

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: P195193

Luminaire Tested: **NAV-AF-01-D-UNV-SL4-7060-600-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195193  
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-SL4-7060-600-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 5700K, 615mA 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: 3280 lumens  
Efficiency: N/A  
Efficacy: 96.5 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): 34  
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

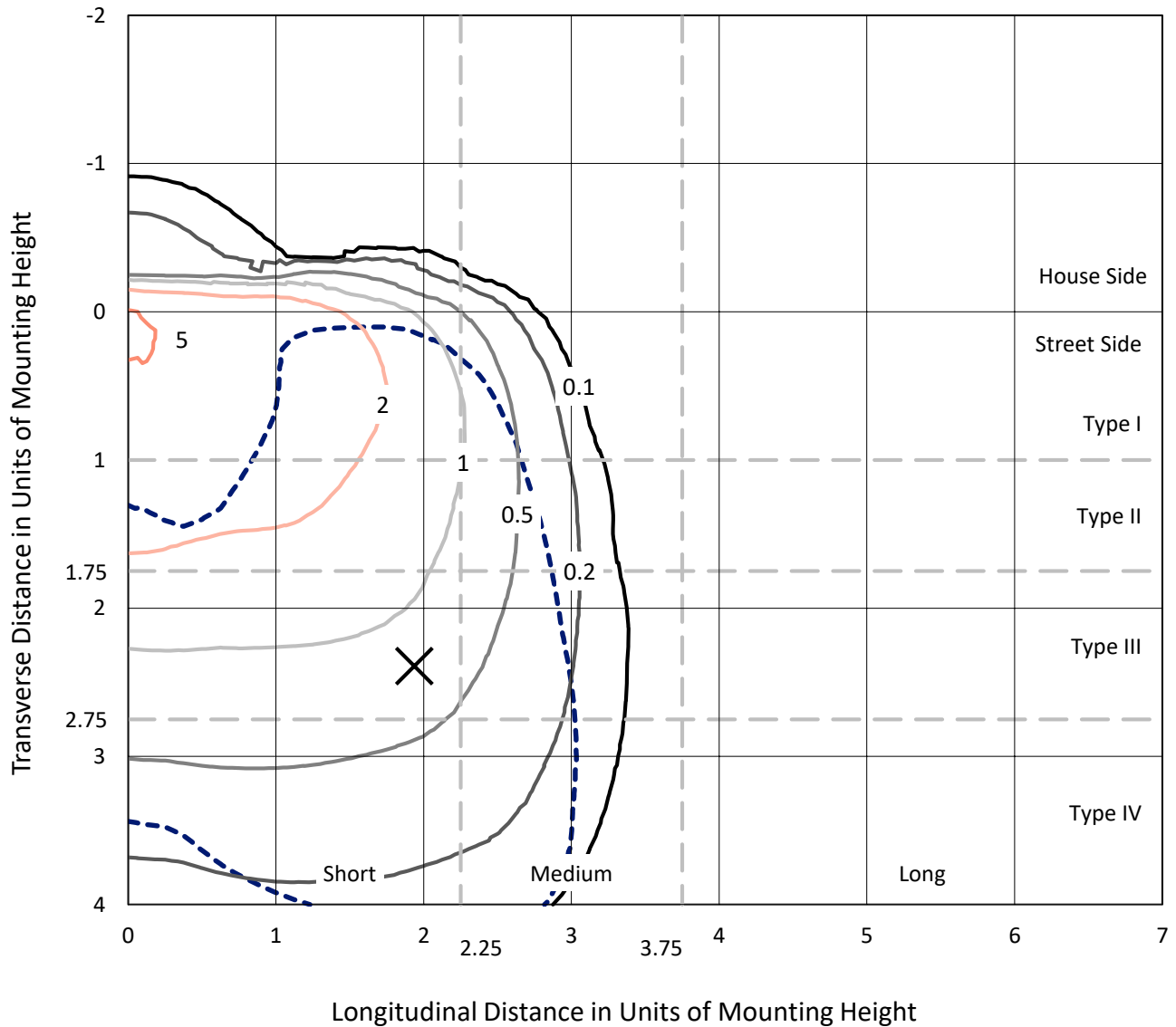


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### Iso-Footcandle Lines of Horizontal Illumination

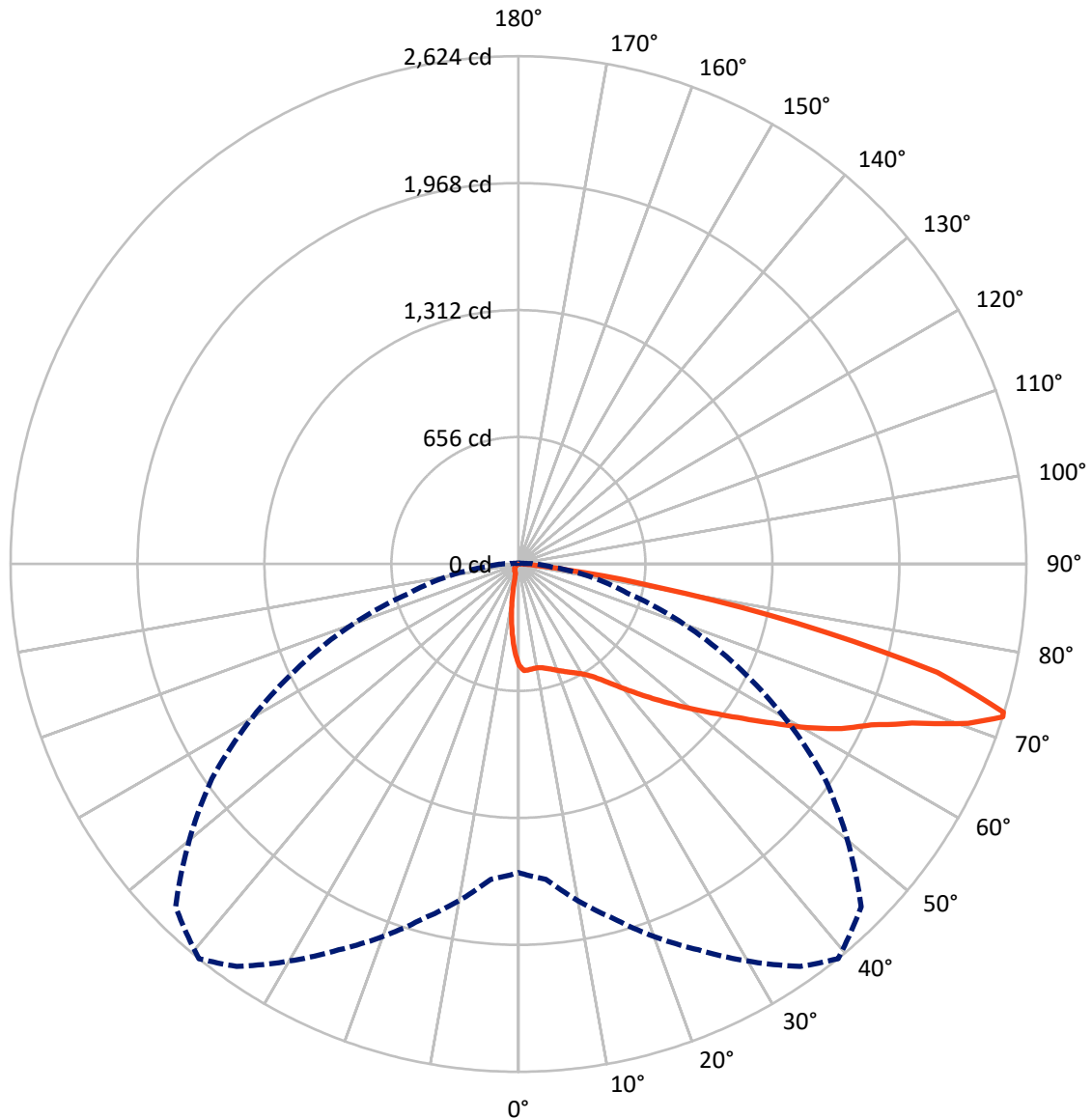
× Max cd  
 - - - 1/2 Max cd



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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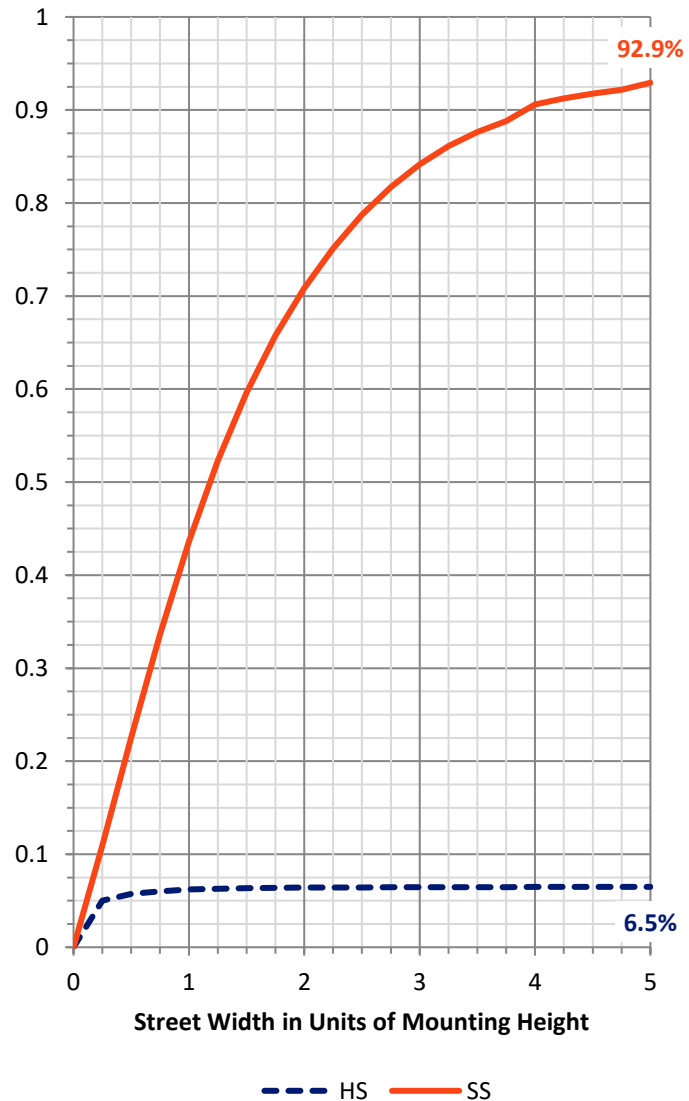
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	215.0	0.0	215.0
	% Fixture	6.6	0.0	6.6
<b>Street Side</b>	Lumens	3065.0	0.0	3065.0
	% Fixture	93.4	0.0	93.4
