

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: P197119

Luminaire Tested: **NAV-AF-01-D-UNV-SL4-8030-800-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197119  
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-SL4-8030-800-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 80 CRI, 3000K, 800mA 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: 3282 lumens  
Efficiency: N/A  
Efficacy: 74.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B0 - 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

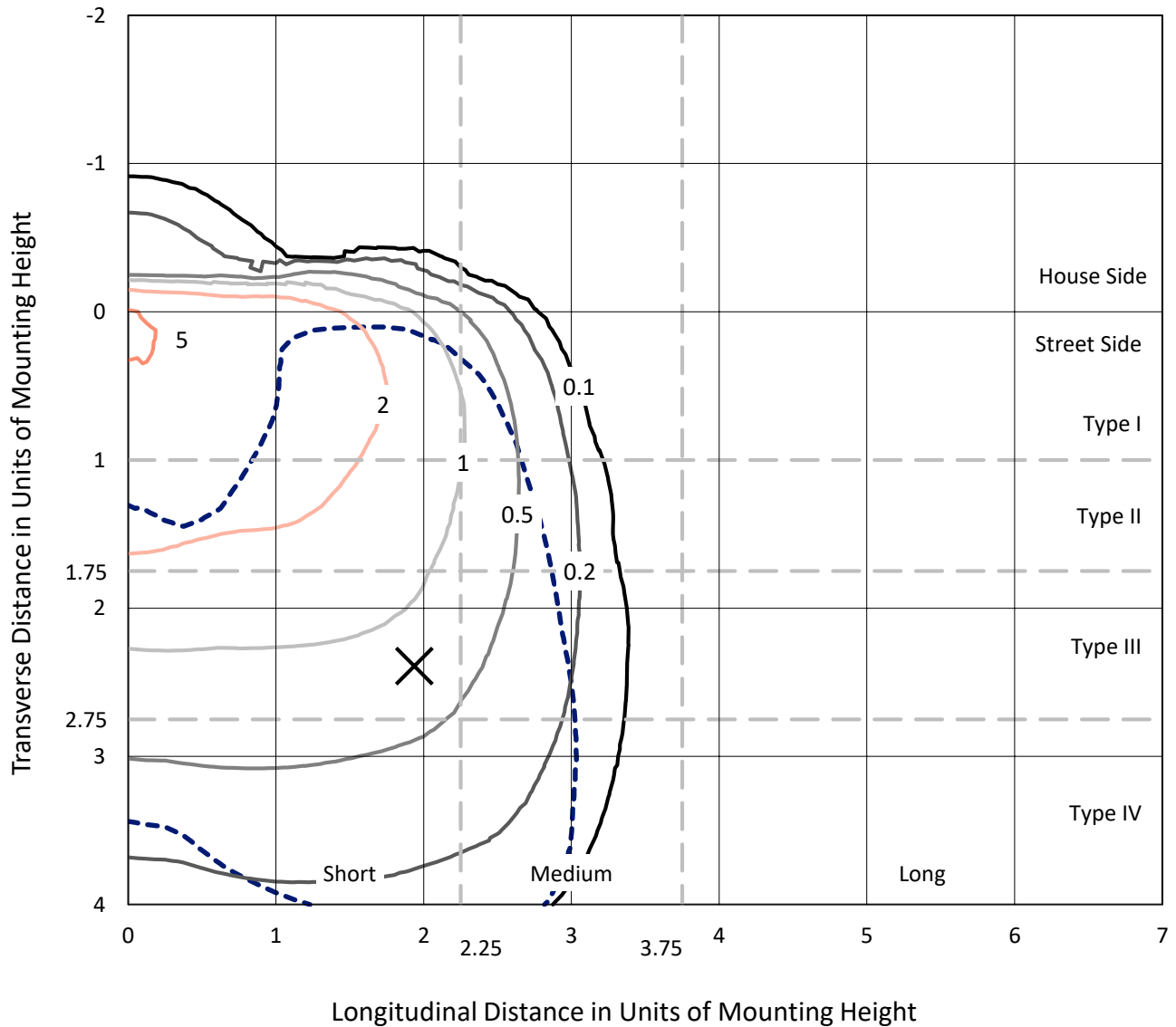


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### Iso-Footcandle Lines of Horizontal Illumination

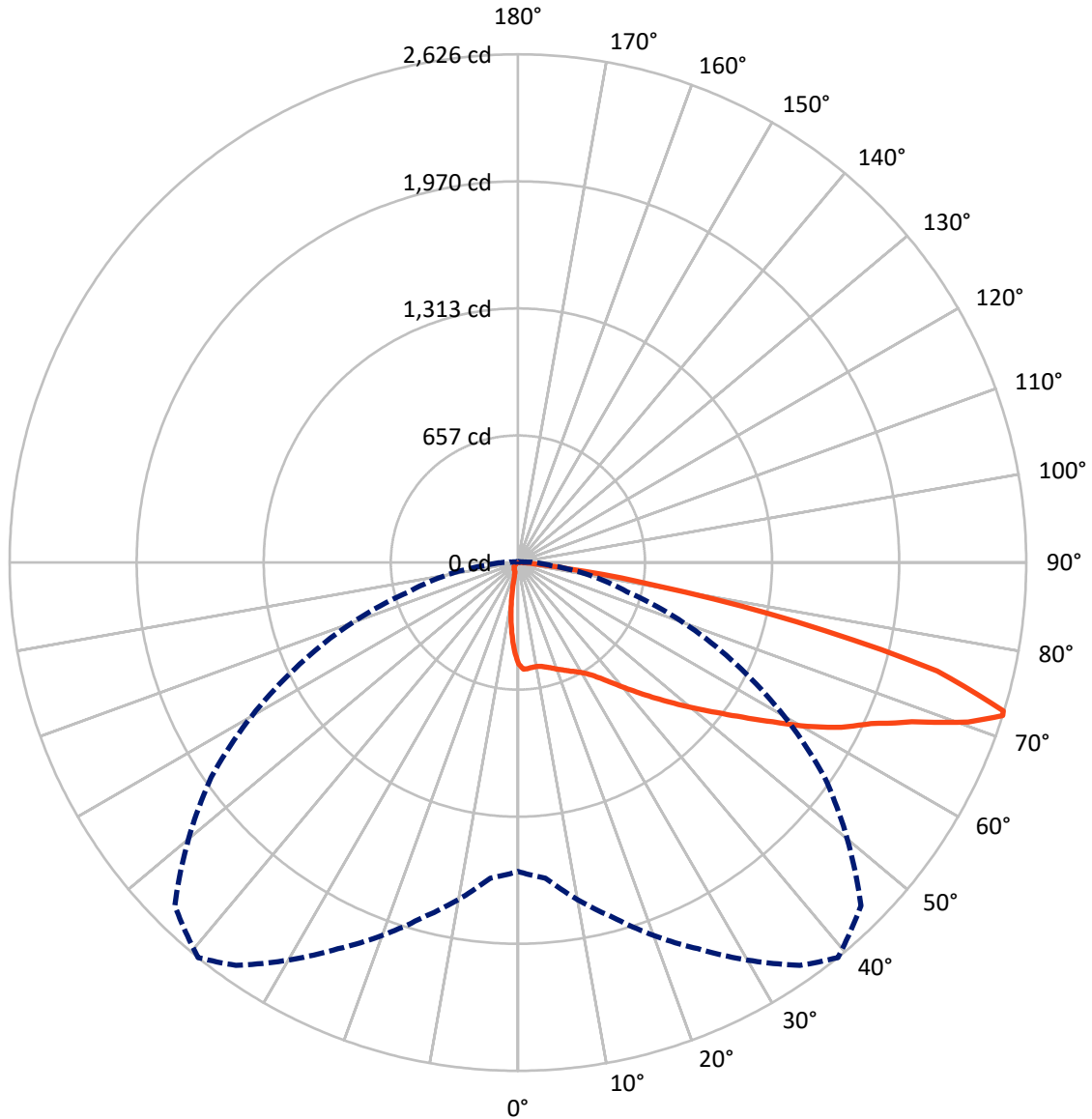
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.5 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	215.1	0.0	215.1
	% Fixture	6.6	0.0	6.6
<b>Street Side</b>	Lumens	3066.9	0.0	3066.9
	% Fixture	93.4	0.0	93.4
<b>Total</b>	Lumens	3282.0	0.0	3282.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	42.7	1.3
10°-20°	103.4	3.2
20°-30°	171.8	5.2
30°-40°	273.8	8.3
40°-50°	452.0	13.8
50°-60°	682.5	20.8
60°-70°	889.1	27.1
70°-80°	600.8	18.3
80°-90°	65.8	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°	3282.0	100.0
0°-180°	3282.0	100.0



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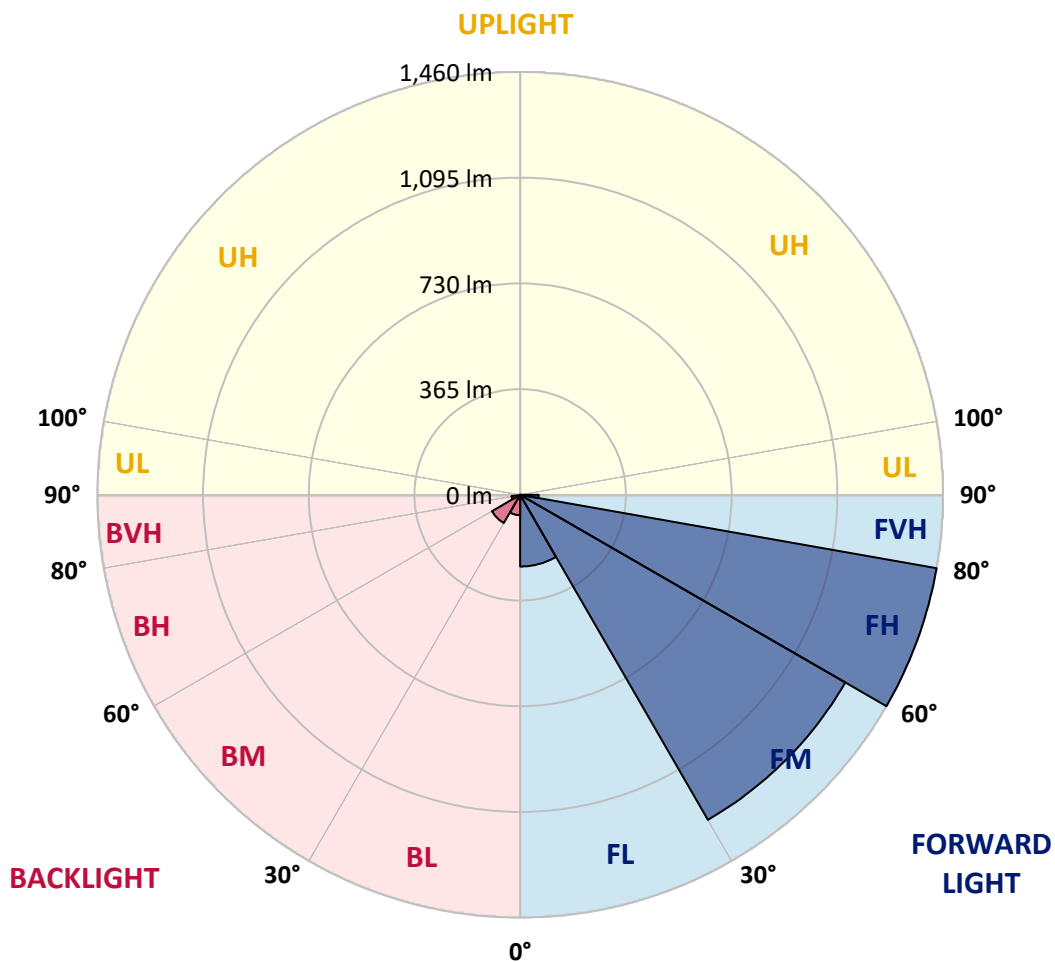
