

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: P197149

Luminaire Tested: **NAV-AF-01-D-UNV-SL4-8030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197149  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24284)  
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-SL4-8030  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 80 CRI, 3000K, 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE IV SPILL  
LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4756 lumens  
Efficiency: N/A  
Efficacy: 80.6 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

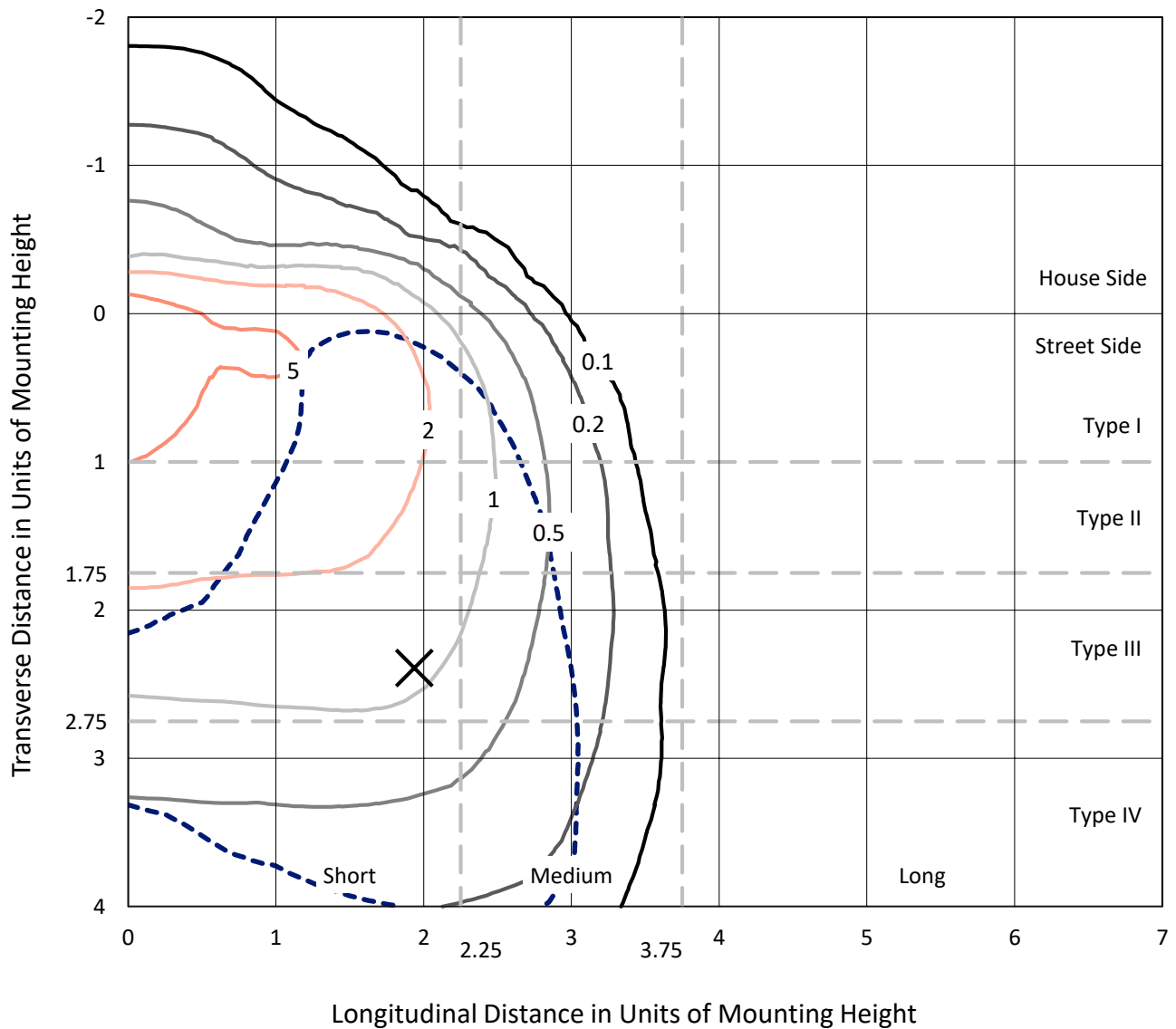
Input Watts (W): 59  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

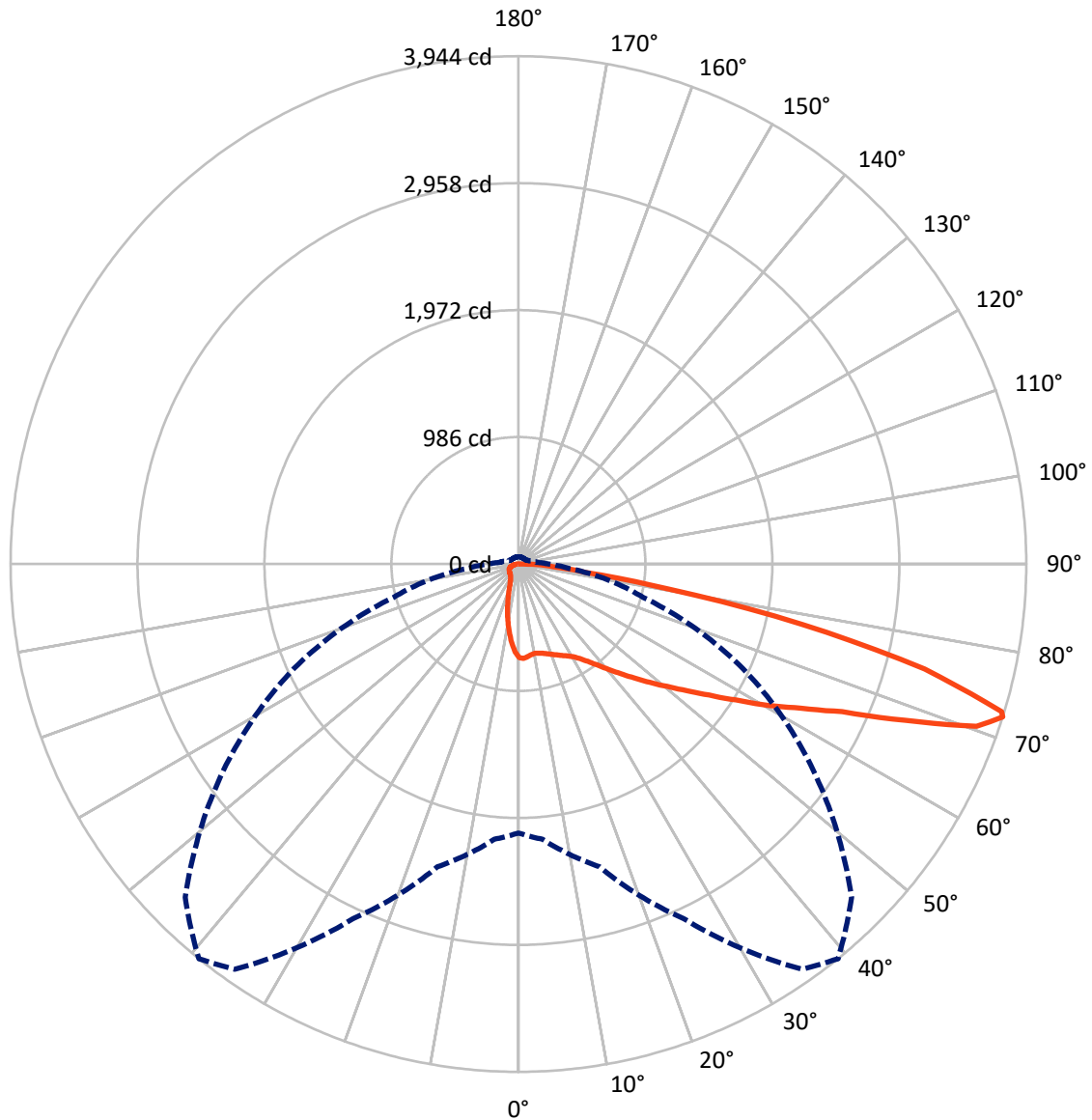
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.3 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



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

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	545.3	0.0	545.3
	% Fixture	11.5	0.0	11.5
<b>Street Side</b>	Lumens	4210.7	0.0	4210.7
	% Fixture	88.5	0.0	88.5
<b>Total</b>	Lumens	4756.0	0.0	4756.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	62.4	1.3
10°-20°	156.8	3.3
20°-30°	244.4	5.1
30°-40°	376.3	7.9
40°-50°	613.5	12.9
50°-60°	953.3	20.0
60°-70°	1276.0	26.8
70°-80°	917.6	19.3
80°-90°	155.6	3.3
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°	4756.0	100.0
0°-180°	4756.0	100.0



