

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: P195685

Luminaire Tested: **NAV-AF-01-D-UNV-SL4-7050-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195685
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-SL4-7050-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5000K, 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: 4978 lumens
Efficiency: N/A
Efficacy: 84.4 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

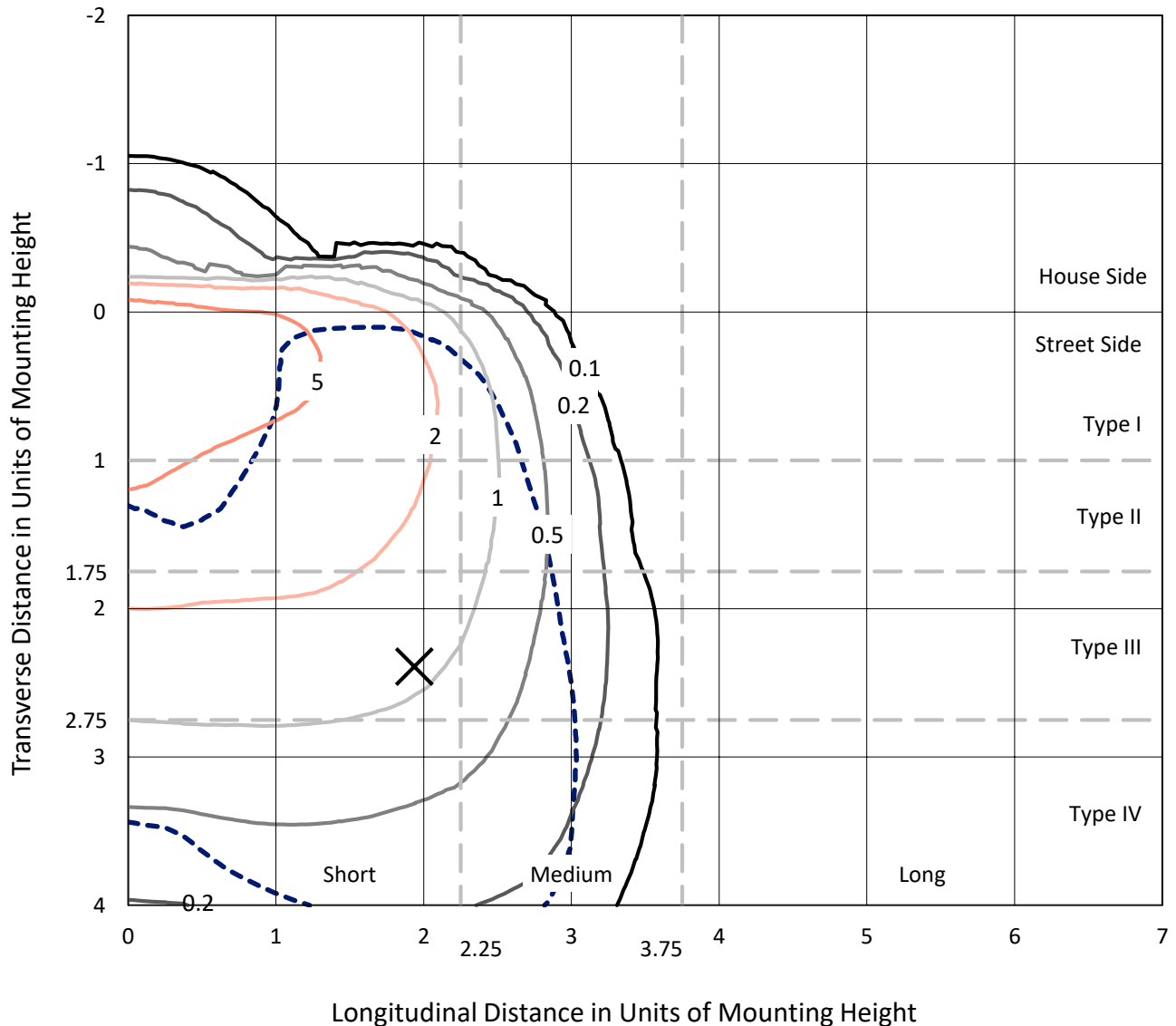


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Iso-Footcandle Lines of Horizontal Illumination

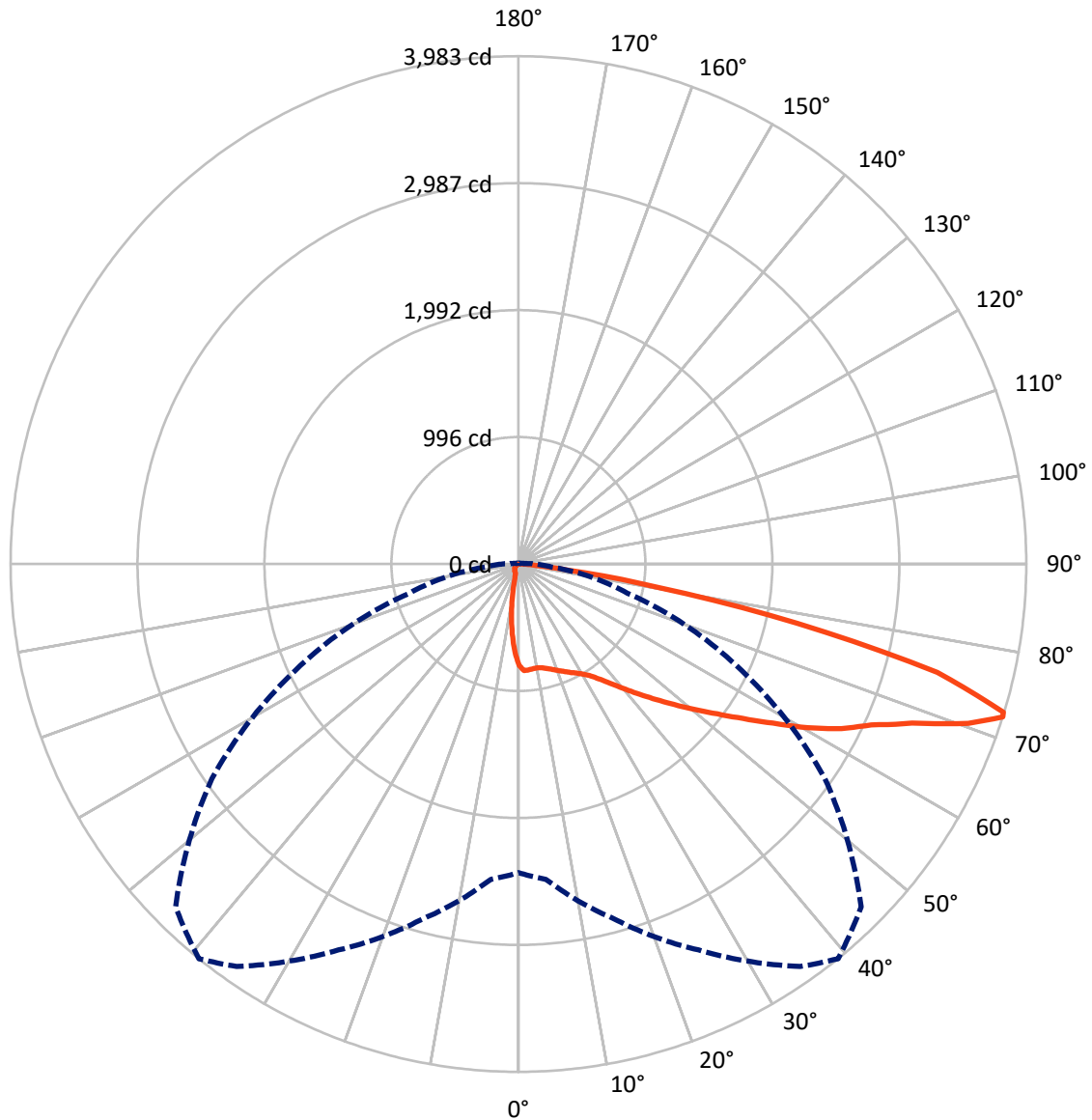
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.4 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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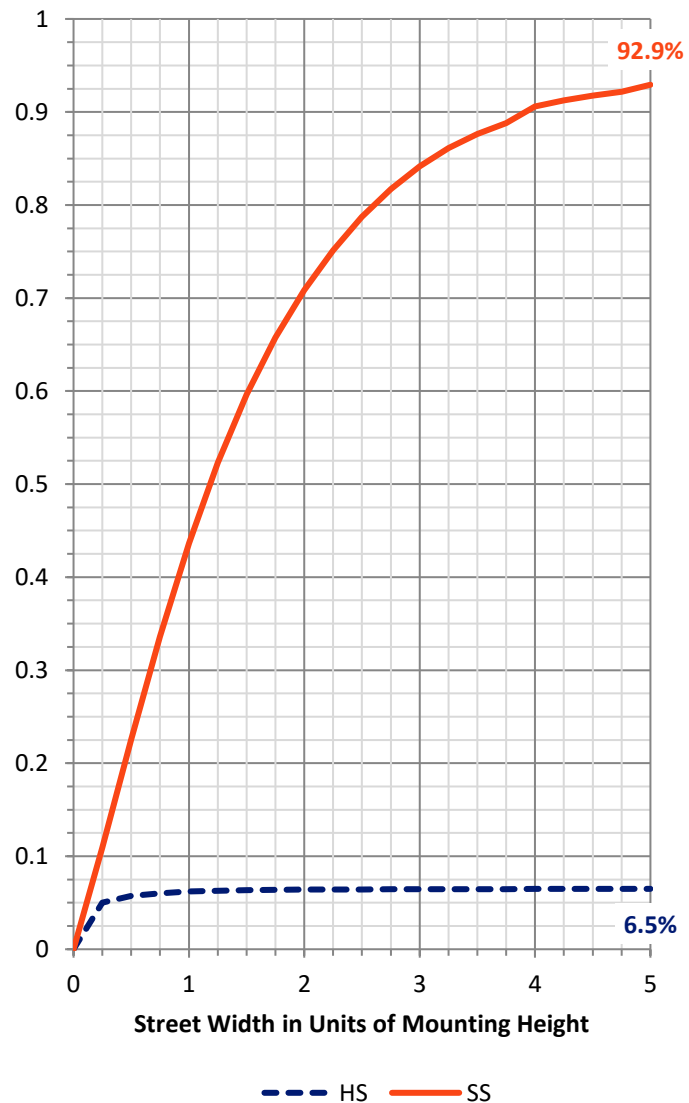
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	326.3	0.0	326.3
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	4651.7	0.0	4651.7
	% Fixture	93.4	0.0	93.4
Total	Lumens	4978.0	0.0	4978.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.8	1.3
10°-20°	156.9	3.2
20°-30°	260.6	5.2
30°-40°	415.3	8.3
40°-50°	685.5	13.8
