

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: P195583

Luminaire Tested: **NAV-AF-01-D-UNV-SL2-7050-800-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195583  
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-SL2-7050-800-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 5000K, 800mA 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: 4026 lumens  
Efficiency: N/A  
Efficacy: 91.5 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 - G1

Input Watts (W): 44  
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

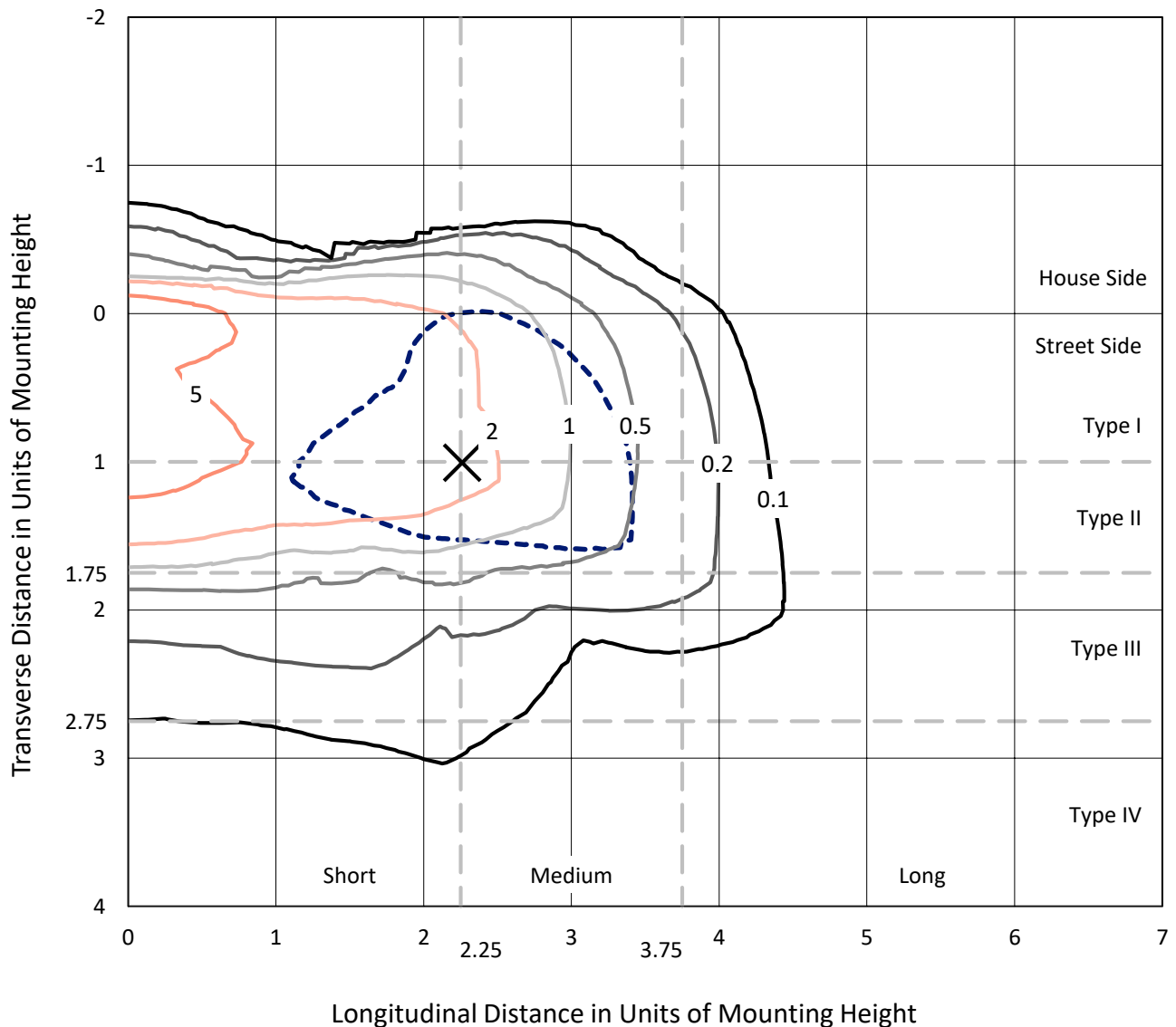


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

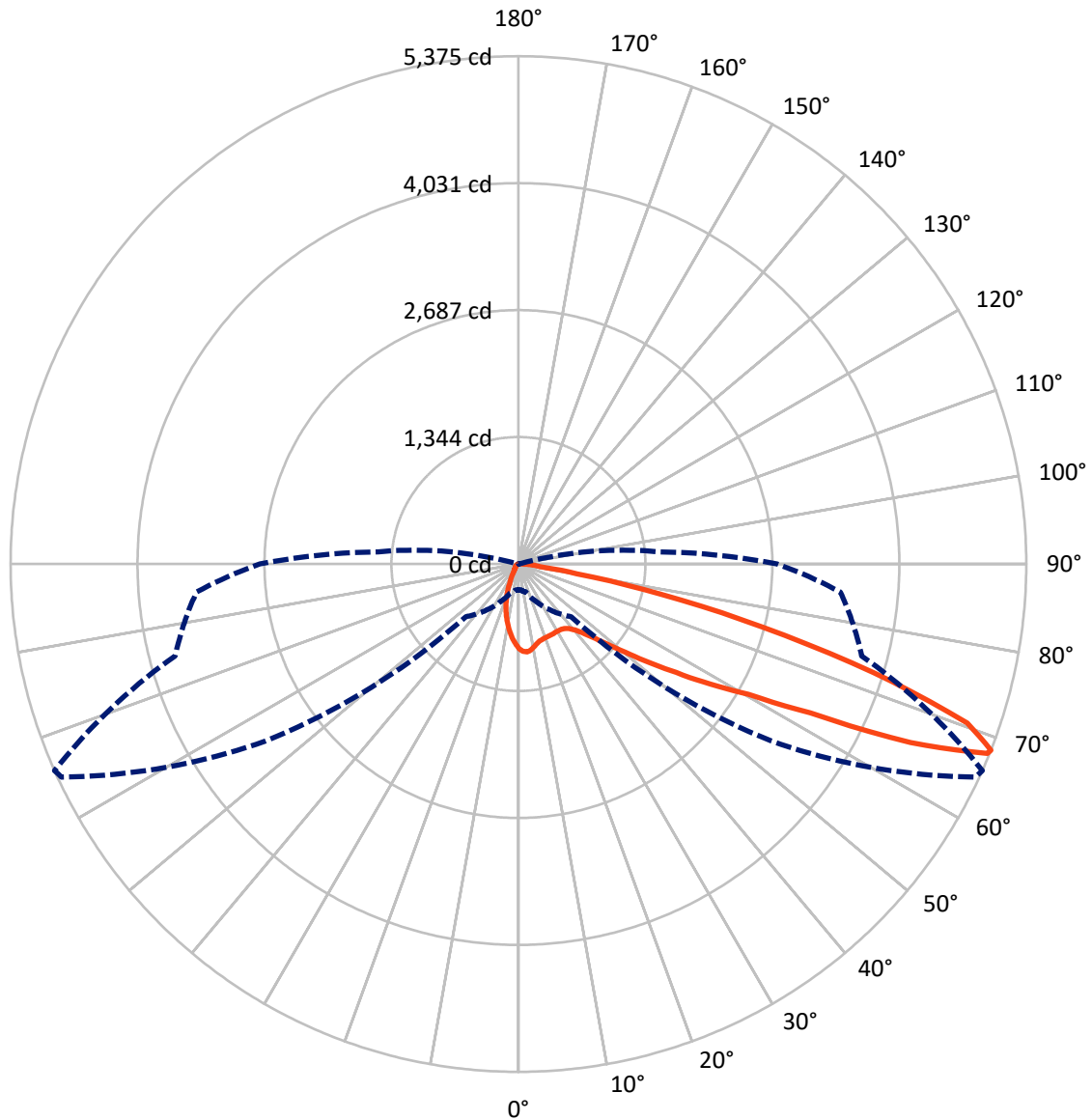


Based on 10 foot mounting height. Maximum calculated value = 9 fc  
 Type II - Medium - Semi-Cutoff

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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	407.8	0.0	407.8
	% Fixture	10.1	0.0	10.1
<b>Street Side</b>	Lumens	3618.2	0.0	3618.2
	% Fixture	89.9	0.0	89.9
<b>Total</b>	Lumens	4026.0	0.0	4026.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	73.5	1.8
10°-20°	158.2	3.9
20°-30°	229.3	5.7
30°-40°	351.0	8.7
40°-50°	600.3	14.9
50°-60°	939.0	23.3
60°-70°	1081.2	26.9
70°-80°	541.1	13.4
80°-90°	52.4	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°	4026.0	100.0
0°-180°	4026.0	100.0

