

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: P196543

Luminaire Tested: **NAV-AF-01-D-UNV-SL2-7030-800-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196543  
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-SL2-7030-800-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 3000K, 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: 3894 lumens  
Efficiency: N/A  
Efficacy: 88.5 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

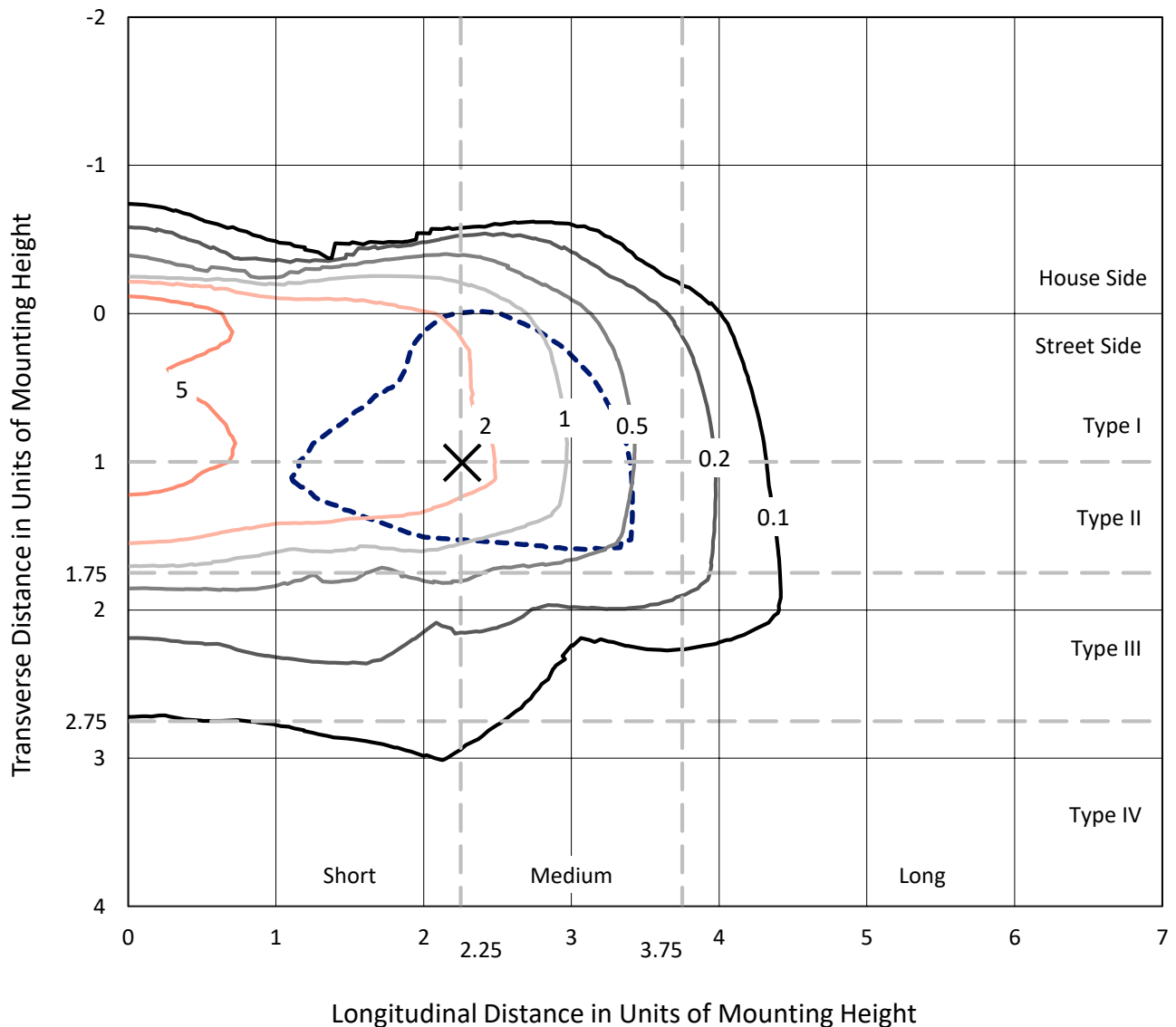


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### Iso-Footcandle Lines of Horizontal Illumination

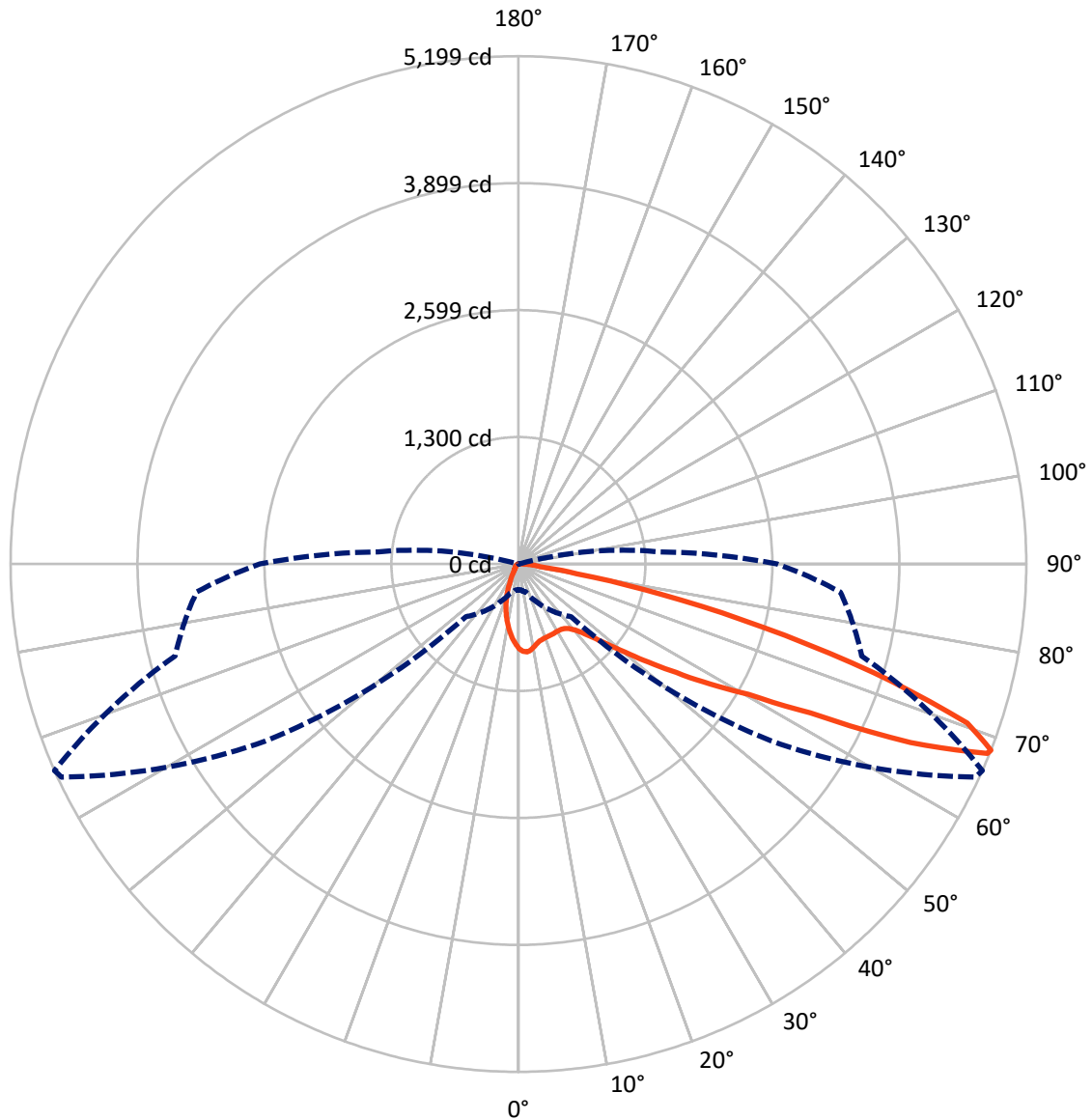
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.7 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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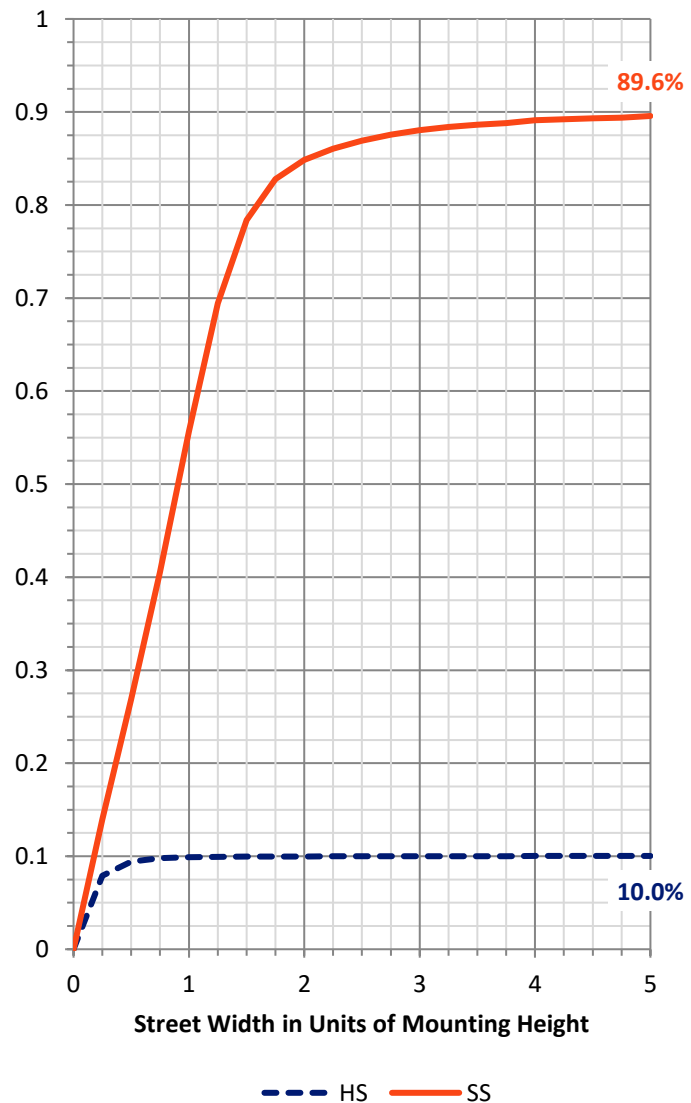
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	394.4	0.0	394.4
	% Fixture	10.1	0.0	10.1
<b>Street Side</b>	Lumens	3499.6	0.0	3499.6
	% Fixture	89.9	0.0	89.9
<b>Total</b>	Lumens	3894.0	0.0	3894.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	71.1	1.8
10°-20°	153.0	3.9
20°-30°	221.7	5.7