50°-60°	1035.3	20.8
60°-70°	1348.6	27.1
70°-80°	911.3	18.3
80°-90°	99.8	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°	4978.0	100.0
0°-180°	4978.0	100.0



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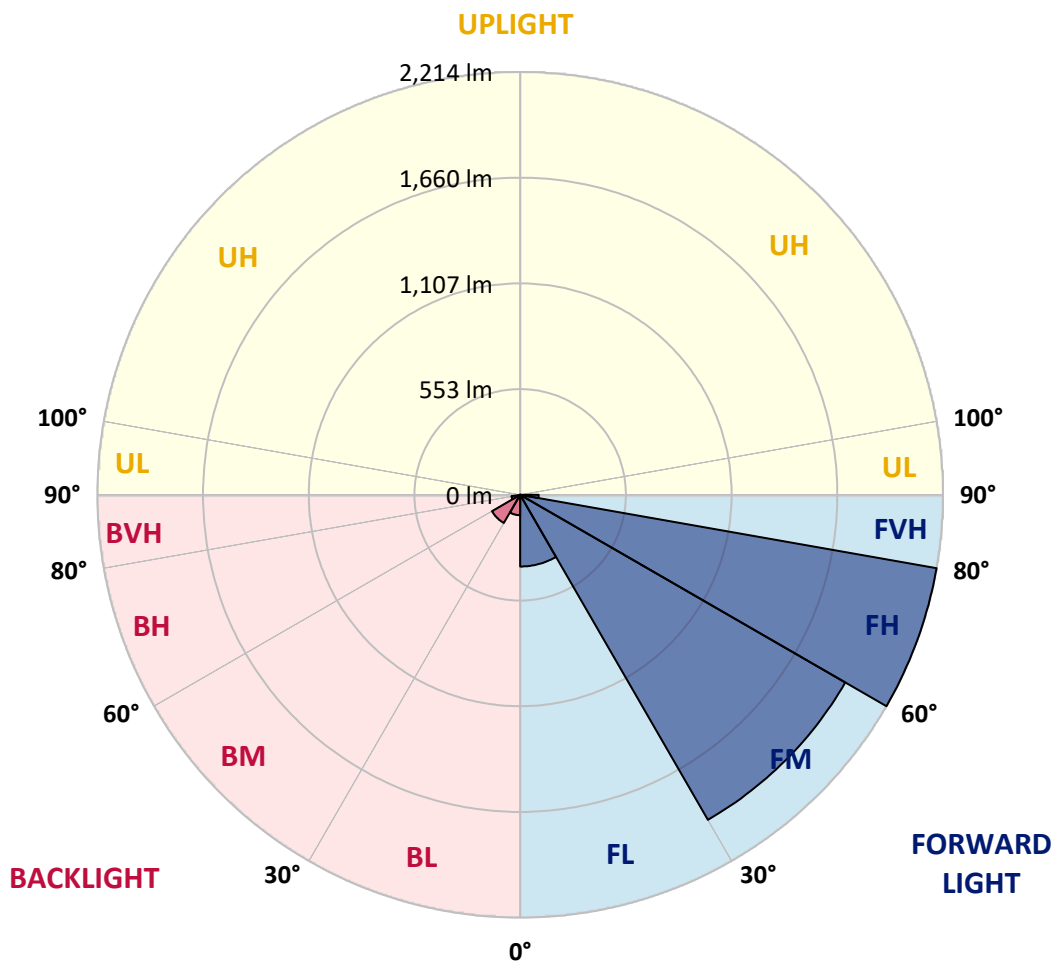
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	375.5	7.5			
FM	(30°-60°)	1965.4	39.5			
FH	(60°-80°)	2214.0	44.5			G2/5000
FVH	(80°-90°)	96.9	1.9			G1/100
BL	(0°-30°)	106.8	2.1	B0/110		
BM	(30°-60°)	170.7	3.4	B0/220		
BH	(60°-80°)	45.9	0.9	B0/110		G0/110
BVH	(80°-90°)	2.9	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-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	796.8	796.8	796.8	796.8	796.8	796.8	796.8	796.8	796.8	796.8	796.8
2.5°	848.4	850.0	848.0	844.5	839.4	836.3	832.0	822.6	810.8	800.7	788.9
5°	855.1	855.9	853.5	846.9	839.0	834.7	829.2	819.1	806.9	792.8	771.7
7.5°	857.0	856.6	853.9	845.7	833.5	828.1	818.7	806.2	793.6	780.7	756.8
10°	856.2	856.2	854.3	846.5	832.8	827.7	817.1	803.8	788.2	775.2	749.8
12.5°	853.5	855.1	853.9	849.6	839.4	835.5	826.1	812.8	797.9	784.6	757.6
15°	857.0	859.4	861.7	860.2	854.3	850.8	842.2	828.5	816.3	802.2	773.3
