

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: P270288

Luminaire Tested: **NAV-AF-01-D-UNV-SL4-7027-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270288
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-SL4-7027-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 2700K, 1050mA 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: 4325.4 lumens
Efficiency: N/A
Efficacy: 73.3 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 - G2

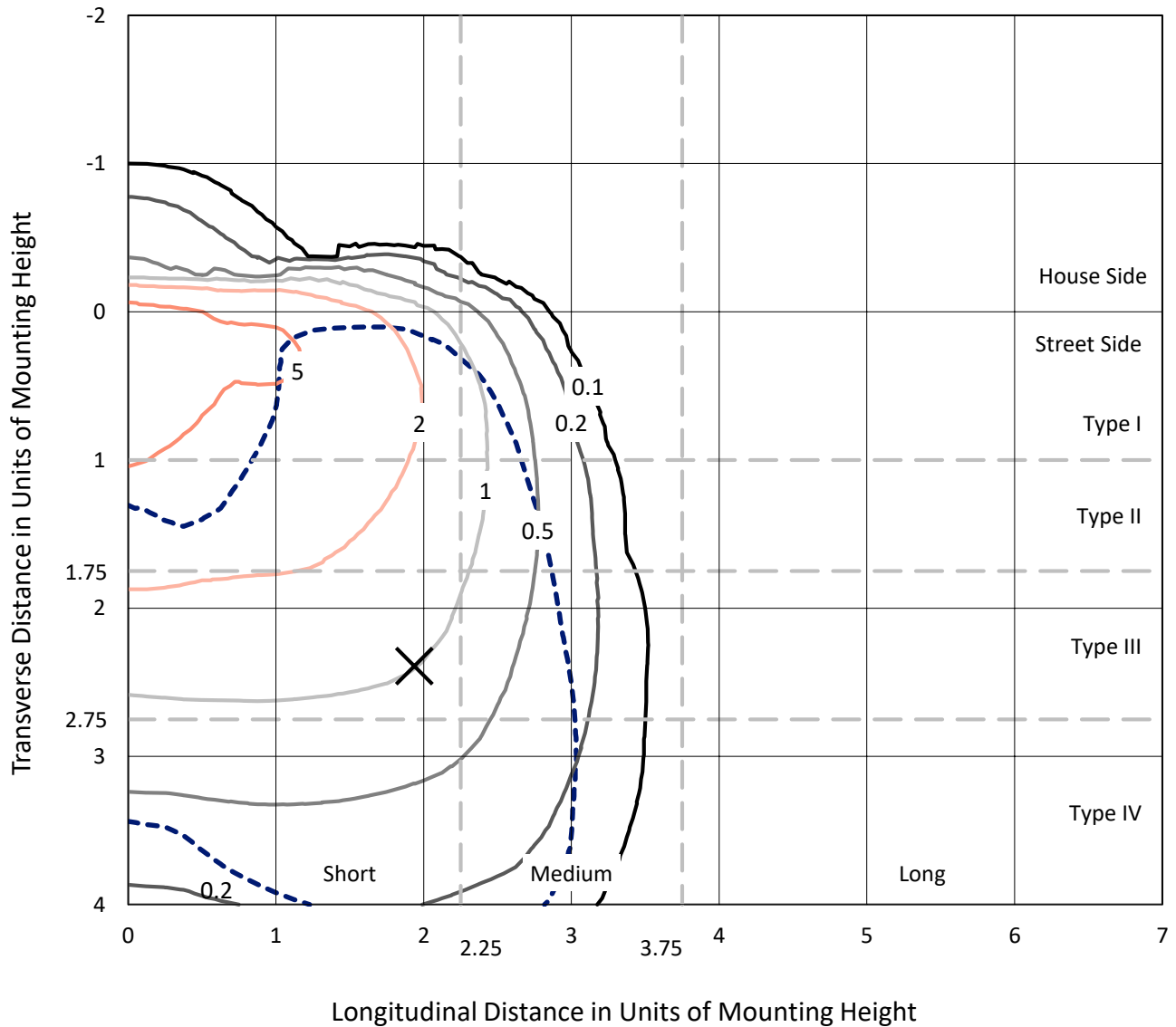
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

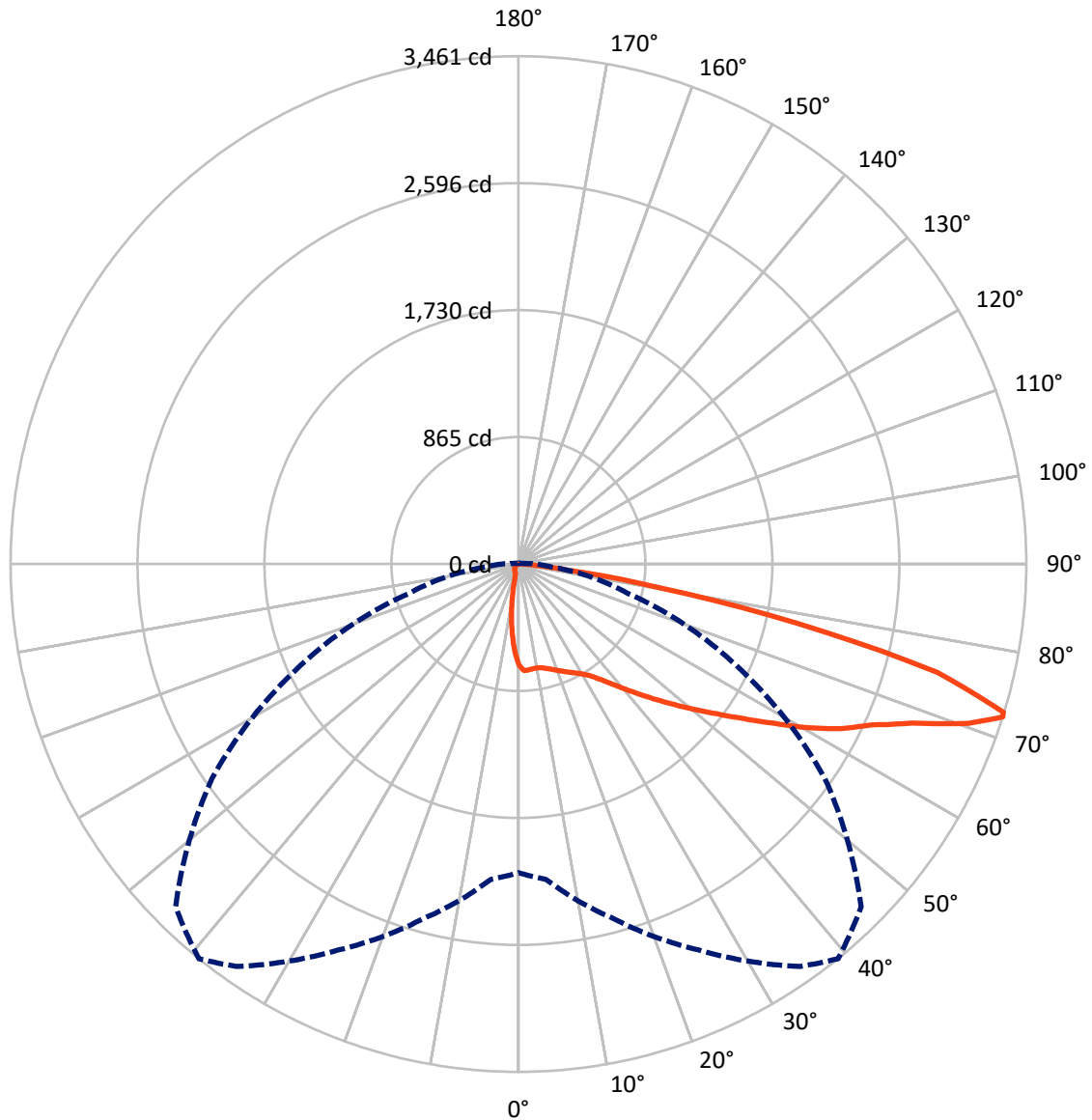


Based on 10 foot mounting height. Maximum calculated value = 7.3 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



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

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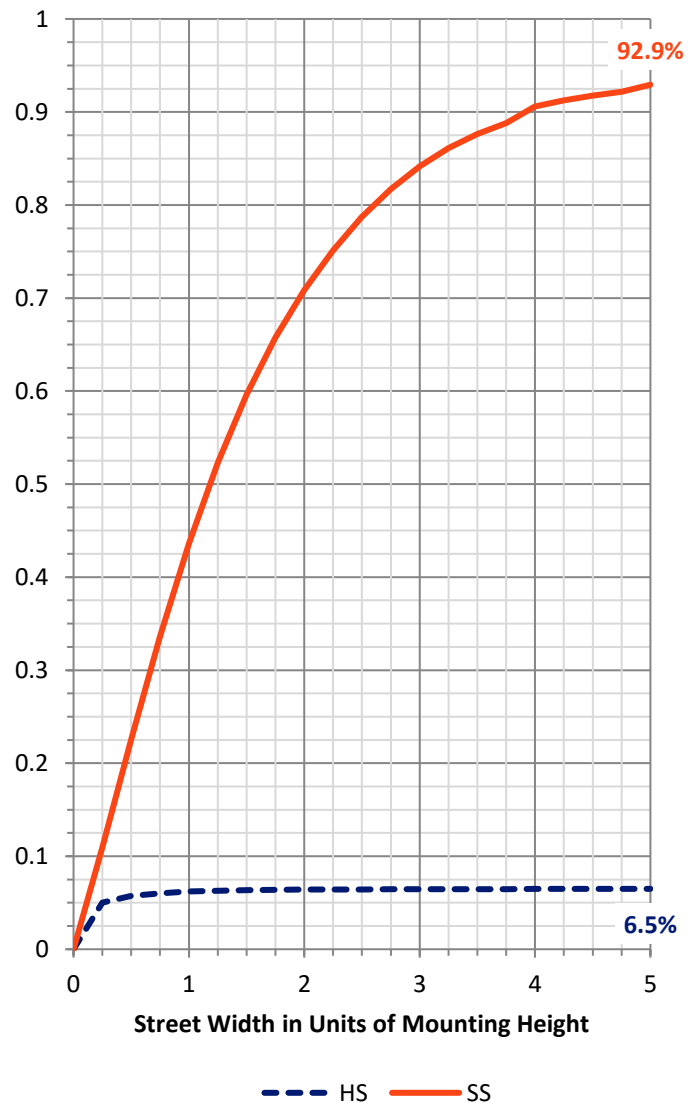
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	283.5	0.0	283.5
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	4041.9	0.0	4041.9
	% Fixture	93.4	0.0	93.4
Total	Lumens	4325.4	0.0	4325.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.3	1.3
10°-20°	136.3	3.2
20°-30°	226.4	5.2