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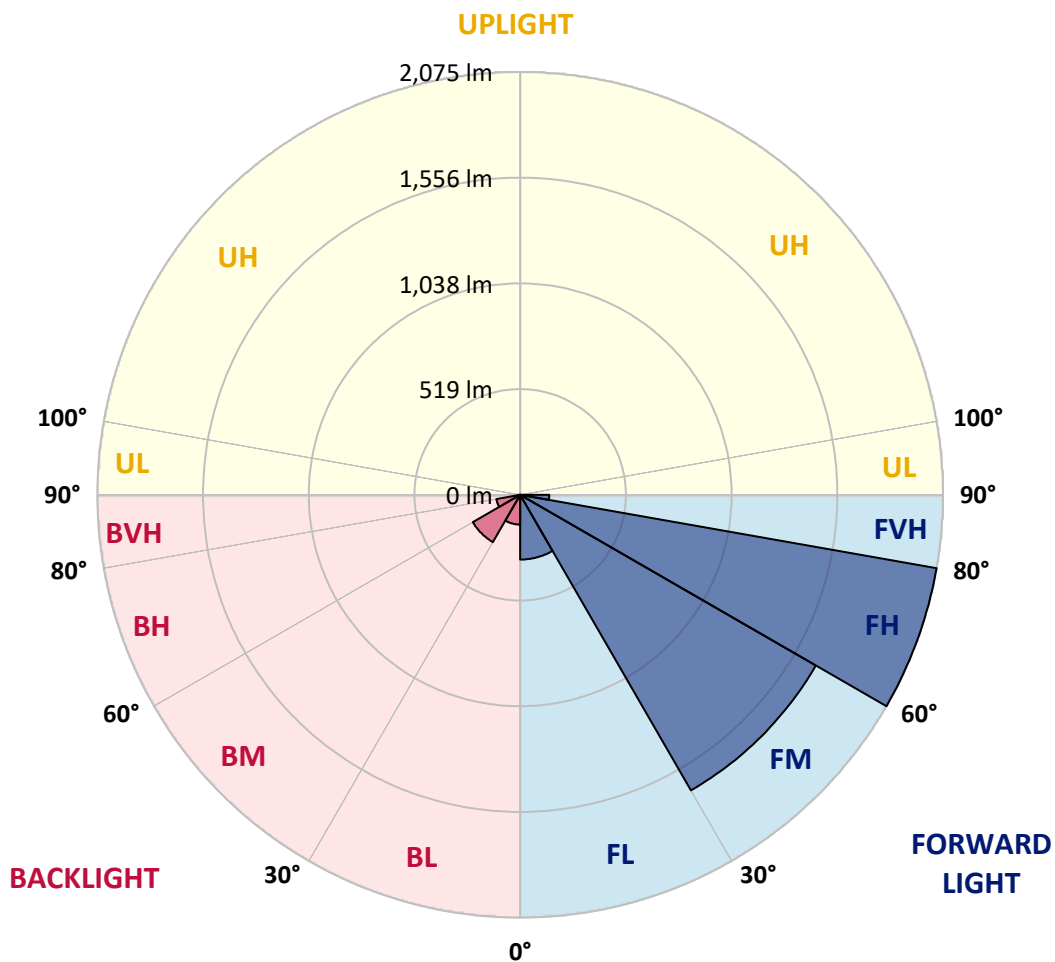
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	317.7	6.7			
FM	(30°-60°)	1675.2	35.2			
FH	(60°-80°)	2075.1	43.6			G2/5000
FVH	(80°-90°)	142.7	3.0			G2/225
BL	(0°-30°)	146.0	3.1	B1/500		
BM	(30°-60°)	268.0	5.6	B1/1000		
BH	(60°-80°)	118.5	2.5	B1/500		G1/500
BVH	(80°-90°)	12.9	0.3			G1/100
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





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	726.3	726.3	726.3	726.3	726.3	726.3	726.3	726.3	726.3	726.3	726.3
2.5°	742.0	742.3	741.3	738.5	735.9	734.6	732.4	728.6	723.5	719.9	717.1
5°	734.9	735.9	735.3	730.5	726.0	723.5	719.9	714.5	707.8	704.9	698.2
7.5°	729.5	730.2	728.2	722.8	714.2	711.0	704.6	697.6	691.5	687.4	679.4
10°	725.7	726.3	724.7	719.3	709.7	705.9	698.2	690.6	682.6	677.5	668.5
12.5°	720.3	721.5	721.5	719.0	712.6	710.0	702.4	694.1	686.7	681.3	670.1
15°	719.3	720.9	723.8	723.5	721.5	719.6	713.6	705.3	698.9	692.5	678.8
17.5°	727.3	730.8	736.5	738.5	737.2	733.0	726.0	718.3	711.3	705.3	688.3
20°	747.4	749.3	757.9	761.8	755.4	749.3	740.1	730.2	723.8	719.0	697.3
22.5°	777.7	780.3	787.3	787.6	774.2	766.9	755.1	742.9	736.9	734.9	709.4
25°	826.3	825.6	827.5	819.6	795.3	786.7	772.3	758.3	754.1	757.9	727.3
27.5°	884.4	882.8	876.7	855.9	819.2	808.1	790.8	778.4	778.4	787.3	751.5
30°	951.4	949.8	930.0	895.2	847.6	834.9	816.7	803.6	810.3	827.5	784.4
32.5°	1022.3	1016.5	988.8	942.1	888.2	874.1	856.6	843.2	855.9	885.3	831.7
