

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: P270272

Luminaire Tested: **NAV-AF-01-D-UNV-SL2-7027-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270272
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-SL2-7027-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 2700K, 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: 4329.3 lumens
Efficiency: N/A
Efficacy: 73.4 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 - G1

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

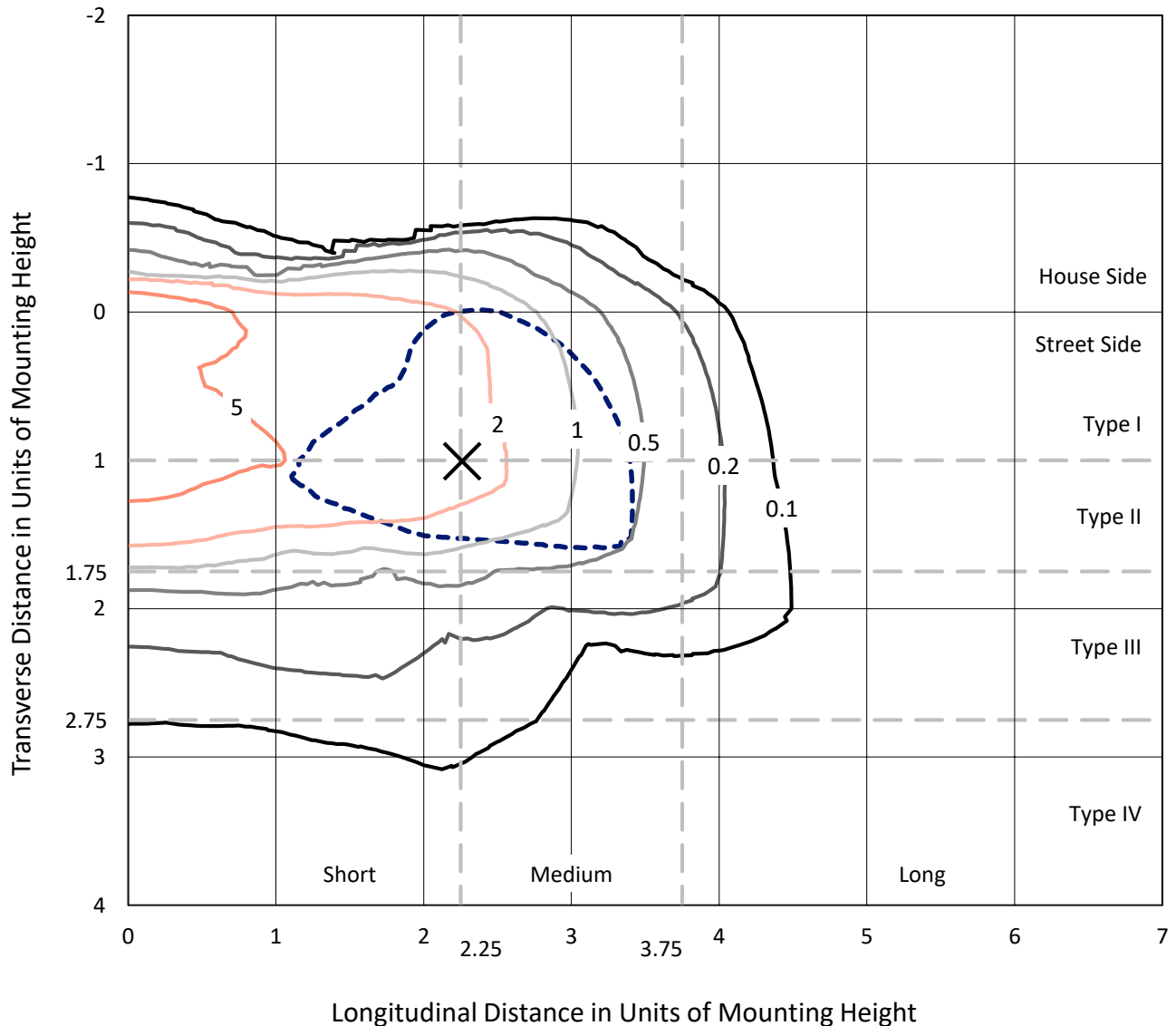


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

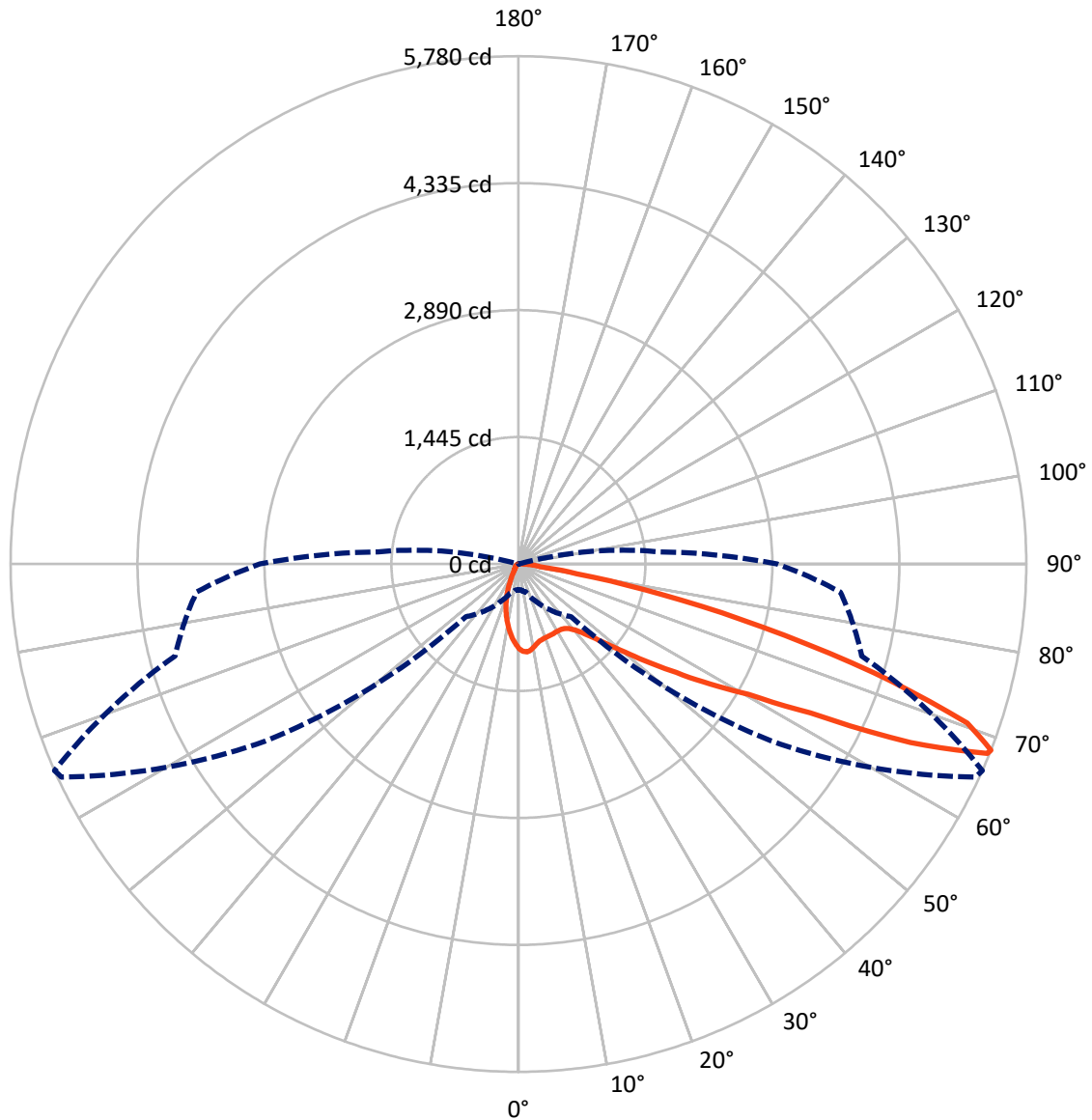


Based on 10 foot mounting height. Maximum calculated value = 9.6 fc
 Type II - Medium - Semi-Cutoff

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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
House Side	Lumens	438.5	0.0	438.5
	% Fixture	10.1	0.0	10.1
Street Side	Lumens	3890.8	0.0	3890.8
	% Fixture	89.9	0.0	89.9
Total	Lumens	4329.3	0.0	4329.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.1	1.8
10°-20°	170.1	3.9
20°-30°	246.5	5.7
30°-40°	377.4	8.7
40°-50°	645.5	14.9
50°-60°	1009.8	23.3
60°-70°	1162.7	26.9
70°-80°	581.8	13.4
80°-90°	56.3	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°	4329.3	100.0
0°-180°	4329.3	100.0

