

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: P196171

Luminaire Tested: **NAV-AF-01-D-UNV-SL4-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196171
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24285)
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-SL4-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 4000K, 1200mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE IV SPILL
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5585.3 lumens
Efficiency: N/A
Efficacy: 83.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G2

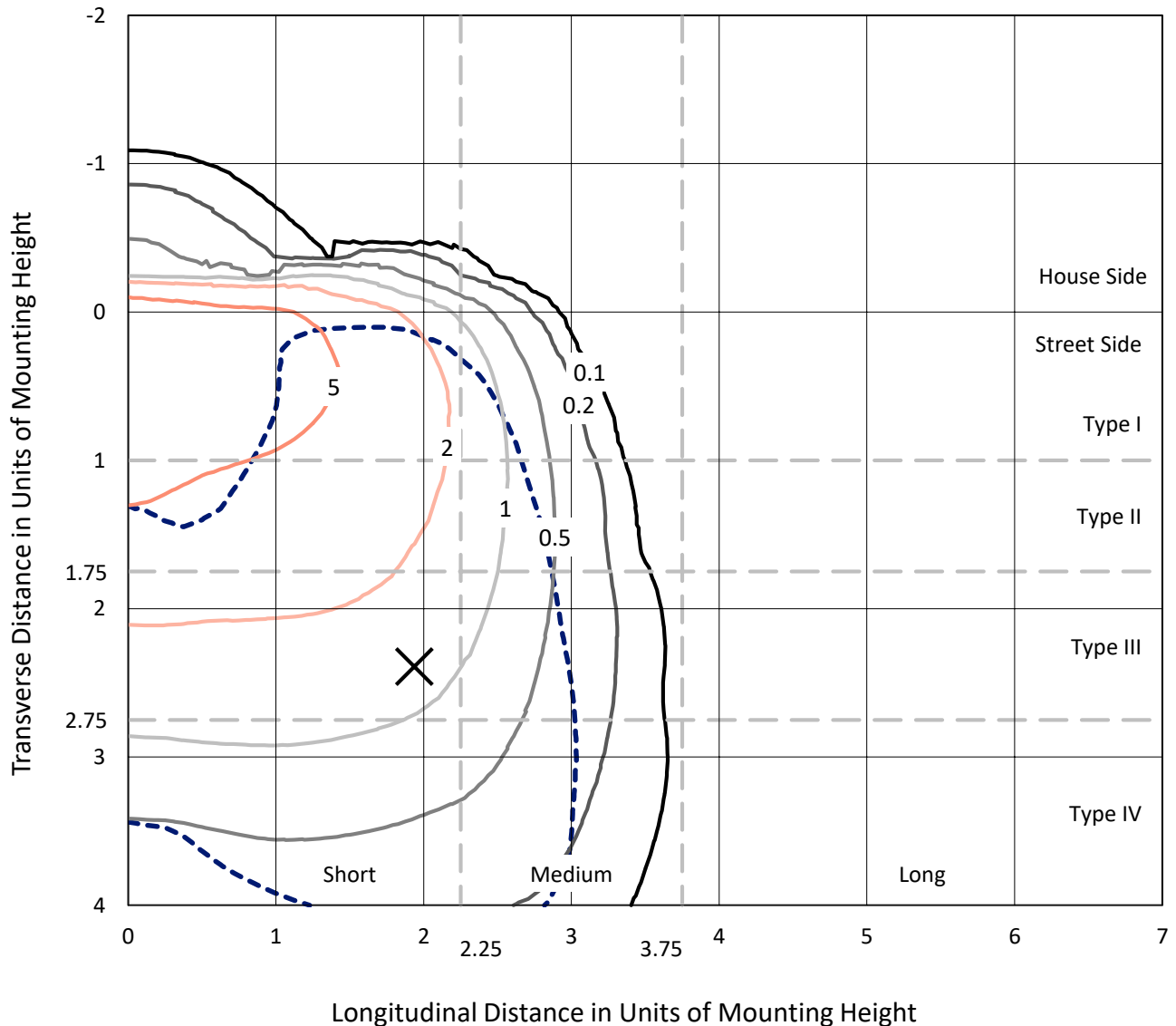
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P196171
 CATALOG NUMBER: NAV-AF-01-D-UNV-SL4-1200-HSS