35°	1089.0	1085.8	1051.7	996.4	940.6	928.7	916.6	900.0	920.4	966.1	898.4
37.5°	1158.0	1155.4	1113.6	1054.8	1004.4	996.4	986.2	974.7	1007.6	1067.6	988.8
40°	1234.9	1229.8	1177.1	1118.4	1078.8	1075.0	1069.5	1066.3	1119.3	1208.7	1103.1
42.5°	1322.1	1312.2	1244.2	1188.3	1159.9	1163.1	1160.2	1173.0	1254.1	1371.6	1239.1
45°	1421.7	1401.9	1310.9	1262.7	1249.6	1262.4	1268.4	1301.0	1413.4	1559.6	1391.0
47.5°	1514.9	1489.4	1384.0	1343.5	1350.8	1372.8	1390.1	1447.5	1588.0	1745.4	1546.2
50°	1600.8	1572.1	1462.2	1427.1	1462.9	1494.2	1529.9	1611.0	1773.8	1936.7	1688.6
52.5°	1664.3	1643.6	1540.5	1518.4	1591.5	1633.0	1690.2	1792.7	1961.6	2119.0	1815.7
55°	1713.5	1702.3	1616.8	1623.1	1737.1	1796.5	1865.8	1983.6	2160.1	2282.4	1917.8
57.5°	1770.3	1762.0	1703.9	1749.6	1917.8	1992.5	2074.3	2205.2	2349.1	2426.4	1998.0
60°	1830.3	1830.3	1801.0	1901.9	2143.9	2229.4	2310.8	2412.7	2537.5	2556.0	2030.5
62.5°	1875.7	1887.5	1898.0	2064.0	2358.4	2464.7	2554.1	2651.8	2732.6	2619.9	1953.9
65°	1941.4	1966.7	2026.1	2251.5	2624.0	2763.2	2883.9	2966.0	2890.6	2569.1	1703.9
67.5°	2054.5	2091.8	2218.2	2530.5	3030.8	3239.3	3356.4	3214.7	2859.7	2249.5	1305.2
70°	2156.3	2209.0	2425.1	2884.6	3559.5	3775.9	3722.0	3156.9	2490.6	1649.0	803.0
72°	2088.6	2146.1	2434.7	3038.8	3842.0	3944.2	3659.7	2797.7	1924.5	1006.3	395.9
72.5°	2044.3	2104.0	2403.7	3034.9	3849.7	3922.8	3573.2	2655.0	1747.0	880.5	320.2
75°	1707.7	1758.8	2066.9	2689.8	3392.5	3258.4	2788.5	1718.3	803.0	284.5	164.7