17.5°	871.1	876.2	881.7	882.1	875.8	869.5	859.8	845.7	833.9	821.0	789.7
20°	897.7	901.6	911.8	913.8	901.2	892.2	878.6	862.1	850.4	839.4	805.0
22.5°	937.3	941.6	949.8	947.0	925.9	915.3	898.1	879.3	867.2	860.9	822.6
25°	997.1	998.3	1000.3	988.1	953.3	941.6	920.4	899.3	889.5	888.7	847.6
27.5°	1067.6	1069.1	1060.5	1033.5	983.8	968.6	944.7	925.5	920.8	926.7	879.3
30°	1148.2	1148.6	1124.7	1080.9	1019.0	1002.2	977.6	956.4	960.7	975.2	920.0
32.5°	1230.8	1226.8	1194.0	1136.8	1067.2	1046.8	1025.7	1004.6	1017.1	1046.4	979.5
35°	1306.3	1304.7	1266.0	1199.4	1129.8	1111.8	1096.5	1074.2	1094.6	1142.3	1060.5
37.5°	1381.8	1380.6	1336.4	1267.1	1206.9	1194.0	1182.6	1165.4	1198.7	1268.7	1168.9
40°	1465.2	1463.2	1408.8	1342.3	1296.5	1289.5	1282.8	1275.4	1332.1	1429.6	1303.9
42.5°	1568.1	1559.5	1485.5	1424.1	1395.1	1397.1	1397.5	1404.9	1493.7	1620.9	1463.2
45°	1686.3	1667.1	1562.6	1511.7	1503.5	1515.3	1527.0	1557.9	1682.0	1841.2	1639.3
47.5°	1800.9	1770.0	1651.4	1606.0	1622.9	1647.1	1675.3	1735.6	1893.3	2071.7	1799.0
50°	1899.5	1867.8	1739.5	1701.9	1755.5	1791.5	1841.6	1932.8	2116.3	2266.6	1899.5
52.5°	1977.0	1952.0	1832.6	1807.6	1902.7	1952.0	2030.6	2150.4	2326.9	2395.0	1970.0