30°-40°	339.4	8.7
40°-50°	580.6	14.9
50°-60°	908.2	23.3
60°-70°	1045.8	26.9
70°-80°	523.3	13.4
80°-90°	50.7	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°	3894.0	100.0
0°-180°	3894.0	100.0

**Coefficient of Utilization**



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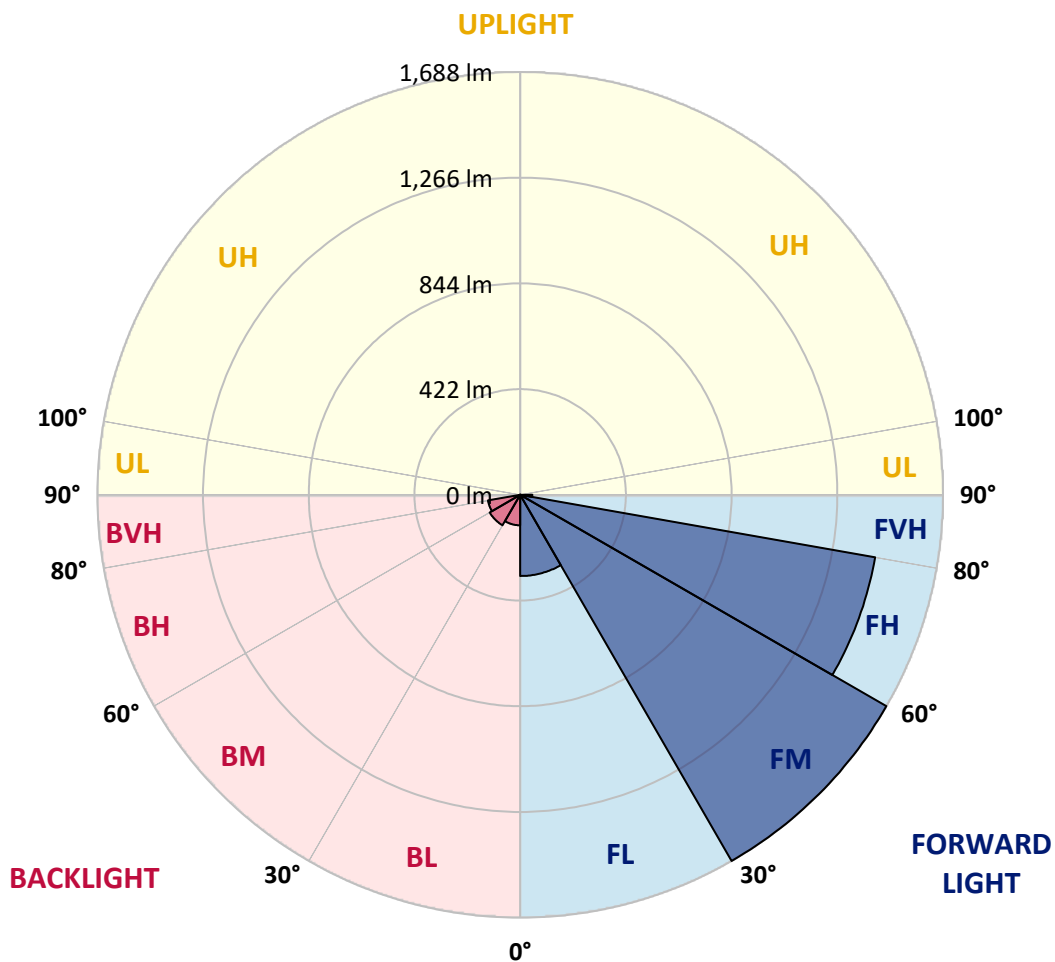
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	324.2	8.3			
FM	(30°-60°)	1687.8	43.3			
FH	(60°-80°)	1438.8	36.9			G1/1800
FVH	(80°-90°)	48.8	1.3			G1/100
BL	(0°-30°)	121.7	3.1	B1/500		
BM	(30°-60°)	140.5	3.6	B0/220		
BH	(60°-80°)	130.3	3.3	B1/500		G1/500
BVH	(80°-90°)	1.9	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°	867.5	867.5	867.5	867.5	867.5	867.5	867.5	867.5	867.5	867.5	867.5
2.5°	912.6	913.1	912.8	913.7	913.1	908.5	903.6	893.2	894.2	880.7	865.7
5°	848.3	853.6	858.7	863.9	876.4	887.4	900.6	903.6	903.6	892.0	870.0
7.5°	782.9	783.2	789.0	796.1	812.8	833.0	863.5	891.1	891.7	894.8	870.6
10°	733.6	735.2	739.1	746.8	763.6	783.5	817.7	860.9	864.1	886.8	864.5
12.5°	695.4	697.3	701.6	710.4	725.7	746.2	782.3	831.5	836.1	879.2	862.6
15°	666.1	668.5	672.0	680.8	697.3	719.0	758.4	811.9	817.4	876.1	868.5