Iso-Footcandle Lines of Horizontal Illumination

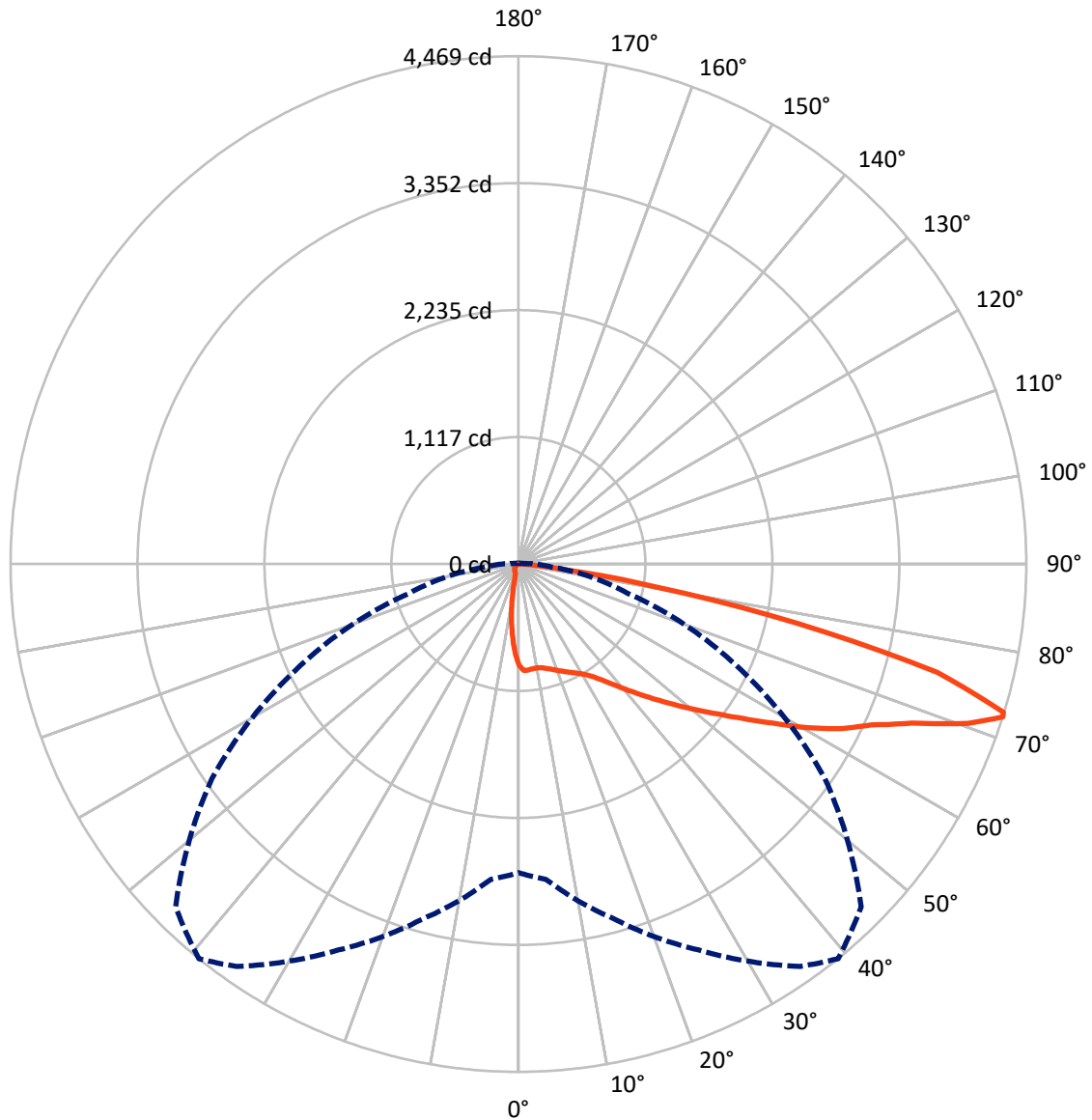
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.4 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P196171
CATALOG NUMBER: NAV-AF-01-D-UNV-SL4-1200-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral - - - Horizontal Cone Through 72-Deg Vertical

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CATALOG NUMBER: NAV-AF-01-D-UNV-SL4-1200-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	366.1	0.0	366.1
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	5219.3	0.0	5219.3
	% Fixture	93.4	0.0	93.4
Total	Lumens	5585.3	0.0	5585.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.7	1.3
10°-20°	176.0	3.2
20°-30°	292.4	5.2
30°-40°	466.0	8.3
40°-50°	769.2	13.8
50°-60°	1161.6	20.8
60°-70°	1513.1	27.1
70°-80°	1022.4	18.3
80°-90°	112.0	2.0
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°	5585.3	100.0
0°-180°	5585.3	100.0

