

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: P197029

Luminaire Tested: **NAV-AF-01-D-UNV-SL2-8030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197029
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-SL2-8030-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 80 CRI, 3000K, 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: 4066 lumens
Efficiency: N/A
Efficacy: 68.9 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

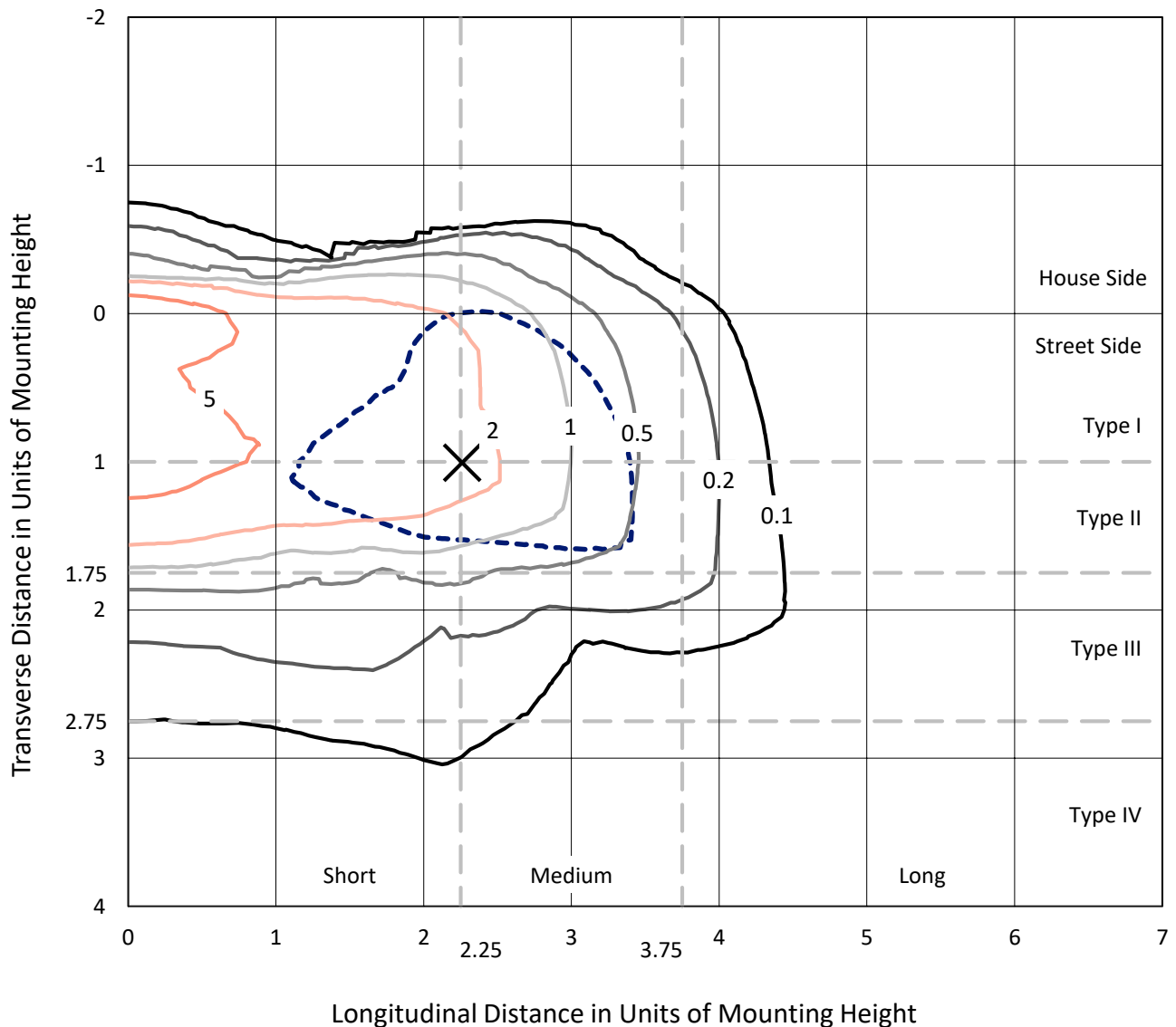


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Iso-Footcandle Lines of Horizontal Illumination

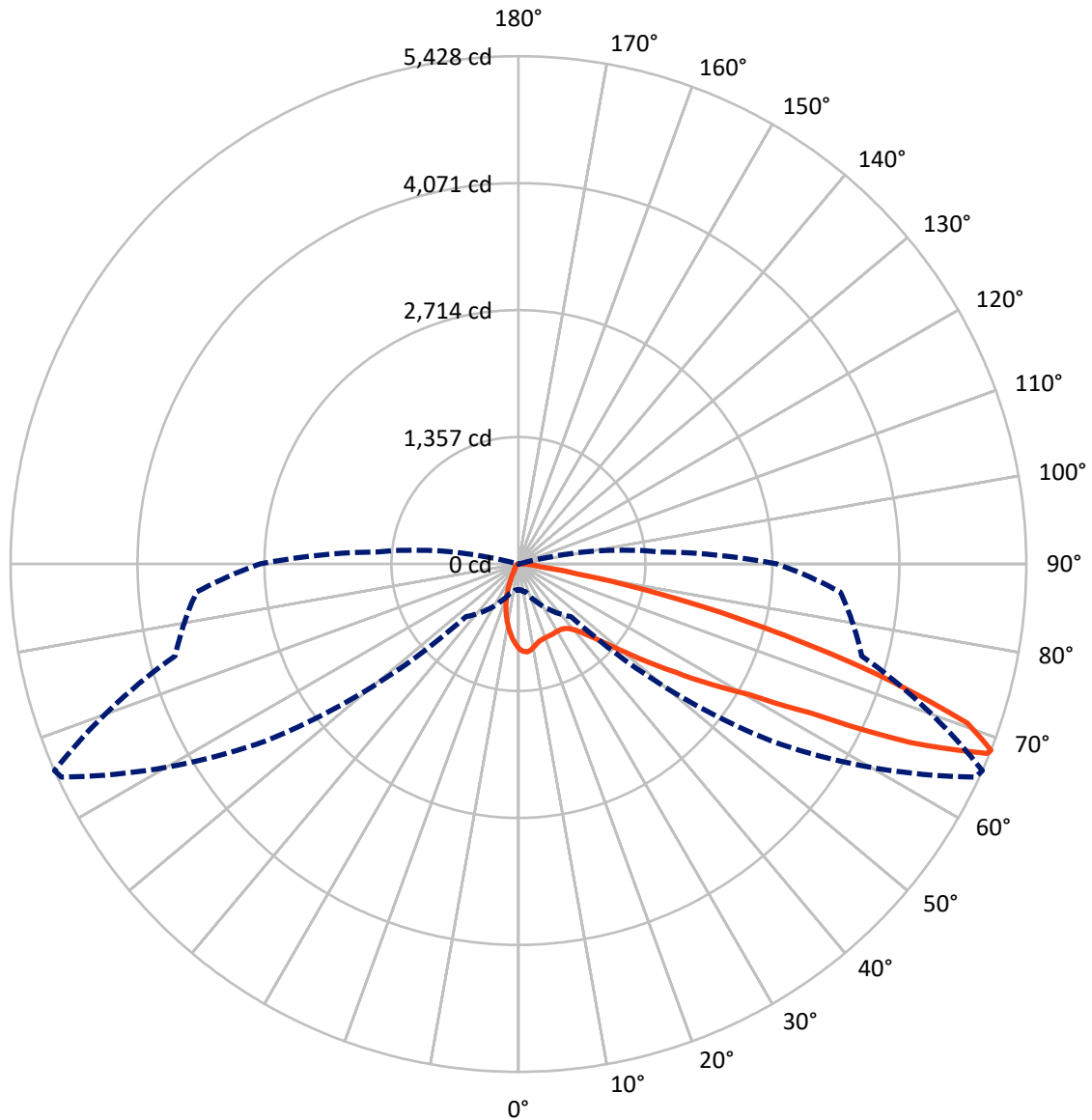
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.1 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
House Side	Lumens	411.8	0.0	411.8
	% Fixture	10.1	0.0	10.1
Street Side	Lumens	3654.2	0.0	3654.2
	% Fixture	89.9	0.0	89.9
Total	Lumens	4066.0	0.0	4066.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.3	1.8
10°-20°	159.8	3.9
20°-30°	231.5	5.7
30°-40°	354.4	8.7
40°-50°	606.3	14.9
50°-60°	948.3	23.3
60°-70°	1092.0	26.9
70°-80°	546.5	13.4
80°-90°	52.9	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°	4066.0	100.0
0°-180°	4066.0	100.0



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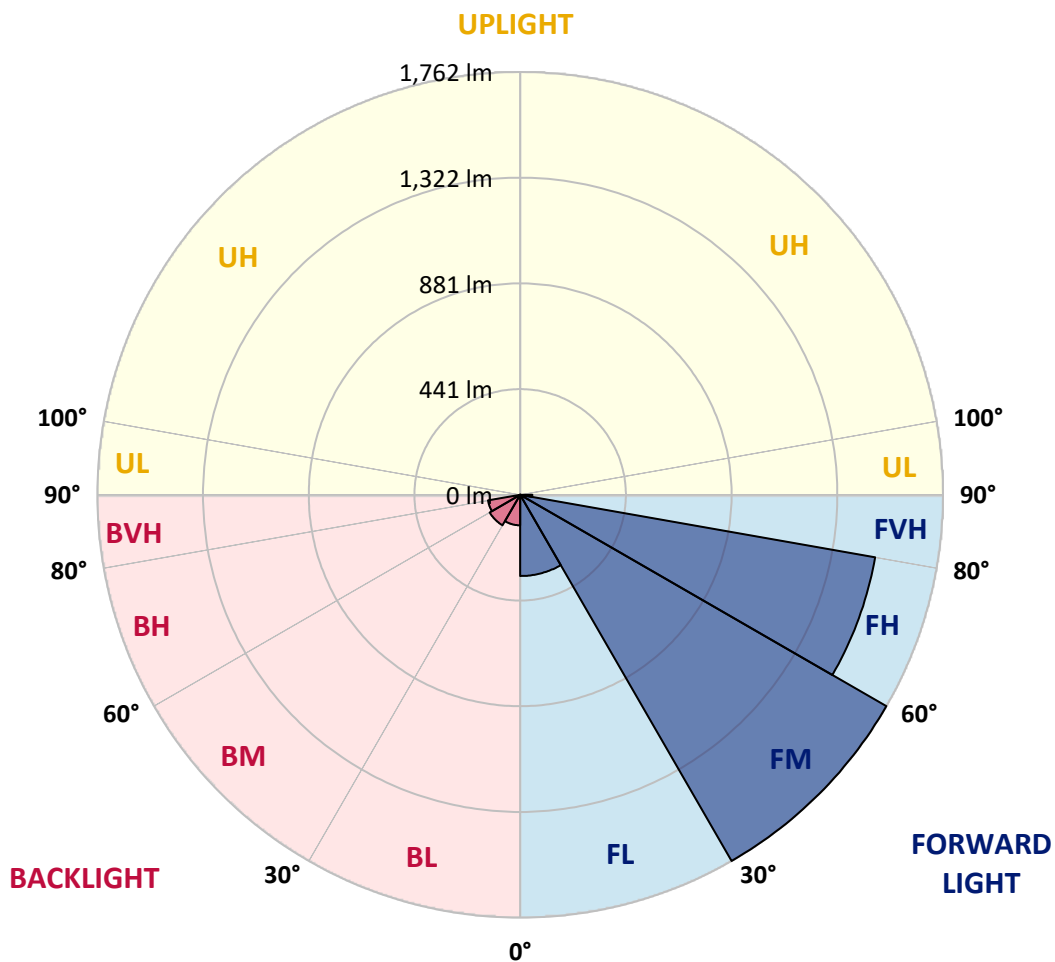
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	338.5	8.3			