77.5°	1115.2	1154.1	1425.2	1863.5	2376.3	2247.3	1697.2	804.5	301.1	172.7	123.9
80°	560.3	588.1	762.7	979.8	1282.5	1180.0	783.5	389.2	201.5	124.8	97.4
82.5°	389.8	415.4	525.2	500.3	536.0	518.8	368.4	324.7	150.7	78.9	51.1
85°	326.9	353.4	434.5	356.6	291.8	265.9	264.0	306.8	99.6	39.0	43.1
87.5°	285.1	325.3	358.5	260.5	200.2	176.6	194.4	281.3	31.6	21.4	13.1
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°	726.3	726.3	726.3	726.3	726.3	726.3	726.3	726.3	726.3	726.3	726.3
2.5°	712.3	711.3	706.5	699.2	693.8	690.2	683.5	683.2	683.9	678.1	680.4
5°	692.2	688.3	675.9	659.0	645.2	632.1	617.8	613.0	608.8	600.2	601.2
7.5°	671.1	664.4	642.7	614.9	588.4	564.1	540.2	528.4	519.4	508.3	508.3
10°	658.6	648.1	614.9	574.4	532.2	496.8	461.0	439.6	424.0	409.6	408.7
12.5°	658.0	642.0	595.7	539.9	482.1	432.3	383.4	350.6	327.2	310.3	308.7
15°	663.1	640.8	579.8	507.6	434.8	370.0	309.7	267.9	238.2	219.3	217.4
17.5°	667.6	639.2	562.5	473.8	388.9	310.0	243.0	199.5	171.4	156.1	154.5
20°	671.7	635.7	540.5	438.0	338.1	253.8	190.0	154.8	136.3	127.7	126.7
22.5°	677.8	632.5	517.5	397.8	288.3	206.6	156.8	131.5	121.6	117.5	116.9
25°	687.7	632.8	495.2	356.6	242.6	172.1	135.7	120.0	114.6	111.7	111.7
27.5°	702.1	636.6	473.1	314.8	204.0	148.5	123.2	114.0	110.5	108.2	107.6
30°	723.1	643.6	449.8	275.2	173.4	132.2	115.9	110.1	107.3	105.4	105.0
32.5°	753.8	656.1	425.3	239.1	150.1	120.7	110.5	107.0	104.7	103.1	102.8
35°	799.4	678.1	401.3	208.5	133.5	112.4	106.0	103.1	101.8	101.2	100.9