Coefficient of Utilization



REPORT NUMBER: P196171

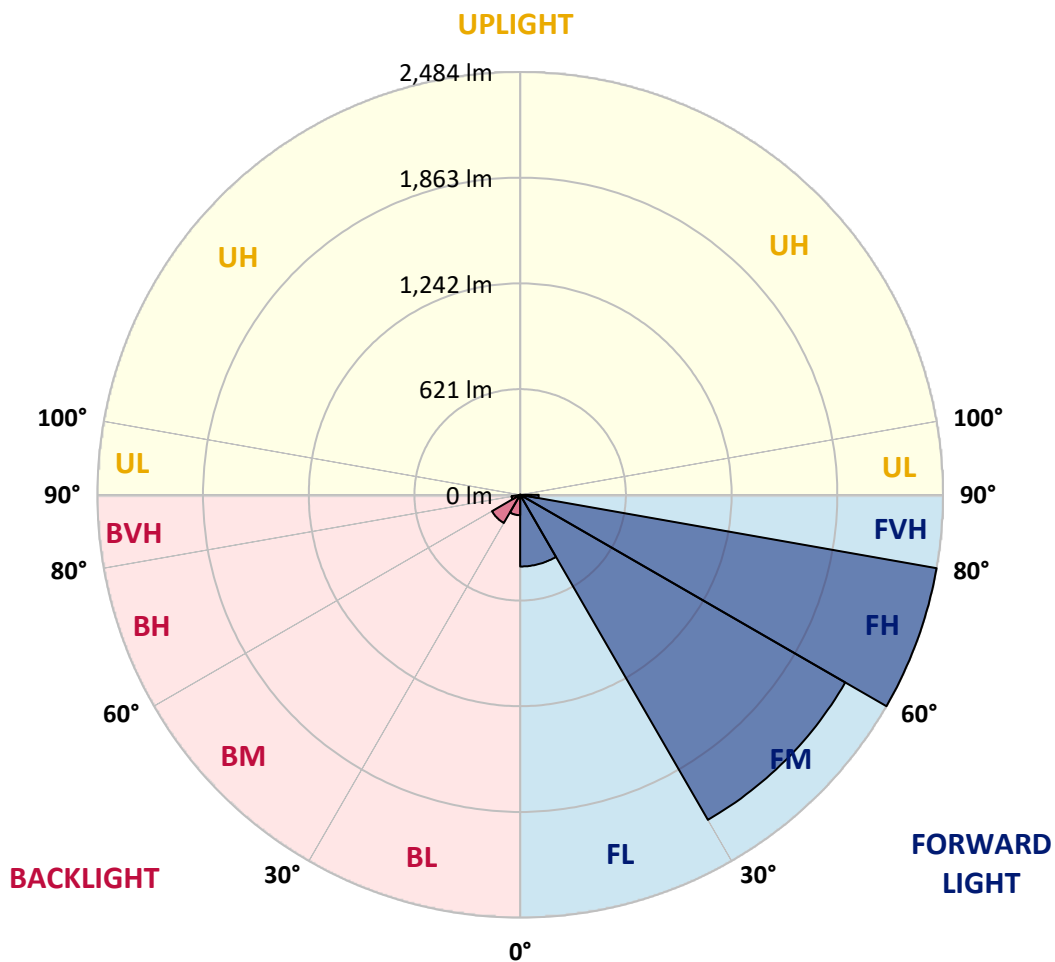
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	421.3	7.5			
FM	(30°-60°)	2205.2	39.5			
FH	(60°-80°)	2484.1	44.5			G2/5000
FVH	(80°-90°)	108.8	1.9			G2/225
BL	(0°-30°)	119.9	2.1	B1/500		
BM	(30°-60°)	191.5	3.4	B0/220		
BH	(60°-80°)	51.5	0.9	B0/110		G0/110
BVH	(80°-90°)	3.2	0.1			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 IV Short