<b>Total</b>	Lumens	3280.0	0.0	3280.0
	% 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°	171.7	5.2
30°-40°	273.6	8.3
40°-50°	451.7	13.8
50°-60°	682.1	20.8
60°-70°	888.6	27.1
70°-80°	600.4	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°	3280.0	100.0
0°-180°	3280.0	100.0



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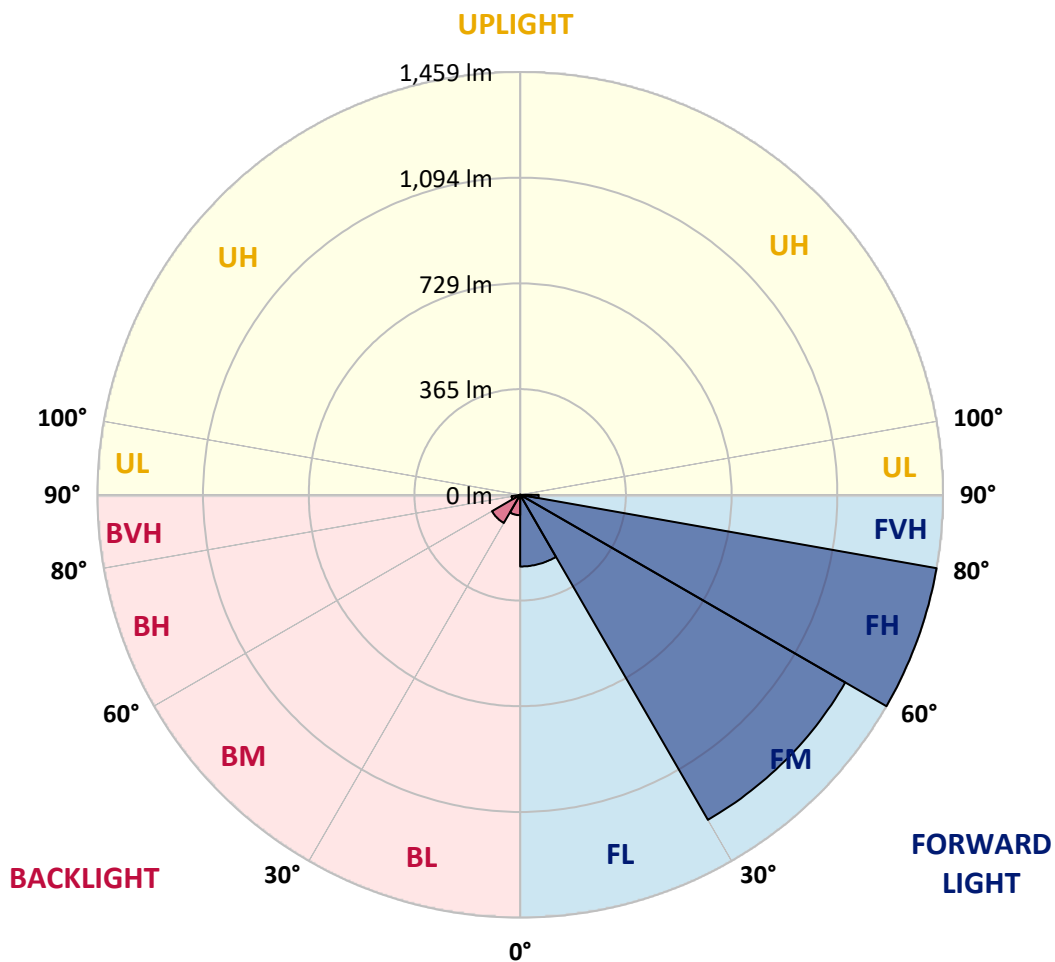
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	247.4	7.5			
FM	(30°-60°)	1295.0	39.5			
FH	(60°-80°)	1458.8	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°	525.0	525.0	525.0	525.0	525.0	525.0	525.0	525.0	525.0	525.0	525.0
2.5°	559.0	560.1	558.8	556.4	553.1	551.0	548.2	542.0	534.3	527.6	519.8
5°	563.4	563.9	562.4	558.0	552.8	550.0	546.4	539.7	531.7	522.4	508.5
7.5°	564.7	564.4	562.6	557.2	549.2	545.6	539.4	531.2	522.9	514.4	498.7
10°	564.2	564.2	562.9	557.7	548.7	545.4	538.4	529.6	519.3	510.8	494.0
12.5°	562.4	563.4	562.6	559.8	553.1	550.5	544.3	535.6	525.8	517.0	499.2
15°	564.7	566.2	567.8	566.8	562.9	560.6	554.9	545.9	537.9	528.6	509.5