37.5°	866.5	713.6	378.6	184.5	122.6	107.0	101.5	99.9	99.3	99.3	99.3
40°	950.8	760.2	358.2	167.6	116.5	102.8	98.3	97.1	97.1	97.4	97.4
42.5°	1053.3	818.6	340.7	156.1	113.0	99.9	96.1	95.5	95.1	95.1	95.5
45°	1172.3	887.6	329.8	147.2	110.5	98.3	94.5	94.2	92.9	92.3	92.3
47.5°	1292.1	961.3	329.2	142.1	107.3	96.4	92.9	92.9	90.4	89.1	89.4
50°	1403.8	1027.4	336.2	140.8	105.4	93.5	91.3	91.6	88.1	86.5	86.2
52.5°	1493.8	1077.8	344.8	142.4	105.4	91.0	88.4	90.0	86.2	84.3	84.0
55°	1563.4	1113.0	348.0	145.9	106.6	88.8	85.9	88.4	85.6	83.0	83.0
57.5°	1613.2	1124.1	334.3	147.5	108.5	88.4	83.3	88.1	86.5	83.3	83.3
60°	1595.0	1059.3	283.2	141.4	108.2	87.8	81.4	88.8	89.7	86.2	86.2
62.5°	1453.0	886.3	227.3	127.7	102.8	85.6	79.2	88.1	91.9	90.7	90.0
65°	1182.9	650.0	176.2	111.4	93.5	80.8	74.4	82.4	86.8	88.1	88.4
67.5°	833.6	411.5	137.0	94.8	82.1	73.8	69.0	72.8	74.4	75.0	76.3
70°	455.9	222.8	108.9	79.8	70.2	66.7	63.2	63.5	62.9	62.3	62.9
72°	228.9	145.6	91.9	69.3	62.3	60.0	58.4	57.5	57.5	56.5	56.8
72.5°	197.0	135.4	88.8	66.7	60.3	58.4	57.1	56.2	55.9	55.2	55.6
75°	131.2	107.3	74.1	55.9	51.4	50.1	50.8	49.8	50.1	49.5	49.8
77.5°	106.0	92.3	62.9	47.3	44.1	42.1	43.4	43.7	44.4	43.7	43.4
80°	88.8	78.5	52.7	39.0	36.7	35.1	35.8	38.0	38.3	36.4	36.1
82.5°	57.5	63.2	41.5	30.3	28.1	27.5	29.1	31.3	31.9	29.4	28.7
85°	48.2	50.8	30.0	20.8	18.5	17.9	21.1	23.3	24.9	22.3	21.7
87.5°	13.4	24.9	14.7	9.9	8.3	8.3	10.2	12.1	14.4	14.7	14.7
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)