**Coefficient of Utilization**



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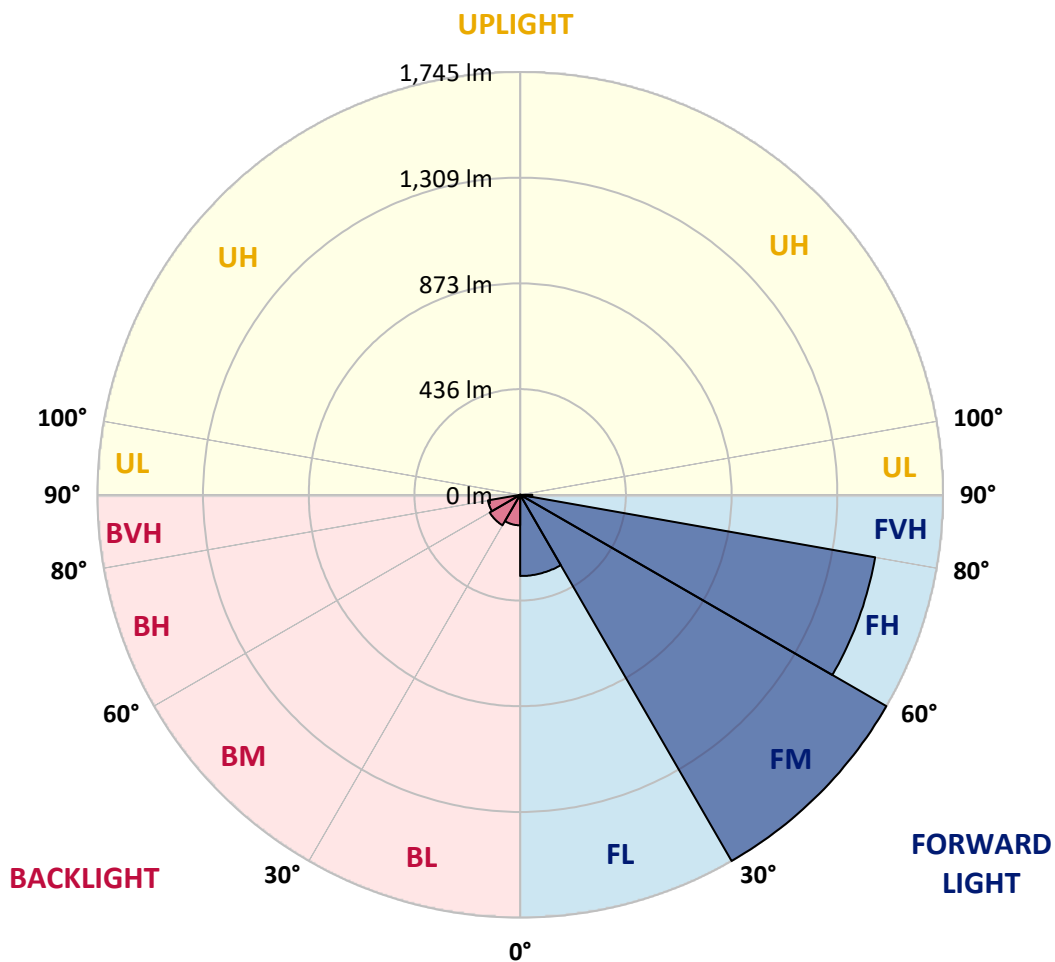
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	335.1	8.3			
FM (30°-60°)	1745.1	43.3			
FH (60°-80°)	1487.6	36.9			G1/1800
FVH (80°-90°)	50.4	1.3			G1/100
BL (0°-30°)	125.9	3.1	B1/500		
BM (30°-60°)	145.2	3.6	B0/220		
BH (60°-80°)	134.7	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°	897.0	897.0	897.0	897.0	897.0	897.0	897.0	897.0	897.0	897.0	897.0
2.5°	943.4	944.0	943.7	944.7	944.0	939.3	934.2	923.5	924.5	910.5	895.1
5°	877.0	882.4	887.8	893.2	906.1	917.5	931.1	934.2	934.2	922.2	899.5
7.5°	809.4	809.7	815.7	823.0	840.4	861.2	892.8	921.3	921.9	925.1	900.1
10°	758.5	760.1	764.2	772.1	789.5	810.0	845.4	890.0	893.5	916.9	893.8
12.5°	719.0	720.9	725.3	734.5	750.3	771.5	808.8	859.7	864.4	909.0	891.9
15°	688.7	691.2	694.7	703.8	720.9	743.4	784.1	839.4	845.1	905.8	897.9
17.5°	676.0	676.0	675.7	682.0	699.1	721.9	764.5	828.7	836.0	908.3	908.0
20°	681.4	680.5	673.8	672.2	682.7	705.4	749.0	821.7	830.0	913.1	920.3
22.5°	709.9	708.0	693.1	680.8	677.6	692.8	738.6	817.0	826.8	922.9	936.8
25°	770.2	764.5	744.0	716.2	691.2	689.6	731.3	814.5	824.9	934.2	954.8
27.5°	848.6	847.0	814.1	776.9	728.8	700.1	729.1	812.6	823.0	942.5	969.3
30°	945.9	946.6	908.6	860.0	787.3	729.4	736.1	811.6	822.4	943.1	975.7
32.5°	1046.4	1047.1	1015.5	963.3	867.2	780.0	755.7	816.0	825.8	940.6	975.3
35°	1143.2	1144.1	1125.1	1083.1	974.1	850.2	792.7	831.2	838.2	942.2	974.7
37.5°	1265.5	1269.3	1245.9	1206.7	1108.1	953.2	853.0	861.9	867.6	955.1	979.4
40°	1474.1	1469.0	1402.0	1335.6	1253.5	1078.7	940.3	914.7	916.5	988.6	997.5
42.5°	1717.1	1710.8	1596.1	1481.7	1403.0	1230.1	1051.8	995.6	995.2	1044.9	1036.6
45°	1926.3	1922.5	1801.8	1649.2	1568.6	1397.3	1189.3	1112.2	1108.4	1142.2	1108.1