17.5°	653.9	653.9	653.6	659.7	676.2	698.1	739.4	801.5	808.5	878.6	878.2
20°	659.1	658.2	651.7	650.2	660.3	682.4	724.5	794.8	802.7	883.2	890.1
22.5°	686.5	684.7	670.5	658.5	655.4	670.1	714.4	790.2	799.7	892.6	906.1
25°	744.9	739.4	719.6	692.7	668.5	667.0	707.4	787.8	797.8	903.6	923.5
27.5°	820.7	819.2	787.4	751.3	704.9	677.1	705.3	785.9	796.1	911.6	937.6
30°	914.9	915.6	878.9	831.8	761.4	705.5	712.0	785.0	795.4	912.2	943.7
32.5°	1012.2	1012.8	982.1	931.8	838.8	754.4	731.0	789.3	798.8	909.7	943.4
35°	1105.7	1106.6	1088.2	1047.6	942.2	822.2	766.7	803.9	810.7	911.2	942.8
37.5°	1224.0	1227.6	1205.0	1167.1	1071.8	921.9	825.0	833.6	839.1	923.8	947.3
40°	1425.8	1420.8	1356.0	1291.9	1212.3	1043.3	909.5	884.7	886.5	956.2	964.8
42.5°	1660.8	1654.7	1543.8	1433.1	1357.0	1189.8	1017.3	962.9	962.6	1010.6	1002.7
45°	1863.2	1859.5	1742.6	1595.0	1517.2	1351.4	1150.3	1075.7	1072.1	1104.7	1071.8
47.5°	2006.9	2003.9	1915.5	1767.5	1702.4	1529.4	1316.2	1229.5	1221.8	1228.0	1184.0
50°	2020.9	2017.6	1986.7	1891.6	1918.8	1790.4	1521.4	1431.0	1421.1	1411.6	1353.6
52.5°	1889.4	1889.2	1905.4	1899.3	2070.5	2126.4	1773.0	1680.1	1668.5	1644.4	1586.6