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	247.5	7.5			
FM	(30°-60°)	1295.8	39.5			
FH	(60°-80°)	1459.7	44.5			G1/1800
FVH	(80°-90°)	63.9	1.9			G1/100
BL	(0°-30°)	70.4	2.1	B0/110		
BM	(30°-60°)	112.5	3.4	B0/220		
BH	(60°-80°)	30.2	0.9	B0/110		G0/110
BVH	(80°-90°)	1.9	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G1**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	525.3	525.3	525.3	525.3	525.3	525.3	525.3	525.3	525.3	525.3	525.3
2.5°	559.4	560.4	559.1	556.8	553.4	551.4	548.5	542.3	534.6	527.9	520.1
5°	563.7	564.3	562.7	558.3	553.2	550.3	546.7	540.0	532.0	522.7	508.8
7.5°	565.0	564.8	563.0	557.6	549.6	545.9	539.8	531.5	523.2	514.7	499.0
10°	564.5	564.5	563.2	558.1	549.0	545.7	538.7	529.9	519.6	511.1	494.3
12.5°	562.7	563.7	563.0	560.1	553.4	550.8	544.7	535.9	526.1	517.3	499.5
15°	565.0	566.6	568.1	567.1	563.2	560.9	555.2	546.2	538.2	528.9	509.8
17.5°	574.3	577.7	581.3	581.6	577.4	573.3	566.8	557.6	549.8	541.3	520.7
20°	591.9	594.5	601.2	602.4	594.2	588.3	579.2	568.4	560.7	553.4	530.7
22.5°	617.9	620.8	626.2	624.4	610.4	603.5	592.1	579.7	571.7	567.6	542.3
25°	657.4	658.2	659.5	651.5	628.5	620.8	606.8	592.9	586.5	585.9	558.8
27.5°	703.8	704.9	699.2	681.4	648.6	638.6	622.8	610.2	607.1	611.0	579.7
30°	757.0	757.3	741.5	712.6	671.9	660.8	644.5	630.6	633.4	643.0	606.6
32.5°	811.4	808.9	787.2	749.5	703.6	690.2	676.2	662.3	670.6	689.9	645.8