REPORT NUMBER: P196171

CATALOG NUMBER: NAV-AF-01-D-UNV-SL4-1200-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	894.0	894.0	894.0	894.0	894.0	894.0	894.0	894.0	894.0	894.0	894.0
2.5°	952.0	953.7	951.4	947.6	941.8	938.4	933.4	922.9	909.8	898.4	885.2
5°	959.4	960.2	957.6	950.1	941.4	936.5	930.4	919.0	905.4	889.6	865.8
7.5°	961.6	961.2	958.1	948.9	935.3	929.0	918.5	904.5	890.5	876.0	849.2
10°	960.8	960.8	958.5	949.7	934.4	928.6	916.8	901.8	884.3	869.8	841.3
12.5°	957.6	959.4	958.1	953.3	941.8	937.4	926.9	912.0	895.3	880.4	850.1
15°	961.6	964.2	966.9	965.1	958.5	954.5	944.9	929.6	916.0	900.1	867.7
17.5°	977.4	983.1	989.3	989.7	982.6	975.6	964.6	948.9	935.7	921.2	886.1
20°	1007.2	1011.6	1023.1	1025.2	1011.2	1001.1	985.7	967.3	954.1	941.8	903.2
22.5°	1051.6	1056.4	1065.6	1062.5	1038.9	1027.0	1007.7	986.6	973.0	966.0	922.9
25°	1118.8	1120.1	1122.3	1108.7	1069.6	1056.4	1032.7	1009.0	998.0	997.2	951.0
27.5°	1197.8	1199.6	1189.9	1159.6	1103.9	1086.7	1060.0	1038.4	1033.2	1039.7	986.6
30°	1288.3	1288.7	1261.9	1212.7	1143.4	1124.5	1096.8	1073.1	1078.0	1094.1	1032.3
32.5°	1380.9	1376.5	1339.7	1275.5	1197.4	1174.6	1150.8	1127.1	1141.2	1174.1	1099.1
35°	1465.7	1463.8	1420.5	1345.8	1267.6	1247.4	1230.3	1205.2	1228.2	1281.7	1189.9
37.5°	1550.4	1549.1	1499.4	1421.7	1354.1	1339.7	1326.9	1307.5	1344.9	1423.5	1311.5
40°	1643.9	1641.7	1580.7	1506.1	1454.6	1446.8	1439.3	1431.0	1494.6	1604.0	1463.0
42.5°	1759.4	1749.8	1666.7	1597.8	1565.3	1567.5	1568.0	1576.3	1676.0	1818.7	1641.7
45°	1891.9	1870.5	1753.2	1696.2	1686.9	1700.1	1713.2	1748.0	1887.1	2065.8	1839.3
47.5°	2020.6	1986.0	1852.9	1802.0	1820.9	1848.1	1879.7	1947.3	2124.3	2324.5	2018.5
50°	2131.3	2095.7	1951.7	1909.5	1969.7	2010.1	2066.3	2168.7	2374.6	2543.2	2131.3
52.5°	2218.3	2190.1	2056.2	2028.1	2134.8	2190.1	2278.4	2412.7	2610.8	2687.2	2210.3
55°	2282.3	2268.3	2156.3	2160.3	2318.3	2398.2	2508.1	2660.0	2810.1	2799.1	2269.6
57.5°	2354.8	2343.8	2261.2	2316.2	2539.2	2642.4	2769.2	2891.4	2955.0	2889.1	2327.5
60°	2429.0	2432.5	2388.6	2504.9	2812.3	2926.5	3037.1	3067.4	3079.3	2980.5	2388.6
62.5°	2485.2	2500.1	2504.1	2708.7	3092.5	3189.9	3237.7	3216.3	3213.6	3103.0	2383.8
65°	2549.7	2588.8	2653.8	2932.2	3347.1	3411.2	3445.5	3476.6	3410.7	3139.4	2149.3
67.5°	2661.3	2722.7	2869.0	3206.1	3641.3	3736.1	3833.2	3800.3	3440.2	2769.2	1637.3
70°	2811.4	2886.5	3144.7	3564.0	4040.5	4199.3	4280.5	3774.3	2920.7	1913.5	863.7
72°	2716.5	2784.7	3229.9	3746.7	4323.2	4469.0	4265.7	3292.3	2117.2	991.9	289.4
72.5°	2624.4	2694.7	3202.7	3744.5	4351.3	4462.8	4168.6	3102.1	1873.5	771.9	199.4
75°	1820.9	1909.5	2745.6	3366.0	3929.4	3806.8	3189.5	1878.3	678.8	132.6	65.9
77.5°	941.4	1009.9	1665.5	2378.5	2738.5	2508.1	1885.0	814.9	187.9	70.3	43.5
80°	583.5	617.4	779.0	1171.9	1422.6	1244.3	831.7	329.3	120.3	41.7	34.7
82.5°	302.1	328.0	490.4	472.9	525.6	436.9	306.9	275.8	74.2	25.9	35.6
85°	99.2	105.4	301.3	314.4	224.8	151.1	136.2	263.0	21.5	16.7	30.3
87.5°	13.2	15.3	105.8	180.0	110.7	68.5	81.6	92.7	7.5	9.2	8.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P196171