17.5°	574.0	577.3	580.9	581.2	577.1	572.9	566.5	557.2	549.5	541.0	520.3
20°	591.5	594.1	600.8	602.1	593.8	587.9	578.9	568.0	560.3	553.1	530.4
22.5°	617.6	620.4	625.8	624.0	610.1	603.1	591.8	579.4	571.4	567.3	542.0
25°	657.0	657.8	659.1	651.1	628.1	620.4	606.5	592.5	586.1	585.6	558.5
27.5°	703.4	704.4	698.8	681.0	648.2	638.2	622.5	609.8	606.7	610.6	579.4
30°	756.5	756.8	741.1	712.2	671.4	660.4	644.1	630.2	633.0	642.6	606.2
32.5°	810.9	808.4	786.7	749.1	703.2	689.8	675.8	661.9	670.2	689.5	645.4
35°	860.7	859.7	834.1	790.3	744.4	732.6	722.5	707.8	721.2	752.7	698.8
37.5°	910.5	909.7	880.6	834.9	795.2	786.7	779.2	767.9	789.8	836.0	770.2
40°	965.4	964.1	928.3	884.4	854.3	849.6	845.2	840.3	877.7	941.9	859.2
42.5°	1033.2	1027.5	978.8	938.3	919.2	920.5	920.8	925.7	984.2	1068.0	964.1
45°	1111.1	1098.4	1029.6	996.1	990.7	998.4	1006.1	1026.5	1108.2	1213.2	1080.1
47.5°	1186.6	1166.3	1088.1	1058.2	1069.3	1085.3	1103.9	1143.6	1247.5	1365.1	1185.3
50°	1251.6	1230.7	1146.1	1121.4	1156.7	1180.4	1213.4	1273.5	1394.5	1493.5	1251.6
52.5°	1302.7	1286.2	1207.5	1191.0	1253.7	1286.2	1338.0	1416.9	1533.2	1578.0	1298.0