55°	1620.8	1619.2	1680.6	1769.9	2067.0	2473.0	2156.7	1976.6	1961.3	1913.0	1837.2
57.5°	1184.3	1176.2	1304.7	1493.9	1921.9	2624.6	2765.9	2344.9	2319.6	2166.4	2049.6
60°	653.9	656.9	821.9	1046.0	1577.9	2594.7	3326.5	2774.4	2707.8	2385.0	2267.3
62.5°	366.6	374.2	497.0	679.8	1006.1	2351.7	3627.3	3513.6	3353.0	2639.9	2542.5
65°	277.3	281.9	343.6	524.6	634.4	1643.4	3675.3	4547.2	4408.6	3026.4	2980.5
67.5°	261.0	264.7	295.0	435.0	577.8	852.2	3314.0	5158.4	5175.9	3553.3	3319.8
68°	262.9	267.4	297.7	418.5	576.9	762.4	3159.9	5161.5	5198.5	3638.4	3308.2
70°	241.5	242.7	314.8	410.5	559.1	600.7	2285.9	4807.9	4874.2	3739.5	3003.1
72.5°	92.4	92.7	141.3	355.5	585.7	604.1	1151.5	3800.0	3803.5	3254.4	2341.3
75°	48.0	40.3	44.4	111.2	559.4	588.8	577.8	2594.7	2578.5	2200.9	1434.6
77.5°	33.0	28.1	29.6	38.6	232.6	588.5	417.3	1492.1	1488.6	936.4	409.2
80°	18.7	16.2	17.7	32.4	81.6	552.5	388.9	641.4	604.3	164.4	66.3
82.5°	9.5	7.9	9.5	27.2	50.7	347.6	378.1	251.7	224.1	39.2	43.0
85°	2.4	2.4	4.6	18.9	31.4	114.0	339.0	181.6	163.3	17.2	30.6
87.5°	0.6	0.3	1.8	7.0	11.4	24.8	188.0	101.2	87.1	8.8	17.7