30°-40°	360.9	8.3
40°-50°	595.7	13.8
50°-60°	899.5	20.8
60°-70°	1171.8	27.1
70°-80°	791.8	18.3
80°-90°	86.7	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°	4325.4	100.0
0°-180°	4325.4	100.0



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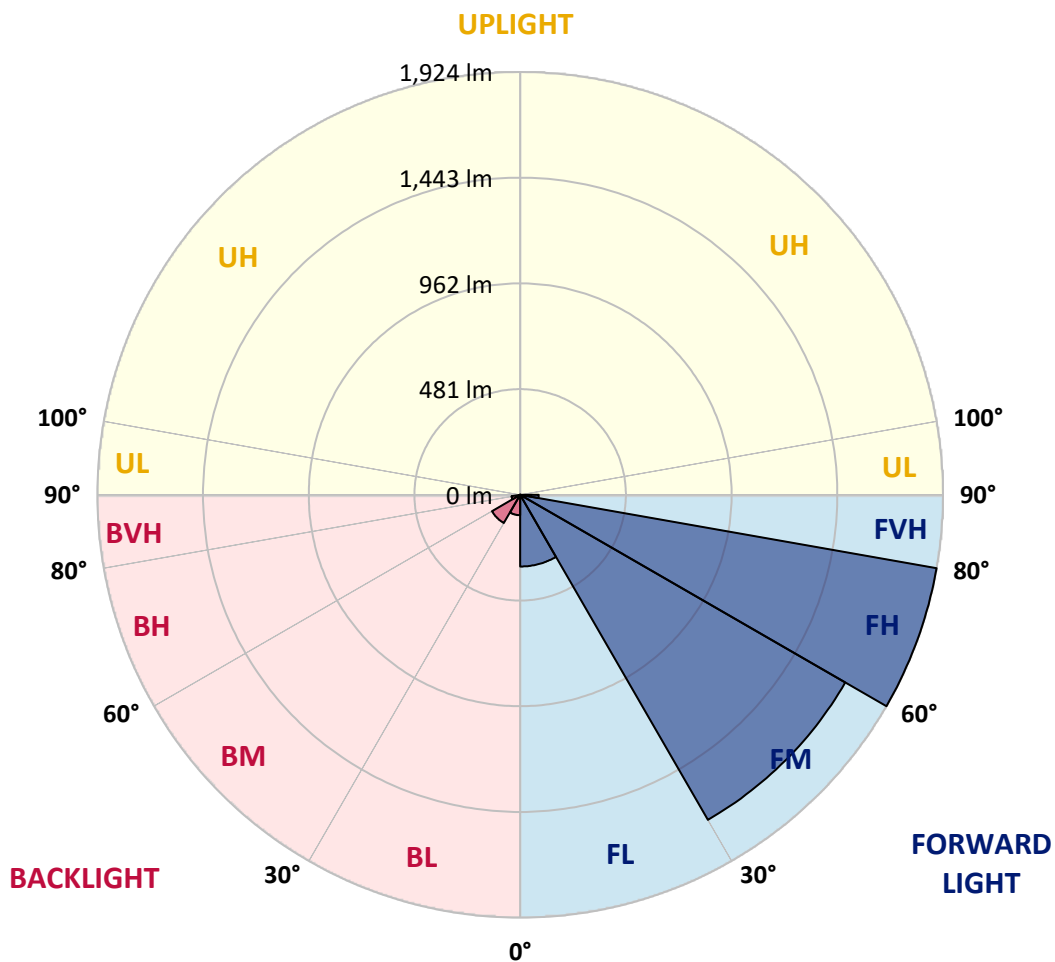
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	326.2	7.5			
FM	(30°-60°)	1707.7	39.5			
FH	(60°-80°)	1923.7	44.5			G2/5000
FVH	(80°-90°)	84.2	1.9			G1/100
BL	(0°-30°)	92.8	2.1	B0/110		
BM	(30°-60°)	148.3	3.4	B0/220		
BH	(60°-80°)	39.8	0.9	B0/110		G0/110
BVH	(80°-90°)	2.5	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-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	692.4	692.4	692.4	692.4	692.4	692.4	692.4	692.4	692.4	692.4	692.4
2.5°	737.1	738.5	736.9	733.7	729.3	726.6	722.9	714.7	704.5	695.6	685.4
5°	743.0	743.6	741.6	735.8	729.1	725.3	720.5	711.6	701.1	688.9	670.6
7.5°	744.7	744.3	742.0	734.9	724.3	719.5	711.4	700.5	689.5	678.4	657.6
10°	743.9	743.9	742.3	735.5	723.6	719.2	710.0	698.4	684.8	673.5	651.5
12.5°	741.6	743.0	742.0	738.1	729.3	726.0	717.8	706.2	693.3	681.8	658.3
15°	744.7	746.8	748.7	747.4	742.3	739.2	731.8	719.8	709.3	697.1	671.9