55°	1340.3	1332.1	1266.3	1268.6	1361.5	1408.4	1472.8	1562.1	1650.2	1643.8	1332.8
57.5°	1382.9	1376.4	1327.9	1360.2	1491.2	1551.7	1626.3	1698.0	1735.3	1696.7	1366.9
60°	1426.4	1428.5	1402.7	1471.0	1651.5	1718.6	1783.6	1801.3	1808.3	1750.3	1402.7
62.5°	1459.4	1468.2	1470.5	1590.7	1816.0	1873.3	1901.4	1888.8	1887.2	1822.2	1399.9
65°	1497.3	1520.3	1558.5	1721.9	1965.6	2003.2	2023.4	2041.7	2003.0	1843.6	1262.2
67.5°	1562.8	1598.9	1684.8	1882.8	2138.4	2194.1	2251.0	2231.7	2020.3	1626.3	961.5
70°	1651.0	1695.1	1846.7	2093.0	2372.7	2466.1	2513.8	2216.5	1715.2	1123.7	507.2
72°	1595.3	1635.3	1896.8	2200.2	2538.8	2624.4	2505.0	1933.4	1243.4	582.5	169.9
72.5°	1541.2	1582.4	1880.8	2199.0	2555.3	2620.8	2448.0	1821.7	1100.3	453.3	117.1
75°	1069.3	1121.4	1612.3	1976.7	2307.5	2235.6	1873.0	1103.1	398.6	77.9	38.7
77.5°	552.8	593.1	978.0	1396.8	1608.2	1472.8	1107.0	478.6	110.4	41.3	25.5
80°	342.7	362.5	457.4	688.2	835.4	730.8	488.4	193.4	70.7	24.5	20.4
82.5°	177.4	192.6	288.0	277.7	308.6	256.6	180.2	161.9	43.6	15.2	20.9
85°	58.3	61.9	176.9	184.6	132.0	88.7	79.9	154.5	12.6	9.8	17.8