55°	2034.2	2021.6	1921.9	1925.4	2066.3	2137.5	2235.3	2370.7	2504.6	2494.8	2022.8
57.5°	2098.7	2089.0	2015.4	2064.3	2263.1	2355.1	2468.2	2577.0	2633.7	2575.0	2074.5
60°	2164.9	2168.0	2128.9	2232.6	2506.5	2608.3	2706.9	2733.9	2744.4	2656.4	2128.9
62.5°	2215.0	2228.3	2231.8	2414.2	2756.2	2843.1	2885.7	2866.5	2864.2	2765.6	2124.6
65°	2272.5	2307.3	2365.2	2613.3	2983.2	3040.3	3070.8	3098.6	3039.9	2798.1	1915.6
67.5°	2371.9	2426.7	2557.0	2857.5	3245.4	3329.9	3416.4	3387.0	3066.1	2468.2	1459.3
70°	2505.7	2572.6	2802.8	3176.5	3601.1	3742.7	3815.1	3363.9	2603.2	1705.4	769.8
72°	2421.2	2481.9	2878.7	3339.3	3853.1	3983.0	3801.8	2934.2	1887.0	884.0	257.9
72.5°	2339.0	2401.6	2854.4	3337.3	3878.1	3977.5	3715.3	2764.8	1669.8	688.0	177.7
75°	1622.9	1701.9	2447.0	3000.0	3502.1	3392.9	2842.7	1674.1	605.0	118.2	58.7
77.5°	839.0	900.1	1484.3	2119.9	2440.8	2235.3	1680.0	726.3	167.5	62.6	38.7
80°	520.1	550.2	694.2	1044.5	1267.9	1109.0	741.2	293.5	107.2	37.2	30.9
82.5°	269.2	292.3	437.1	421.5	468.4	389.4	273.5	245.8	66.1	23.1	31.7
85°	88.4	93.9	268.5	280.2	200.4	134.6	121.3	234.4	19.2	14.9	27.0
87.5°	11.7	13.7	94.3	160.4	98.6	61.0	72.8	82.6	6.7	8.2	7.4