17.5°	756.9	761.4	766.1	766.4	761.0	755.6	747.0	734.9	724.7	713.3	686.1
20°	780.1	783.4	792.2	794.0	783.1	775.2	763.4	749.0	738.9	729.3	699.4
22.5°	814.4	818.1	825.3	822.8	804.5	795.3	780.4	764.1	753.5	748.1	714.7
25°	866.4	867.5	869.1	858.6	828.2	818.1	799.8	781.3	772.9	772.3	736.5
27.5°	927.6	928.9	921.5	898.0	854.8	841.6	820.8	804.3	800.1	805.2	764.1
30°	997.7	997.9	977.3	939.2	885.5	870.8	849.3	831.0	834.7	847.3	799.4
32.5°	1069.4	1066.0	1037.5	987.7	927.3	909.5	891.2	872.9	883.8	909.3	851.1
35°	1135.0	1133.8	1100.1	1042.3	981.7	966.0	952.7	933.3	951.0	992.5	921.5
37.5°	1200.7	1199.6	1161.1	1101.1	1048.6	1037.5	1027.7	1012.6	1041.6	1102.4	1015.7
40°	1273.1	1271.5	1224.1	1166.3	1126.6	1120.4	1114.6	1108.1	1157.5	1242.1	1133.0
42.5°	1362.5	1355.1	1290.8	1237.3	1212.3	1213.9	1214.2	1220.6	1298.0	1408.5	1271.5
45°	1465.1	1448.5	1357.8	1313.5	1306.5	1316.6	1326.7	1353.7	1461.5	1599.8	1424.4
47.5°	1564.8	1538.0	1435.0	1395.4	1410.1	1431.2	1455.7	1508.1	1645.1	1800.2	1563.1
50°	1650.5	1623.0	1511.5	1478.8	1525.4	1556.7	1600.2	1679.4	1838.9	1969.4	1650.5
52.5°	1717.9	1696.1	1592.3	1570.5	1653.2	1696.1	1764.5	1868.5	2021.8	2081.1	1711.7