FM	(30°-60°)	1762.4	43.3			
FH	(60°-80°)	1502.4	36.9			G1/1800
FVH	(80°-90°)	50.9	1.3			G1/100
BL	(0°-30°)	127.1	3.1	B1/500		
BM	(30°-60°)	146.7	3.6	B0/220		
BH	(60°-80°)	136.1	3.3	B1/500		G1/500
BVH	(80°-90°)	2.0	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°	905.9	905.9	905.9	905.9	905.9	905.9	905.9	905.9	905.9	905.9	905.9
2.5°	952.8	953.4	953.1	954.1	953.4	948.6	943.5	932.7	933.6	919.6	904.0
5°	885.8	891.2	896.6	902.0	915.1	926.6	940.3	943.5	943.5	931.4	908.4
7.5°	817.5	817.8	823.8	831.2	848.7	869.8	901.7	930.4	931.1	934.3	909.1
10°	766.1	767.7	771.8	779.8	797.3	818.1	853.8	898.8	902.4	926.0	902.7
12.5°	726.2	728.1	732.5	741.8	757.8	779.1	816.8	868.2	873.0	918.0	900.8
15°	695.5	698.1	701.6	710.8	728.1	750.7	791.9	847.8	853.5	914.8	906.8
17.5°	682.8	682.8	682.4	688.8	706.1	729.0	772.1	836.9	844.3	917.4	917.0
20°	688.2	687.2	680.5	678.9	689.5	712.4	756.5	829.9	838.2	922.1	929.5
22.5°	716.9	715.0	700.0	687.5	684.3	699.7	746.0	825.1	835.0	932.0	946.1
25°	777.9	772.1	751.4	723.3	698.1	696.5	738.6	822.6	833.1	943.5	964.3
27.5°	857.0	855.4	822.2	784.6	736.1	707.0	736.4	820.6	831.2	951.8	979.0
30°	955.3	956.0	917.7	868.5	795.1	736.7	743.4	819.7	830.5	952.5	985.3
32.5°	1056.8	1057.5	1025.6	972.9	875.9	787.8	763.2	824.2	834.0	949.9	985.0
35°	1154.5	1155.5	1136.3	1093.9	983.7	858.6	800.5	839.5	846.5	951.5	984.4