Coefficient of Utilization



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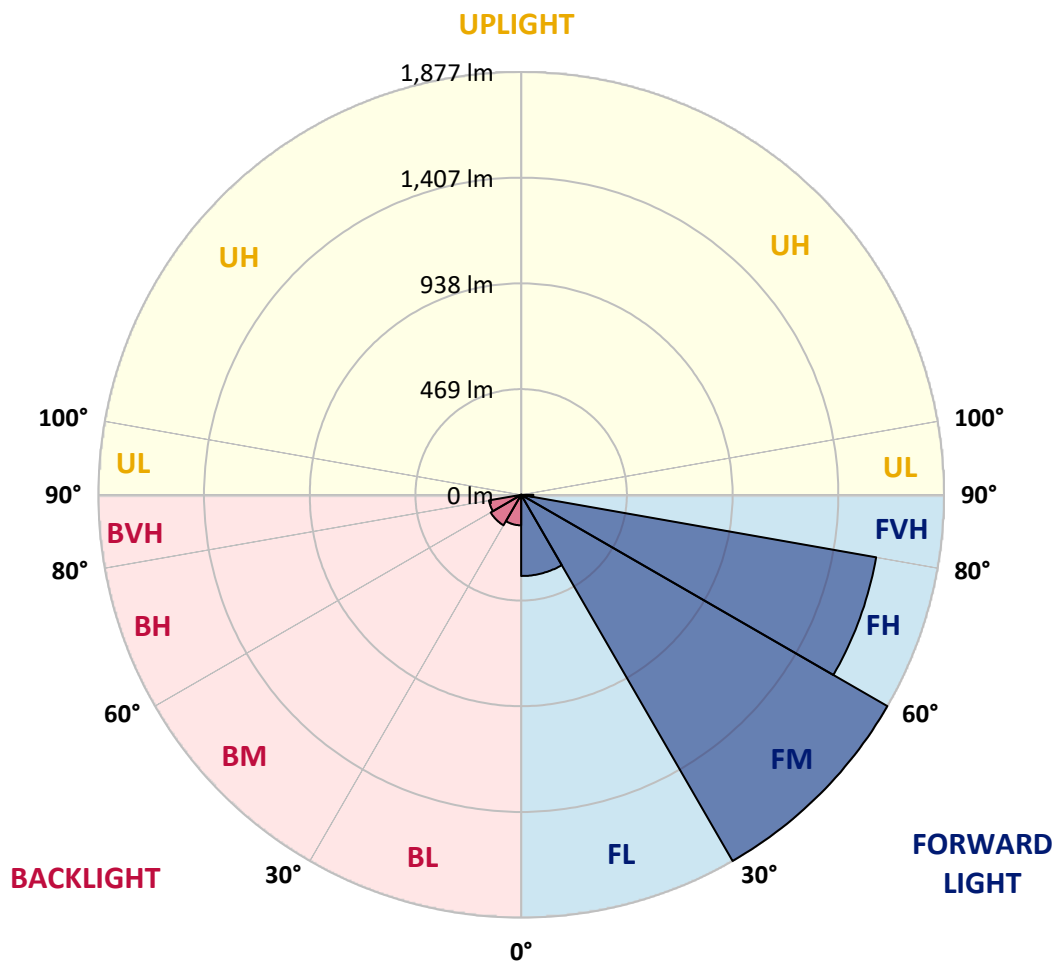
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	360.4	8.3			
FM	(30°-60°)	1876.5	43.3			
FH	(60°-80°)	1599.7	36.9			G1/1800
FVH	(80°-90°)	54.2	1.3			G1/100
BL	(0°-30°)	135.3	3.1	B1/500		
BM	(30°-60°)	156.2	3.6	B0/220		
BH	(60°-80°)	144.9	3.3	B1/500		G1/500
BVH	(80°-90°)	2.1	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-G1