55°	1767.4	1756.6	1669.9	1673.0	1795.4	1857.2	1942.2	2060.0	2176.2	2167.7	1757.7
57.5°	1823.6	1815.0	1751.2	1793.6	1966.4	2046.2	2144.6	2239.1	2288.4	2237.4	1802.4
60°	1881.1	1883.7	1849.8	1939.9	2177.9	2266.3	2352.0	2375.5	2384.6	2308.1	1849.8
62.5°	1924.6	1936.1	1939.3	2097.6	2394.8	2470.2	2507.3	2490.7	2488.8	2403.1	1846.0
65°	1974.6	2004.8	2055.1	2270.7	2592.1	2641.7	2668.2	2692.4	2641.3	2431.3	1664.5
67.5°	2060.9	2108.5	2221.8	2482.9	2819.9	2893.4	2968.4	2942.9	2664.2	2144.6	1268.0
70°	2177.2	2235.4	2435.3	2760.0	3128.9	3252.0	3314.9	2922.9	2261.9	1481.8	668.9
72°	2103.8	2156.6	2501.3	2901.4	3348.0	3460.9	3303.3	2549.6	1639.6	768.1	224.0
72.5°	2032.3	2086.9	2480.2	2899.8	3369.7	3456.0	3228.2	2402.3	1450.9	597.8	154.4
75°	1410.1	1478.8	2126.2	2606.7	3043.0	2948.1	2470.0	1454.6	525.7	102.6	51.1
77.5°	729.1	782.1	1289.7	1842.0	2120.8	1942.2	1459.7	631.1	145.5	54.3	33.6
80°	451.8	478.1	603.2	907.6	1101.7	963.6	644.1	254.9	93.2	32.2	26.9
82.5°	234.0	254.0	379.9	366.1	407.0	338.3	237.7	213.5	57.4	20.0	27.6
85°	76.8	81.6	233.3	243.5	174.1	117.0	105.5	203.6	16.7	12.9	23.4
87.5°	10.2	11.9	81.9	139.3	85.7	53.0	63.2	71.8	5.7	7.1	6.5