37.5°	1278.0	1281.9	1258.3	1218.7	1119.1	962.7	861.5	870.4	876.2	964.6	989.2
40°	1488.7	1483.6	1415.9	1348.9	1265.9	1089.4	949.6	923.7	925.7	998.4	1007.4
42.5°	1734.2	1727.8	1611.9	1496.4	1416.9	1242.3	1062.3	1005.5	1005.1	1055.2	1046.9
45°	1945.5	1941.6	1819.7	1665.5	1584.1	1411.1	1201.1	1123.2	1119.4	1153.6	1119.1
47.5°	2095.5	2092.3	2000.1	1845.6	1777.6	1596.9	1374.4	1283.8	1275.8	1282.2	1236.2
50°	2110.2	2106.7	2074.4	1975.2	2003.6	1869.5	1588.6	1494.1	1483.9	1474.0	1413.4
52.5°	1972.9	1972.6	1989.5	1983.1	2161.9	2220.3	1851.3	1754.3	1742.1	1716.9	1656.6
55°	1692.4	1690.8	1754.9	1848.1	2158.4	2582.3	2251.9	2063.9	2047.9	1997.5	1918.3
57.5°	1236.5	1228.3	1362.3	1559.9	2006.8	2740.6	2888.0	2448.5	2422.0	2262.1	2140.2
60°	682.8	685.9	858.3	1092.3	1647.7	2709.3	3473.4	2897.0	2827.4	2490.3	2367.4
62.5°	382.7	390.7	519.0	709.9	1050.5	2455.5	3787.5	3668.8	3501.2	2756.5	2654.7
65°	289.5	294.3	358.8	547.7	662.3	1716.0	3837.6	4748.0	4603.4	3160.0	3112.1
67.5°	272.6	276.4	308.0	454.2	603.3	889.9	3460.4	5386.4	5404.6	3710.3	3466.4
68°	274.5	279.3	310.9	437.0	602.3	796.1	3299.5	5389.6	5428.2	3799.0	3454.3
70°	252.2	253.4	328.8	428.7	583.8	627.2	2386.9	5020.2	5089.5	3904.7	3135.7
72.5°	96.4	96.7	147.5	371.2	611.6	630.7	1202.4	3967.9	3971.4	3398.1	2444.7
75°	50.1	42.1	46.3	116.2	584.1	614.8	603.3	2709.3	2692.4	2298.2	1498.0