47.5°	2074.9	2071.7	1980.4	1827.4	1760.1	1581.2	1360.9	1271.2	1263.3	1269.6	1224.1
50°	2089.4	2085.9	2054.0	1955.7	1983.9	1851.1	1573.0	1479.4	1469.3	1459.5	1399.5
52.5°	1953.5	1953.2	1970.0	1963.6	2140.6	2198.5	1833.1	1737.0	1725.0	1700.0	1640.3
55°	1675.7	1674.1	1737.7	1829.9	2137.1	2556.9	2229.7	2043.6	2027.8	1977.9	1899.5
57.5°	1224.4	1216.2	1348.9	1544.5	1987.0	2713.6	2859.6	2424.4	2398.2	2239.9	2119.1
60°	676.0	679.2	849.9	1081.5	1631.5	2682.6	3439.3	2868.5	2799.6	2465.8	2344.2
62.5°	378.9	386.8	513.9	702.9	1040.1	2431.4	3750.3	3632.7	3466.8	2729.4	2628.6
65°	286.7	291.4	355.2	542.3	655.8	1699.1	3799.9	4701.3	4558.1	3128.9	3081.5
67.5°	269.9	273.7	305.0	449.7	597.3	881.2	3426.3	5333.4	5351.4	3673.8	3432.3
68°	271.8	276.5	307.8	432.7	596.4	788.2	3267.0	5336.5	5374.8	3761.6	3420.3
70°	249.7	250.9	325.5	424.5	578.1	621.0	2363.4	4970.9	5039.4	3866.3	3104.9
72.5°	95.4	95.8	146.0	367.6	605.6	624.5	1190.6	3928.8	3932.3	3364.7	2420.6
75°	49.6	41.7	45.8	115.0	578.4	608.7	597.3	2682.6	2665.9	2275.6	1483.2
77.5°	34.1	29.1	30.7	39.8	240.5	608.4	431.4	1542.6	1539.2	968.1	423.2
80°	19.3	16.8	18.3	33.5	84.4	571.1	402.0	663.1	624.8	170.0	68.6
82.5°	9.8	8.2	9.8	28.1	52.5	359.4	391.0	260.1	231.7	40.5	44.6
85°	2.5	2.5	4.7	19.6	32.6	117.9	350.5	187.7	168.8	17.7	31.6
87.5°	0.6	0.3	1.9	7.3	11.7	25.6	194.4	104.6	90.1	9.2	18.3
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°	897.0	897.0	897.0	897.0	897.0	897.0	897.0	897.0	897.0	897.0	897.0
2.5°	888.7	879.9	862.5	842.9	829.0	813.8	805.0	794.2	786.0	778.8	784.1
5°	885.6	868.5	830.0	786.7	750.3	715.5	689.6	665.0	646.3	634.6	639.4
7.5°	877.4	852.1	789.5	721.9	662.4	606.5	561.0	520.2	488.6	471.5	476.9
10°	863.5	827.7	743.7	649.8	566.7	487.7	420.0	359.4	313.5	292.0	297.1
12.5°	853.3	806.2	696.3	580.3	470.9	358.7	269.0	199.4	163.7	142.2	144.1
15°	848.9	789.5	652.0	506.9	366.3	230.4	145.4	105.2	92.9	88.5	88.8