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°	692.4	692.4	692.4	692.4	692.4	692.4	692.4	692.4	692.4	692.4	692.4
2.5°	678.7	674.3	660.3	646.4	630.4	615.8	604.2	596.7	600.2	588.8	590.6
5°	659.4	648.0	617.6	584.4	548.9	515.4	488.9	469.3	465.5	448.6	449.2
7.5°	640.6	622.3	572.6	518.2	459.0	411.2	367.5	329.5	315.9	301.9	293.7
10°	630.4	605.3	534.9	455.6	372.3	301.9	240.7	192.7	172.7	158.1	150.9
12.5°	633.5	600.2	506.6	398.8	289.3	200.0	136.1	101.0	88.8	81.9	79.6
15°	643.6	601.1	481.1	343.4	210.6	121.0	79.9	68.4	67.4	67.1	66.7
17.5°	653.2	602.3	454.4	285.7	140.8	77.2	64.3	63.2	63.2	63.2	63.2
20°	663.0	602.6	424.7	225.0	92.4	63.2	60.5	59.8	60.5	60.5	60.5
22.5°	674.6	604.9	396.2	166.2	68.4	59.5	57.9	57.4	57.9	57.9	57.4
25°	688.9	609.9	365.3	119.0	62.0	57.1	55.4	55.1	55.4	55.1	55.1
27.5°	708.0	616.9	329.1	85.3	59.2	54.7	53.0	53.0	53.0	52.7	52.7
30°	732.4	625.0	280.9	67.4	56.5	52.5	51.1	51.1	50.7	50.3	50.3
32.5°	767.4	638.2	228.2	60.8	53.4	49.2	47.9	48.2	47.9	47.6	47.3
35°	817.1	658.9	176.2	57.4	50.3	46.3	44.8	44.8	44.8	44.1	44.1
37.5°	887.4	690.5	132.0	54.1	47.3	43.2	41.5	41.5	41.1	40.5	40.9
40°	974.5	730.4	95.6	51.1	44.1	39.7	38.4	37.8	37.1	36.4	36.4
42.5°	1079.3	769.2	71.8	47.9	41.1	37.1	35.4	34.7	33.3	32.7	32.2