87.5°	7.7	9.0	62.1	105.7	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°	525.0	525.0	525.0	525.0	525.0	525.0	525.0	525.0	525.0	525.0	525.0
2.5°	514.7	511.3	500.7	490.2	478.1	467.0	458.2	452.5	455.1	446.6	447.9
5°	500.0	491.5	468.3	443.2	416.2	390.9	370.8	355.8	353.0	340.1	340.6
7.5°	485.8	471.9	434.2	393.0	348.1	311.7	278.7	249.9	239.5	229.0	222.8
10°	478.1	459.0	405.6	345.5	282.3	229.0	182.6	146.2	131.0	119.9	114.5
12.5°	480.4	455.1	384.2	302.5	219.4	151.6	103.1	76.6	67.3	62.1	60.3
15°	488.1	455.9	364.9	260.4	159.6	91.8	60.6	51.8	51.1	50.8	50.5
17.5°	495.3	456.7	344.5	216.6	106.8	58.5	48.7	48.0	48.0	48.0	48.0
20°	502.8	456.9	322.1	170.7	70.1	48.0	45.9	45.4	45.9	45.9	45.9
22.5°	511.6	458.7	300.4	126.1	51.8	45.1	43.8	43.6	43.8	43.8	43.6
25°	522.4	462.6	276.9	90.2	46.9	43.3	42.0	41.8	42.0	41.8	41.8
27.5°	536.8	467.7	249.6	64.7	44.9	41.5	40.2	40.2	40.2	40.0	40.0
30°	555.4	473.9	213.0	51.1	42.8	39.7	38.7	38.7	38.4	38.2	38.2
32.5°	582.0	484.0	173.0	46.2	40.5	37.4	36.4	36.6	36.4	36.1	35.8
35°	619.6	499.7	133.6	43.6	38.2	35.1	34.0	34.0	34.0	33.5	33.5
