1055.8	1066.7	1073.8	1182.1	1212.3
40°	1824.5	1818.2	1735.3	1653.1	1551.4	1335.1	1163.8	1132.1	1134.4	1223.6	1234.6
42.5°	2125.3	2117.5	1975.5	1833.8	1736.4	1522.5	1301.8	1232.2	1231.8	1293.2	1283.1
45°	2384.2	2379.5	2230.1	2041.2	1941.4	1729.4	1472.0	1376.6	1371.9	1413.7	1371.5
47.5°	2568.1	2564.2	2451.1	2261.8	2178.5	1957.1	1684.4	1573.3	1563.5	1571.4	1515.0
50°	2586.1	2581.8	2542.3	2420.6	2455.4	2291.1	1946.9	1831.1	1818.6	1806.5	1732.1
52.5°	2417.9	2417.5	2438.2	2430.4	2649.5	2721.0	2268.8	2149.9	2135.1	2104.2	2030.2
55°	2074.0	2072.1	2150.7	2264.9	2645.2	3164.6	2759.8	2529.4	2509.8	2448.0	2351.0
57.5°	1515.4	1505.3	1669.6	1911.7	2459.3	3358.7	3539.4	3000.7	2968.3	2772.3	2622.9
60°	836.7	840.6	1051.9	1338.6	2019.3	3320.3	4256.8	3550.3	3465.1	3052.0	2901.4
62.5°	469.0	478.8	636.1	870.0	1287.4	3009.3	4641.7	4496.2	4290.8	3378.2	3253.4
65°	354.8	360.7	439.7	671.3	811.7	2103.0	4703.1	5818.8	5641.6	3872.7	3814.0
67.5°	334.1	338.8	377.5	556.6	739.3	1090.6	4240.8	6601.1	6623.4	4547.1	4248.2
68°	336.4	342.3	381.0	535.5	738.2	975.6	4043.6	6605.1	6652.4	4655.8	4233.3
70°	309.0	310.6	402.9	525.4	715.5	768.7	2925.2	6152.5	6237.3	4785.3	3842.9
72.5°	118.1	118.5	180.7	454.9	749.5	773.0	1473.6	4862.7	4867.0	4164.5	2996.0
75°	61.4	51.6	56.7	142.4	715.9	753.4	739.3	3320.3	3299.6	2816.5	1835.8
77.5°	42.2	36.0	37.9	49.3	297.7	753.0	534.0	1909.3	1905.0	1198.2	523.8
80°	23.9	20.7	22.7	41.5	104.4	706.9	497.6	820.7	773.4	210.5	84.9
82.5°	12.1	10.2	12.1	34.8	64.9	444.8	483.9	321.9	286.7	50.1	55.2
85°	3.1	3.1	5.9	24.3	40.3	145.9	433.8	232.4	208.9	21.9	39.1
87.5°	0.8	0.4	2.3	9.0	14.5	31.7	240.6	129.5	111.5	11.3	22.7
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°	1110.2	1110.2	1110.2	1110.2	1110.2	1110.2	1110.2	1110.2	1110.2	1110.2	1110.2
2.5°	1100.0	1089.0	1067.5	1043.3	1026.1	1007.3	996.3	983.0	972.9	963.9	970.5
5°	1096.1	1075.0	1027.2	973.6	928.7	885.6	853.6	823.0	800.0	785.5	791.4
7.5°	1085.9	1054.6	977.2	893.5	819.9	750.7	694.3	643.9	604.8	583.6	590.3
10°	1068.7	1024.5	920.4	804.3	701.4	603.6	519.9	444.8	388.0	361.4	367.7
12.5°	1056.2	997.9	861.8	718.2	582.9	444.0	332.9	246.8	202.6	176.0	178.4
15°	1050.7	977.2	807.0	627.5	453.4	285.2	179.9	130.3	115.0	109.5	109.9
17.5°	1051.5	960.7	755.0	533.2	322.7	163.9	110.3	99.4	97.0	95.8	95.8
20°	1053.4	944.3	701.0	435.0	206.5	105.6	91.9	88.4	87.2	85.7	86.1
22.5°	1059.3	931.8	646.6	336.4	127.1	86.1	81.4	78.2	76.3	73.9	74.3
25°	1068.3	922.4	593.0	242.1	89.6	75.1	70.8	66.5	63.0	60.2	60.6
27.5°	1073.8	909.1	535.9	165.1	74.3	65.7	59.9	54.0	50.1	47.7	47.3
30°	1069.9	887.6	471.0	108.4	65.7	56.7	49.7	43.0	39.1	37.2	37.2
32.5°	1059.3	859.8	399.4	79.0	58.3	48.9	40.3	34.4	31.7	30.5	30.9
35°	1047.2	830.9	323.1	66.9	52.4	41.5	32.9	28.2	27.0	26.6	26.6
37.5°	1040.5	805.8	250.0	60.6	46.9	34.4	27.0	24.3	23.1	23.1	23.1
40°	1048.0	786.7	185.0	55.9	41.5	28.6	22.7	20.7	20.3	20.3	20.3
42.5°	1079.7	780.0	135.3	52.0	36.0	23.9	19.6	18.0	17.6	18.0	18.0
45°	1141.5	794.5	102.5	48.1	30.9	19.6	16.8	15.6	15.6	16.0	16.0
47.5°	1246.3	831.6	84.1	44.2	25.8	16.4	14.5	13.7	13.7	14.1	14.1
50°	1409.0	900.5	75.5	39.9	21.5	14.1	12.1	11.7	11.7	12.1	12.5
52.5°	1656.3	1031.5	71.2	35.6	17.6	11.7	10.2	9.8	10.2	10.6	10.6
55°	1931.2	1199.4	66.1	31.3	14.9	9.8	8.2	8.2	8.6	9.4	9.4
57.5°	2187.5	1361.3	61.4	25.8	12.9	7.8	6.7	6.7	7.4	8.2	8.2
60°	2458.2	1520.1	55.2	20.7	11.0	6.3	5.5	5.5	6.7	7.4	7.8
62.5°	2792.6	1704.8	46.9	16.4	8.6	4.7	3.9	5.1	6.3	7.4	7.4
65°	3276.1	1934.4	36.8	12.9	6.7	3.5	3.1	4.7	5.9	7.0	7.4
67.5°	3451.8	1905.0	27.8	10.6	5.1	2.7	2.7	4.3	5.9	7.0	7.0
68°	3387.6	1840.9	26.6	10.2	4.7	2.7	2.7	4.3	5.9	7.0	7.0
70°	2951.8	1504.9	21.9	7.8	3.9	2.3	2.3	3.9	5.9	6.7	7.0
72.5°	2210.2	999.9	18.8	5.1	3.5	2.3	2.0	3.9	5.5	6.7	6.7
75°	1267.8	415.0	16.0	3.9	3.1	2.0	2.0	3.5	5.5	6.7	6.7
77.5°	358.3	97.0	12.9	3.1	2.7	2.0	1.6	3.5	5.1	6.3	6.3
80°	65.7	28.9	10.2	2.7	2.3	2.0	1.6	3.5	5.1	6.3	6.3
82.5°	43.4	13.7	7.4	2.7	2.3	2.0	1.6	3.1	4.7	5.9	5.9
85°	32.5	9.8	4.7	2.7	2.3	2.0	1.6	3.1	4.7	5.9	5.9
87.5°	18.0	4.3	3.5	3.1	2.7	2.0	1.6	2.7	4.3	5.5	5.5
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)