77.5°	34.5	29.4	31.0	40.2	242.9	614.4	435.7	1558.0	1554.5	977.7	427.4
80°	19.5	16.9	18.5	33.8	85.2	576.8	406.0	669.7	631.0	171.7	69.3
82.5°	9.9	8.3	9.9	28.4	53.0	362.9	394.8	262.7	234.0	40.9	45.0
85°	2.6	2.6	4.8	19.8	32.9	119.1	354.0	189.6	170.4	17.9	31.9
87.5°	0.6	0.3	1.9	7.3	11.8	25.9	196.3	105.7	91.0	9.3	18.5
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°	905.9	905.9	905.9	905.9	905.9	905.9	905.9	905.9	905.9	905.9	905.9
2.5°	897.6	888.6	871.1	851.3	837.2	821.9	813.0	802.1	793.8	786.5	791.9
5°	894.4	877.1	838.2	794.5	757.8	722.7	696.5	671.6	652.7	640.9	645.7
7.5°	886.1	860.5	797.3	729.0	669.0	612.5	566.6	525.4	493.5	476.2	481.7
10°	872.0	836.0	751.1	656.3	572.3	492.5	424.2	362.9	316.6	294.9	300.0
12.5°	861.8	814.3	703.2	586.0	475.6	362.3	271.6	201.4	165.3	143.6	145.6
15°	857.3	797.3	658.5	512.0	369.9	232.7	146.8	106.3	93.8	89.4	89.7
17.5°	858.0	783.9	616.0	435.1	263.3	133.7	90.0	81.1	79.2	78.2	78.2
20°	859.6	770.5	572.0	354.9	168.5	86.2	75.0	72.1	71.2	69.9	70.2
22.5°	864.4	760.3	527.6	274.5	103.7	70.2	66.4	63.8	62.2	60.3	60.6
25°	871.7	752.7	483.9	197.6	73.1	61.3	57.8	54.3	51.4	49.2	49.5
27.5°	876.2	741.8	437.3	134.7	60.6	53.6	48.8	44.0	40.9	38.9	38.6
30°	873.0	724.2	384.3	88.4	53.6	46.3	40.5	35.1	31.9	30.3	30.3
32.5°	864.4	701.6	325.9	64.5	47.6	39.9	32.9	28.1	25.9	24.9	25.2