35°	861.2	860.2	834.7	790.8	744.9	733.0	722.9	708.2	721.6	753.1	699.2
37.5°	911.0	910.3	881.1	835.4	795.7	787.2	779.7	768.3	790.3	836.5	770.7
40°	966.0	964.7	928.8	885.0	854.8	850.1	845.8	840.8	878.3	942.5	859.7
42.5°	1033.8	1028.2	979.4	938.9	919.8	921.1	921.3	926.3	984.8	1068.7	964.7
45°	1111.8	1099.1	1030.2	996.7	991.3	999.0	1006.7	1027.1	1108.9	1213.9	1080.8
47.5°	1187.4	1167.0	1088.8	1058.9	1070.0	1086.0	1104.5	1144.3	1248.2	1365.9	1186.1
50°	1252.4	1231.5	1146.8	1122.1	1157.4	1181.2	1214.2	1274.3	1395.3	1494.4	1252.4
52.5°	1303.5	1286.9	1208.3	1191.7	1254.4	1286.9	1338.8	1417.8	1534.1	1579.0	1298.8
55°	1341.1	1332.9	1267.1	1269.4	1362.3	1409.2	1473.7	1563.0	1651.3	1644.8	1333.6
57.5°	1383.7	1377.2	1328.7	1361.0	1492.1	1552.7	1627.3	1699.0	1736.4	1697.7	1367.7
60°	1427.3	1429.4	1403.6	1471.9	1652.5	1719.6	1784.6	1802.4	1809.4	1751.4	1403.6
62.5°	1460.3	1469.1	1471.4	1591.7	1817.2	1874.4	1902.6	1889.9	1888.4	1823.3	1400.7
65°	1498.3	1521.2	1559.4	1723.0	1966.8	2004.5	2024.6	2042.9	2004.2	1844.8	1263.0
67.5°	1563.8	1599.9	1685.8	1884.0	2139.7	2195.4	2252.4	2233.1	2021.5	1627.3	962.1
70°	1652.0	1696.1	1847.9	2094.3	2374.2	2467.6	2515.3	2217.8	1716.3	1124.4	507.5
72°	1596.3	1636.3	1897.9	2201.6	2540.4	2626.0	2506.6	1934.5	1244.1	582.8	170.0
72.5°	1542.1	1583.4	1881.9	2200.3	2556.9	2622.4	2449.5	1822.8	1100.9	453.6	117.1