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°	867.5	867.5	867.5	867.5	867.5	867.5	867.5	867.5	867.5	867.5	867.5
2.5°	859.7	851.0	834.2	815.3	801.9	787.1	778.6	768.2	760.2	753.3	758.4
5°	856.6	839.9	802.7	760.9	725.7	692.0	667.0	643.2	625.2	613.8	618.4
7.5°	848.6	824.2	763.6	698.1	640.7	586.6	542.6	503.1	472.5	456.0	461.3
10°	835.2	800.7	719.3	628.5	548.2	471.7	406.2	347.6	303.2	282.4	287.4
12.5°	825.4	779.8	673.5	561.3	455.5	347.0	260.1	192.9	158.3	137.5	139.5
15°	821.1	763.6	630.7	490.3	354.3	222.9	140.6	101.8	89.9	85.5	85.9
17.5°	821.7	750.7	590.0	416.6	252.2	128.1	86.2	77.7	75.8	74.9	74.9
20°	823.3	737.9	547.8	339.9	161.3	82.5	71.8	69.1	68.2	66.9	67.3
22.5°	827.8	728.1	505.4	262.9	99.3	67.3	63.6	61.1	59.6	57.8	58.1
25°	834.8	720.8	463.5	189.2	70.0	58.7	55.2	52.0	49.1	47.1	47.4
27.5°	839.1	710.4	418.8	129.0	58.1	51.4	46.8	42.2	39.2	37.2	37.0
30°	836.1	693.6	368.1	84.6	51.4	44.4	38.8	33.7	30.6	29.1	29.1
32.5°	827.8	672.0	312.2	61.7	45.6	38.2	31.4	26.9	24.8	23.8	24.1
35°	818.4	649.3	252.5	52.2	41.0	32.4	25.6	22.0	21.1	20.8	20.8
37.5°	813.1	629.8	195.3	47.4	36.7	26.9	21.1	18.9	18.0	18.0	18.0
40°	818.9	614.7	144.5	43.7	32.4	22.3	17.7	16.2	15.9	15.9	15.9