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°	796.8	796.8	796.8	796.8	796.8	796.8	796.8	796.8	796.8	796.8	796.8
2.5°	781.1	776.0	760.0	743.9	725.5	708.7	695.4	686.8	690.7	677.8	679.8
5°	758.8	745.9	710.7	672.7	631.6	593.3	562.7	540.0	535.7	516.2	517.0
7.5°	737.3	716.1	659.0	596.4	528.3	473.1	423.0	379.2	363.6	347.5	338.1
10°	725.5	696.6	615.6	524.4	428.5	347.5	277.1	221.9	198.8	182.0	173.8
12.5°	729.1	690.7	583.1	459.0	333.0	230.1	156.5	116.2	102.1	94.3	91.6
15°	740.8	691.9	553.7	395.2	242.2	139.3	92.0	78.7	77.5	77.1	76.7
17.5°	751.8	693.1	522.8	328.7	162.0	88.8	74.0	72.8	72.8	72.8	72.8
20°	763.1	693.4	488.8	259.1	106.4	72.8	69.7	68.9	69.7	69.7	69.7
22.5°	776.4	696.2	455.9	191.4	78.7	68.5	66.5	66.1	66.5	66.5	66.1
25°	792.8	702.1	420.3	137.0	71.2	65.7	63.8	63.4	63.8	63.4	63.4
27.5°	814.8	709.9	378.8	98.2	68.1	63.0	61.0	61.0	61.0	60.7	60.7
30°	842.9	719.3	323.2	77.5	65.0	60.3	58.7	58.7	58.3	57.9	57.9
32.5°	883.2	734.5	262.6	70.0	61.4	56.7	55.2	55.6	55.2	54.8	54.4
35°	940.4	758.4	202.7	66.1	57.9	53.2	51.7	51.7	51.7	50.9	50.9
37.5°	1021.4	794.8	151.8	62.2	54.4	49.7	47.7	47.7	47.4	46.6	47.0
40°	1121.6	840.6	110.0	58.7	50.9	45.8	44.2	43.4	42.7	41.9	41.9
42.5°	1242.1	885.2	82.6	55.2	47.4	42.7	40.7	39.9	38.4	37.6	37.2