75°	1070.0	1122.1	1613.3	1977.9	2308.9	2236.9	1874.2	1103.8	398.9	77.9	38.7
77.5°	553.2	593.4	978.6	1397.6	1609.2	1473.7	1107.6	478.9	110.4	41.3	25.5
80°	342.9	362.8	457.7	688.6	835.9	731.2	488.7	193.5	70.7	24.5	20.4
82.5°	177.5	192.7	288.2	277.9	308.8	256.7	180.3	162.0	43.6	15.2	20.9
85°	58.3	61.9	177.0	184.7	132.1	88.8	80.0	154.5	12.6	9.8	17.8
87.5°	7.7	9.0	62.2	105.8	65.0	40.2	48.0	54.4	4.4	5.4	4.9
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°	525.3	525.3	525.3	525.3	525.3	525.3	525.3	525.3	525.3	525.3	525.3
2.5°	515.0	511.6	501.1	490.5	478.3	467.3	458.5	452.8	455.4	446.9	448.2
5°	500.3	491.8	468.5	443.5	416.4	391.1	371.0	356.1	353.2	340.3	340.8
7.5°	486.1	472.2	434.5	393.2	348.3	311.9	278.9	250.0	239.7	229.1	222.9
10°	478.3	459.3	405.8	345.7	282.5	229.1	182.7	146.3	131.1	120.0	114.6
12.5°	480.7	455.4	384.4	302.6	219.6	151.7	103.2	76.6	67.3	62.2	60.4
15°	488.4	456.2	365.1	260.6	159.7	91.9	60.6	51.9	51.1	50.8	50.6
17.5°	495.6	456.9	344.7	216.7	106.8	58.6	48.8	48.0	48.0	48.0	48.0
20°	503.1	457.2	322.3	170.8	70.2	48.0	45.9	45.4	45.9	45.9	45.9
22.5°	511.9	459.0	300.6	126.2	51.9	45.2	43.9	43.6	43.9	43.9	43.6
25°	522.7	462.9	277.1	90.3	47.0	43.3	42.1	41.8	42.1	41.8	41.8
27.5°	537.2	468.0	249.8	64.8	44.9	41.5	40.2	40.2	40.2	40.0	40.0
30°	555.8	474.2	213.1	51.1	42.8	39.7	38.7	38.7	38.4	38.2	38.2
32.5°	582.3	484.3	173.1	46.2	40.5	37.4	36.4	36.6	36.4	36.1	35.9