CATALOG NUMBER: NAV-AF-01-D-UNV-SL4-1200-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	894.0	894.0	894.0	894.0	894.0	894.0	894.0	894.0	894.0	894.0	894.0
2.5°	876.4	870.7	852.7	834.7	814.1	795.1	780.2	770.6	775.0	760.5	762.7
5°	851.4	836.9	797.4	754.7	708.7	665.6	631.4	605.9	601.1	579.2	580.0
7.5°	827.3	803.5	739.4	669.1	592.8	530.8	474.6	425.4	408.0	389.9	379.4
10°	814.1	781.5	690.7	588.4	480.8	389.9	310.9	249.0	223.0	204.2	195.0
12.5°	818.1	775.0	654.2	515.1	373.7	258.2	175.6	130.4	114.6	105.8	102.7
15°	831.1	776.3	621.3	443.4	271.8	156.3	103.2	88.3	87.0	86.5	86.0
17.5°	843.4	777.6	586.6	368.9	181.8	99.6	83.0	81.6	81.6	81.6	81.6
20°	856.2	778.1	548.4	290.6	119.5	81.6	78.2	77.2	78.2	78.2	78.2
22.5°	871.1	781.1	511.6	214.7	88.3	76.8	74.7	74.2	74.7	74.7	74.2
25°	889.6	787.7	471.6	153.6	79.9	73.8	71.6	71.1	71.6	71.1	71.1
27.5°	914.2	796.5	425.0	110.2	76.4	70.7	68.5	68.5	68.5	68.0	68.0
30°	945.8	807.0	362.6	87.0	72.9	67.6	65.9	65.9	65.5	65.0	65.0
32.5°	991.0	824.2	294.6	78.6	68.9	63.6	61.9	62.4	61.9	61.5	61.1
35°	1055.1	850.9	227.4	74.2	65.0	59.7	58.0	58.0	58.0	57.1	57.1
37.5°	1146.0	891.8	170.3	69.8	61.1	55.8	53.6	53.6	53.1	52.3	52.7
40°	1258.4	943.2	123.4	65.9	57.1	51.4	49.6	48.7	47.9	47.0	47.0
42.5°	1393.7	993.2	92.7	61.9	53.1	47.9	45.6	44.8	43.1	42.1	41.7
45°	1545.2	1046.4	76.8	57.1	48.7	43.9	42.1	40.4	38.2	36.9	36.4
47.5°	1672.9	1078.8	68.5	52.3	44.4	40.0	38.2	35.6	32.9	32.0	32.0
50°	1749.8	1065.2	61.5	47.5	40.0	36.0	33.9	30.3	28.5	27.6	27.2
52.5°	1792.7	1024.8	55.8	43.5	36.0	31.6	28.5	25.5	24.6	23.7	23.7
55°	1822.2	966.4	49.6	39.5	32.5	27.6	24.1	22.0	21.1	20.7	20.2
57.5°	1850.3	895.3	43.9	36.0	28.9	24.6	20.7	19.7	18.0	17.6	17.6
60°	1858.6	797.4	38.7	32.0	25.9	21.5	18.0	16.7	14.9	14.5	14.5
62.5°	1752.3	634.4	34.3	27.2	22.8	18.4	15.9	14.0	12.3	12.3	12.3
65°	1464.4	430.8	29.5	23.7	20.2	15.9	13.6	11.5	10.5	10.5	10.5
67.5°	1020.0	240.2	25.1	20.2	17.1	13.2	11.5	9.6	9.2	9.6	9.6
70°	459.7	95.2	21.1	16.7	14.0	10.9	9.6	8.4	9.2	9.2	9.2
72°	137.9	50.9	17.6	13.6	11.5	9.6	8.4	7.9	8.8	9.2	9.2
72.5°	102.3	45.6	16.7	13.2	11.5	9.2	7.9	7.9	8.8	9.2	9.2
75°	52.7	31.2	12.7	9.6	8.4	7.5	6.5	7.5	8.8	8.8	8.8
77.5°	41.2	25.5	10.5	7.5	7.1	6.5	6.1	7.1	7.9	7.9	7.9
80°	38.7	16.7	8.4	7.1	6.1	5.7	5.7	6.1	7.1	7.5	7.5
82.5°	39.1	13.6	7.5	6.5	5.7	5.3	5.3	5.7	6.5	7.1	7.1
85°	25.1	9.2	6.5	5.7	5.3	4.8	4.8	5.3	6.1	6.5	6.5
87.5°	8.4	7.1	5.7	5.3	4.4	4.4	4.4	4.4	5.3	5.7	6.1
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)