45°	1377.1	932.6	68.5	50.9	43.4	39.1	37.6	36.0	34.0	32.9	32.5
47.5°	1491.0	961.5	61.0	46.6	39.5	35.6	34.0	31.7	29.4	28.6	28.6
50°	1559.5	949.4	54.8	42.3	35.6	32.1	30.1	27.0	25.4	24.7	24.3
52.5°	1597.8	913.4	49.7	38.7	32.1	28.2	25.4	22.7	21.9	21.1	21.1
55°	1624.0	861.3	44.2	35.2	29.0	24.7	21.5	19.6	18.8	18.4	18.0
57.5°	1649.1	797.9	39.1	32.1	25.8	21.9	18.4	17.6	16.0	15.7	15.7
60°	1656.5	710.7	34.4	28.6	23.1	19.2	16.0	14.9	13.3	12.9	12.9
62.5°	1561.8	565.5	30.5	24.3	20.3	16.4	14.1	12.5	11.0	11.0	11.0
65°	1305.1	383.9	26.2	21.1	18.0	14.1	12.1	10.2	9.4	9.4	9.4
67.5°	909.1	214.1	22.3	18.0	15.3	11.7	10.2	8.6	8.2	8.6	8.6
70°	409.7	84.9	18.8	14.9	12.5	9.8	8.6	7.4	8.2	8.2	8.2
72°	122.9	45.4	15.7	12.1	10.2	8.6	7.4	7.0	7.8	8.2	8.2
72.5°	91.2	40.7	14.9	11.7	10.2	8.2	7.0	7.0	7.8	8.2	8.2
75°	47.0	27.8	11.3	8.6	7.4	6.7	5.9	6.7	7.8	7.8	7.8
77.5°	36.8	22.7	9.4	6.7	6.3	5.9	5.5	6.3	7.0	7.0	7.0
80°	34.4	14.9	7.4	6.3	5.5	5.1	5.1	5.5	6.3	6.7	6.7
82.5°	34.8	12.1	6.7	5.9	5.1	4.7	4.7	5.1	5.9	6.3	6.3
85°	22.3	8.2	5.9	5.1	4.7	4.3	4.3	4.7	5.5	5.9	5.9
87.5°	7.4	6.3	5.1	4.7	3.9	3.9	3.9	3.9	4.7	5.1	5.5
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)