35°	620.0	500.0	133.6	43.6	38.2	35.1	34.1	34.1	34.1	33.5	33.5
37.5°	673.4	524.0	100.1	41.0	35.9	32.8	31.5	31.5	31.2	30.7	31.0
40°	739.5	554.2	72.5	38.7	33.5	30.2	29.2	28.6	28.1	27.6	27.6
42.5°	818.9	583.6	54.4	36.4	31.2	28.1	26.8	26.3	25.3	24.8	24.5
45°	907.9	614.8	45.2	33.5	28.6	25.8	24.8	23.7	22.4	21.7	21.4
47.5°	983.0	633.9	40.2	30.7	26.1	23.5	22.4	20.9	19.4	18.8	18.8
50°	1028.2	625.9	36.1	27.9	23.5	21.2	19.9	17.8	16.8	16.3	16.0
52.5°	1053.4	602.2	32.8	25.5	21.2	18.6	16.8	15.0	14.4	13.9	13.9
55°	1070.7	567.9	29.2	23.2	19.1	16.3	14.2	12.9	12.4	12.1	11.9
57.5°	1087.2	526.1	25.8	21.2	17.0	14.4	12.1	11.6	10.6	10.3	10.3
60°	1092.2	468.5	22.7	18.8	15.2	12.6	10.6	9.8	8.8	8.5	8.5
62.5°	1029.7	372.8	20.1	16.0	13.4	10.8	9.3	8.3	7.2	7.2	7.2
65°	860.5	253.1	17.3	13.9	11.9	9.3	8.0	6.7	6.2	6.2	6.2
67.5°	599.4	141.1	14.7	11.9	10.1	7.7	6.7	5.7	5.4	5.7	5.7
70°	270.1	56.0	12.4	9.8	8.3	6.5	5.7	4.9	5.4	5.4	5.4
72°	81.0	29.9	10.3	8.0	6.7	5.7	4.9	4.6	5.2	5.4	5.4
72.5°	60.1	26.8	9.8	7.7	6.7	5.4	4.6	4.6	5.2	5.4	5.4
75°	31.0	18.3	7.5	5.7	4.9	4.4	3.9	4.4	5.2	5.2	5.2
77.5°	24.3	15.0	6.2	4.4	4.1	3.9	3.6	4.1	4.6	4.6	4.6
80°	22.7	9.8	4.9	4.1	3.6	3.4	3.4	3.6	4.1	4.4	4.4
82.5°	23.0	8.0	4.4	3.9	3.4	3.1	3.1	3.4	3.9	4.1	4.1
85°	14.7	5.4	3.9	3.4	3.1	2.8	2.8	3.1	3.6	3.9	3.9
87.5°	4.9	4.1	3.4	3.1	2.6	2.6	2.6	2.6	3.1	3.4	3.6
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)