42.5°	843.7	609.5	105.8	40.7	28.1	18.7	15.3	14.1	13.7	14.1	14.1
45°	892.0	620.8	80.1	37.5	24.1	15.3	13.1	12.2	12.2	12.6	12.6
47.5°	973.9	649.9	65.8	34.5	20.2	12.9	11.4	10.7	10.7	11.0	11.0
50°	1101.2	703.7	59.0	31.1	16.8	11.0	9.5	9.2	9.2	9.5	9.9
52.5°	1294.2	806.2	55.6	27.9	13.7	9.2	7.9	7.6	7.9	8.3	8.3
55°	1509.2	937.2	51.7	24.5	11.6	7.6	6.4	6.4	6.8	7.3	7.3
57.5°	1709.4	1063.7	48.0	20.2	10.1	6.1	5.3	5.3	5.8	6.4	6.4
60°	1921.0	1187.8	43.0	16.2	8.5	4.9	4.3	4.3	5.3	5.8	6.1
62.5°	2182.4	1332.2	36.7	12.9	6.8	3.8	3.1	4.0	4.9	5.8	5.8
65°	2560.2	1511.6	28.7	10.1	5.3	2.7	2.4	3.8	4.6	5.5	5.8
67.5°	2697.4	1488.6	21.8	8.3	4.0	2.1	2.1	3.4	4.6	5.5	5.5
68°	2647.3	1438.6	20.8	7.9	3.8	2.1	2.1	3.4	4.6	5.5	5.5
70°	2306.7	1175.9	17.2	6.1	3.1	1.8	1.8	3.1	4.6	5.3	5.5
72.5°	1727.2	781.3	14.6	4.0	2.7	1.8	1.5	3.1	4.3	5.3	5.3
75°	990.8	324.4	12.6	3.1	2.4	1.5	1.5	2.7	4.3	5.3	5.3
77.5°	280.0	75.8	10.1	2.4	2.1	1.5	1.2	2.7	4.0	4.9	4.9
80°	51.4	22.6	7.9	2.1	1.8	1.5	1.2	2.7	4.0	4.9	4.9
82.5°	34.0	10.7	5.8	2.1	1.8	1.5	1.2	2.4	3.8	4.6	4.6
85°	25.3	7.6	3.8	2.1	1.8	1.5	1.2	2.4	3.8	4.6	4.6
87.5°	14.1	3.4	2.7	2.4	2.1	1.5	1.2	2.1	3.4	4.3	4.3
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)