35°	854.5	678.0	263.7	54.6	42.8	33.8	26.8	23.0	22.0	21.7	21.7
37.5°	849.1	657.5	204.0	49.5	38.3	28.1	22.0	19.8	18.8	18.8	18.8
40°	855.1	641.9	151.0	45.6	33.8	23.3	18.5	16.9	16.6	16.6	16.6
42.5°	881.0	636.5	110.4	42.5	29.4	19.5	16.0	14.7	14.4	14.7	14.7
45°	931.4	648.3	83.6	39.3	25.2	16.0	13.7	12.8	12.8	13.1	13.1
47.5°	1016.9	678.6	68.6	36.1	21.1	13.4	11.8	11.2	11.2	11.5	11.5
50°	1149.7	734.8	61.6	32.6	17.6	11.5	9.9	9.6	9.6	9.9	10.2
52.5°	1351.5	841.7	58.1	29.0	14.4	9.6	8.3	8.0	8.3	8.6	8.6
55°	1575.8	978.6	53.9	25.5	12.1	8.0	6.7	6.7	7.0	7.7	7.7
57.5°	1784.9	1110.8	50.1	21.1	10.5	6.4	5.4	5.4	6.1	6.7	6.7
60°	2005.8	1240.4	45.0	16.9	8.9	5.1	4.5	4.5	5.4	6.1	6.4
62.5°	2278.7	1391.0	38.3	13.4	7.0	3.8	3.2	4.1	5.1	6.1	6.1
65°	2673.2	1578.4	30.0	10.5	5.4	2.9	2.6	3.8	4.8	5.7	6.1
67.5°	2816.5	1554.5	22.7	8.6	4.1	2.2	2.2	3.5	4.8	5.7	5.7
68°	2764.2	1502.1	21.7	8.3	3.8	2.2	2.2	3.5	4.8	5.7	5.7
70°	2408.6	1227.9	17.9	6.4	3.2	1.9	1.9	3.2	4.8	5.4	5.7
72.5°	1803.4	815.9	15.3	4.1	2.9	1.9	1.6	3.2	4.5	5.4	5.4
75°	1034.5	338.7	13.1	3.2	2.6	1.6	1.6	2.9	4.5	5.4	5.4
77.5°	292.4	79.2	10.5	2.6	2.2	1.6	1.3	2.9	4.1	5.1	5.1
80°	53.6	23.6	8.3	2.2	1.9	1.6	1.3	2.9	4.1	5.1	5.1
82.5°	35.4	11.2	6.1	2.2	1.9	1.6	1.3	2.6	3.8	4.8	4.8
85°	26.5	8.0	3.8	2.2	1.9	1.6	1.3	2.6	3.8	4.8	4.8
87.5°	14.7	3.5	2.9	2.6	2.2	1.6	1.3	2.2	3.5	4.5	4.5
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)