37.5°	673.0	523.7	100.0	41.0	35.8	32.7	31.5	31.5	31.2	30.7	30.9
40°	739.0	553.9	72.5	38.7	33.5	30.2	29.1	28.6	28.1	27.6	27.6
42.5°	818.4	583.3	54.4	36.4	31.2	28.1	26.8	26.3	25.3	24.8	24.5
45°	907.4	614.5	45.1	33.5	28.6	25.8	24.8	23.7	22.4	21.7	21.4
47.5°	982.4	633.5	40.2	30.7	26.0	23.5	22.4	20.9	19.3	18.8	18.8
50°	1027.5	625.5	36.1	27.8	23.5	21.1	19.9	17.8	16.8	16.2	16.0
52.5°	1052.8	601.8	32.7	25.5	21.1	18.6	16.8	15.0	14.4	13.9	13.9
55°	1070.1	567.5	29.1	23.2	19.1	16.2	14.2	12.9	12.4	12.1	11.9
57.5°	1086.6	525.8	25.8	21.1	17.0	14.4	12.1	11.6	10.6	10.3	10.3
60°	1091.5	468.3	22.7	18.8	15.2	12.6	10.6	9.8	8.8	8.5	8.5
62.5°	1029.1	372.6	20.1	16.0	13.4	10.8	9.3	8.3	7.2	7.2	7.2
65°	859.9	253.0	17.3	13.9	11.9	9.3	8.0	6.7	6.2	6.2	6.2
67.5°	599.0	141.0	14.7	11.9	10.1	7.7	6.7	5.7	5.4	5.7	5.7
70°	270.0	56.0	12.4	9.8	8.3	6.4	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°	30.9	18.3	7.5	5.7	4.9	4.4	3.9	4.4	5.2	5.2	5.2
77.5°	24.2	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°	22.9	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)