45°	1196.6	810.4	59.5	44.1	37.8	34.0	32.7	31.4	29.6	28.6	28.2
47.5°	1295.5	835.5	53.0	40.5	34.3	30.9	29.6	27.6	25.5	24.9	24.9
50°	1355.1	825.0	47.6	36.7	30.9	27.8	26.2	23.4	22.1	21.4	21.1
52.5°	1388.3	793.7	43.2	33.6	27.8	24.4	22.1	19.8	19.0	18.3	18.3
55°	1411.1	748.4	38.4	30.6	25.2	21.4	18.8	17.0	16.3	16.0	15.6
57.5°	1432.8	693.3	34.0	27.8	22.5	19.0	16.0	15.4	14.0	13.7	13.7
60°	1439.4	617.6	30.0	24.9	20.0	16.7	14.0	12.9	11.6	11.1	11.1
62.5°	1357.1	491.4	26.5	21.1	17.6	14.4	12.2	10.9	9.5	9.5	9.5
65°	1134.0	333.6	22.7	18.3	15.6	12.2	10.5	8.9	8.2	8.2	8.2
67.5°	789.9	185.9	19.4	15.6	13.2	10.2	8.9	7.5	7.1	7.5	7.5
70°	356.0	73.8	16.3	12.9	10.9	8.5	7.5	6.5	7.1	7.1	7.1
72°	106.8	39.4	13.7	10.5	8.9	7.5	6.5	6.1	6.7	7.1	7.1
72.5°	79.2	35.4	12.9	10.2	8.9	7.1	6.1	6.1	6.7	7.1	7.1
75°	40.9	24.2	9.8	7.5	6.5	5.7	5.1	5.7	6.7	6.7	6.7
77.5°	32.0	19.8	8.2	5.7	5.4	5.1	4.9	5.4	6.1	6.1	6.1
80°	30.0	12.9	6.5	5.4	4.9	4.4	4.4	4.9	5.4	5.7	5.7
82.5°	30.3	10.5	5.7	5.1	4.4	4.1	4.1	4.4	5.1	5.4	5.4
85°	19.4	7.1	5.1	4.4	4.1	3.8	3.8	4.1	4.9	5.1	5.1
87.5°	6.5	5.4	4.4	4.1	3.5	3.5	3.5	3.5	4.1	4.4	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

(END OF REPORT)