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	964.5	964.5	964.5	964.5	964.5	964.5	964.5	964.5	964.5	964.5	964.5
2.5°	1014.5	1015.2	1014.8	1015.9	1015.2	1010.1	1004.7	993.0	994.2	979.2	962.5
5°	943.1	948.9	954.7	960.5	974.4	986.6	1001.3	1004.7	1004.7	991.6	967.3
7.5°	870.4	870.7	877.1	885.0	903.7	926.2	960.1	990.7	991.4	994.8	968.0
10°	815.8	817.4	821.8	830.4	849.0	871.0	909.2	957.1	960.7	985.9	961.1
12.5°	773.3	775.2	780.0	789.8	806.9	829.7	869.6	924.4	929.6	977.4	959.1
15°	740.6	743.3	747.0	756.9	775.2	799.3	843.1	902.6	908.7	974.0	965.6
17.5°	727.0	727.0	726.5	733.5	751.8	776.2	822.0	891.1	898.9	976.7	976.4
20°	732.7	731.7	724.7	722.9	734.2	758.6	805.5	883.7	892.5	981.8	989.8
22.5°	763.3	761.4	745.4	732.1	728.6	745.0	794.2	878.5	889.1	992.4	1007.4
25°	828.2	822.0	800.0	770.1	743.3	741.6	786.5	875.8	887.0	1004.7	1026.8
27.5°	912.5	910.8	875.5	835.3	783.7	752.8	784.1	873.8	885.0	1013.5	1042.4
30°	1017.2	1017.9	977.0	924.7	846.7	784.4	791.5	872.8	884.3	1014.1	1049.2
32.5°	1125.2	1125.9	1092.0	1035.8	932.6	838.7	812.5	877.6	888.1	1011.4	1048.9
35°	1229.3	1230.3	1209.8	1164.7	1047.5	914.2	852.4	893.9	901.3	1013.1	1048.1
37.5°	1360.8	1364.9	1339.7	1297.6	1191.5	1025.1	917.3	926.8	932.9	1027.0	1053.3
40°	1585.1	1579.7	1507.6	1436.3	1347.8	1159.9	1011.1	983.6	985.6	1063.1	1072.5
42.5°	1846.5	1839.6	1716.3	1593.2	1508.7	1322.8	1131.1	1070.6	1070.2	1123.6	1114.7
45°	2071.4	2067.4	1937.6	1773.4	1686.7	1502.5	1278.8	1196.0	1192.0	1228.3	1191.5
47.5°	2231.2	2227.7	2129.6	1965.1	1892.6	1700.3	1463.5	1367.0	1358.4	1365.2	1316.2
50°	2246.8	2243.1	2208.8	2103.1	2133.4	1990.6	1691.5	1590.9	1579.9	1569.5	1504.9
52.5°	2100.6	2100.3	2118.4	2111.6	2301.8	2364.1	1971.2	1867.8	1855.0	1828.1	1763.9
55°	1802.0	1800.3	1868.6	1967.7	2298.1	2749.5	2397.8	2197.6	2180.5	2126.8	2042.6
57.5°	1316.6	1307.8	1450.6	1660.8	2136.7	2918.1	3075.1	2607.2	2578.9	2408.6	2278.8
60°	727.0	730.3	913.8	1163.0	1754.4	2884.7	3698.4	3084.6	3010.5	2651.5	2520.7
62.5°	407.6	415.9	552.5	755.8	1118.5	2614.5	4032.9	3906.4	3728.0	2935.0	2826.6
65°	308.3	313.4	382.0	583.2	705.2	1827.2	4086.2	5055.4	4901.5	3364.6	3313.7
67.5°	290.2	294.4	328.1	483.6	642.4	947.5	3684.5	5735.1	5754.5	3950.6	3690.9
68°	292.3	297.3	331.0	465.3	641.3	847.6	3513.1	5738.6	5779.8	4045.1	3678.0
70°	268.6	269.9	350.1	456.3	621.5	667.8	2541.5	5345.4	5419.1	4157.5	3338.8
72.5°	102.6	102.9	157.1	395.3	651.2	671.6	1280.3	4224.8	4228.6	3618.2	2603.0
75°	53.4	44.8	49.2	123.6	621.9	654.5	642.4	2884.7	2866.8	2447.1	1595.0
77.5°	36.7	31.4	33.0	42.8	258.6	654.2	464.0	1658.9	1655.1	1041.0	455.1