17.5°	849.5	776.2	610.0	430.8	260.7	132.4	89.1	80.3	78.4	77.4	77.4
20°	851.1	762.9	566.4	351.4	166.9	85.3	74.3	71.4	70.5	69.2	69.5
22.5°	855.9	752.8	522.4	271.8	102.7	69.5	65.7	63.2	61.6	59.7	60.0
25°	863.1	745.2	479.1	195.6	72.4	60.7	57.2	53.7	50.9	48.7	49.0
27.5°	867.6	734.5	433.0	133.4	60.0	53.1	48.4	43.6	40.5	38.6	38.2
30°	864.4	717.1	380.5	87.5	53.1	45.8	40.1	34.8	31.6	30.0	30.0
32.5°	855.9	694.7	322.7	63.8	47.1	39.5	32.6	27.8	25.6	24.7	25.0
35°	846.1	671.3	261.1	54.0	42.4	33.5	26.5	22.8	21.8	21.5	21.5
37.5°	840.7	651.1	202.0	49.0	37.9	27.8	21.8	19.6	18.6	18.6	18.6
40°	846.7	635.6	149.5	45.2	33.5	23.1	18.3	16.8	16.4	16.4	16.4
42.5°	872.3	630.2	109.4	42.0	29.1	19.3	15.8	14.5	14.2	14.5	14.5
45°	922.2	641.9	82.8	38.9	25.0	15.8	13.6	12.6	12.6	13.0	13.0
47.5°	1006.9	671.9	68.0	35.7	20.9	13.3	11.7	11.1	11.1	11.4	11.4
50°	1138.4	727.6	61.0	32.2	17.4	11.4	9.8	9.5	9.5	9.8	10.1
52.5°	1338.2	833.4	57.5	28.8	14.2	9.5	8.2	7.9	8.2	8.5	8.5
55°	1560.3	969.0	53.4	25.3	12.0	7.9	6.6	6.6	7.0	7.6	7.6
57.5°	1767.4	1099.9	49.6	20.9	10.4	6.3	5.4	5.4	6.0	6.6	6.6
60°	1986.1	1228.2	44.6	16.8	8.8	5.1	4.4	4.4	5.4	6.0	6.3
62.5°	2256.3	1377.4	37.9	13.3	7.0	3.8	3.2	4.1	5.1	6.0	6.0
65°	2646.9	1562.9	29.7	10.4	5.4	2.8	2.5	3.8	4.7	5.7	6.0
67.5°	2788.8	1539.2	22.4	8.5	4.1	2.2	2.2	3.5	4.7	5.7	5.7
68°	2737.0	1487.3	21.5	8.2	3.8	2.2	2.2	3.5	4.7	5.7	5.7
70°	2384.9	1215.9	17.7	6.3	3.2	1.9	1.9	3.2	4.7	5.4	5.7
72.5°	1785.7	807.8	15.2	4.1	2.8	1.9	1.6	3.2	4.4	5.4	5.4
75°	1024.3	335.3	13.0	3.2	2.5	1.6	1.6	2.8	4.4	5.4	5.4
77.5°	289.5	78.4	10.4	2.5	2.2	1.6	1.3	2.8	4.1	5.1	5.1
80°	53.1	23.4	8.2	2.2	1.9	1.6	1.3	2.8	4.1	5.1	5.1
82.5°	35.1	11.1	6.0	2.2	1.9	1.6	1.3	2.5	3.8	4.7	4.7
85°	26.2	7.9	3.8	2.2	1.9	1.6	1.3	2.5	3.8	4.7	4.7
87.5°	14.5	3.5	2.8	2.5	2.2	1.6	1.3	2.2	3.5	4.4	4.4
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)