80°	20.8	18.1	19.8	36.0	90.8	614.1	432.4	713.1	671.9	182.8	73.8
82.5°	10.5	8.9	10.5	30.3	56.5	386.5	420.3	279.7	249.1	43.5	47.9
85°	2.8	2.8	5.1	21.1	35.0	126.8	376.8	201.8	181.5	19.0	34.0
87.5°	0.7	0.3	2.1	7.8	12.5	27.5	209.0	112.5	96.8	9.8	19.8
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°	964.5	964.5	964.5	964.5	964.5	964.5	964.5	964.5	964.5	964.5	964.5
2.5°	955.6	946.2	927.5	906.4	891.5	875.2	865.6	854.1	845.2	837.4	843.1
5°	952.4	934.0	892.5	845.9	806.9	769.5	741.6	715.1	695.0	682.4	687.6
7.5°	943.5	916.4	849.0	776.2	712.4	652.2	603.2	559.5	525.4	507.1	512.8
10°	928.5	890.1	799.8	698.7	609.4	524.4	451.7	386.5	337.1	314.0	319.4
12.5°	917.6	867.0	748.6	624.1	506.5	385.7	289.3	214.4	176.1	152.9	155.0
15°	912.9	849.0	701.1	545.1	393.8	247.8	156.3	113.1	99.9	95.2	95.5
17.5°	913.5	834.7	655.9	463.3	280.5	142.4	95.8	86.3	84.4	83.3	83.3
20°	915.3	820.4	609.1	377.9	179.4	91.7	79.9	76.8	75.7	74.4	74.7
22.5°	920.4	809.6	561.8	292.3	110.4	74.7	70.6	68.0	66.3	64.1	64.6
25°	928.2	801.4	515.3	210.4	77.9	65.2	61.5	57.9	54.7	52.3	52.7
27.5°	932.9	789.8	465.6	143.4	64.6	57.1	52.0	46.9	43.5	41.4	41.1
30°	929.6	771.1	409.2	94.1	57.1	49.2	43.2	37.4	34.0	32.2	32.2
32.5°	920.4	747.0	346.9	68.6	50.7	42.5	35.0	30.0	27.5	26.5	26.9
35°	909.9	721.9	280.7	58.1	45.5	36.0	28.6	24.4	23.4	23.0	23.0
37.5°	904.1	700.0	217.2	52.7	40.9	30.0	23.4	21.1	20.0	20.0	20.0
40°	910.5	683.5	160.7	48.6	36.0	24.9	19.8	18.1	17.6	17.6	17.6
42.5°	938.0	677.7	117.6	45.3	31.4	20.8	17.0	15.6	15.4	15.6	15.6
45°	991.6	690.3	89.0	41.9	26.9	17.0	14.6	13.7	13.7	14.0	14.0
47.5°	1082.7	722.5	73.0	38.4	22.5	14.3	12.5	11.9	11.9	12.2	12.2
50°	1224.2	782.3	65.5	34.7	18.7	12.2	10.5	10.2	10.2	10.5	10.9
52.5°	1438.9	896.1	61.9	30.9	15.4	10.2	8.9	8.5	8.9	9.2	9.2
55°	1677.9	1042.0	57.4	27.2	12.9	8.5	7.1	7.1	7.5	8.2	8.2
57.5°	1900.5	1182.7	53.4	22.5	11.1	6.7	5.7	5.7	6.5	7.1	7.1
60°	2135.7	1320.7	47.9	18.1	9.5	5.4	4.8	4.8	5.7	6.5	6.7
62.5°	2426.3	1481.1	40.9	14.3	7.5	4.1	3.5	4.4	5.4	6.5	6.5
65°	2846.4	1680.5	31.9	11.1	5.7	3.1	2.8	4.1	5.1	6.1	6.5
67.5°	2998.9	1655.1	24.2	9.2	4.4	2.3	2.3	3.8	5.1	6.1	6.1
68°	2943.1	1599.4	23.0	8.9	4.1	2.3	2.3	3.8	5.1	6.1	6.1
70°	2564.7	1307.5	19.0	6.7	3.5	2.1	2.1	3.5	5.1	5.7	6.1
72.5°	1920.2	868.8	16.3	4.4	3.1	2.1	1.6	3.5	4.8	5.7	5.7
75°	1101.5	360.6	14.0	3.5	2.8	1.6	1.6	3.1	4.8	5.7	5.7
77.5°	311.4	84.4	11.1	2.8	2.3	1.6	1.3	3.1	4.4	5.4	5.4
80°	57.1	25.2	8.9	2.3	2.1	1.6	1.3	3.1	4.4	5.4	5.4
82.5°	37.6	11.9	6.5	2.3	2.1	1.6	1.3	2.8	4.1	5.1	5.1
85°	28.1	8.5	4.1	2.3	2.1	1.6	1.3	2.8	4.1	5.1	5.1
87.5°	15.6	3.8	3.1	2.8	2.3	1.6	1.3	2.3	3.8	4.8	4.8
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)