

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: P961030

Luminaire Tested: **NAV-SB1D-830-U-SLR-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P961030
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-9)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB1D-830-U-SLR-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(1) 80 CRI, 3000K, 900mA LIGHTSQUARE WITH 26 LEDS AND SPILL LIGHT
ELIMINATOR RIGHT OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7155.5 lumens
Efficiency: N/A
Efficacy: 89.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

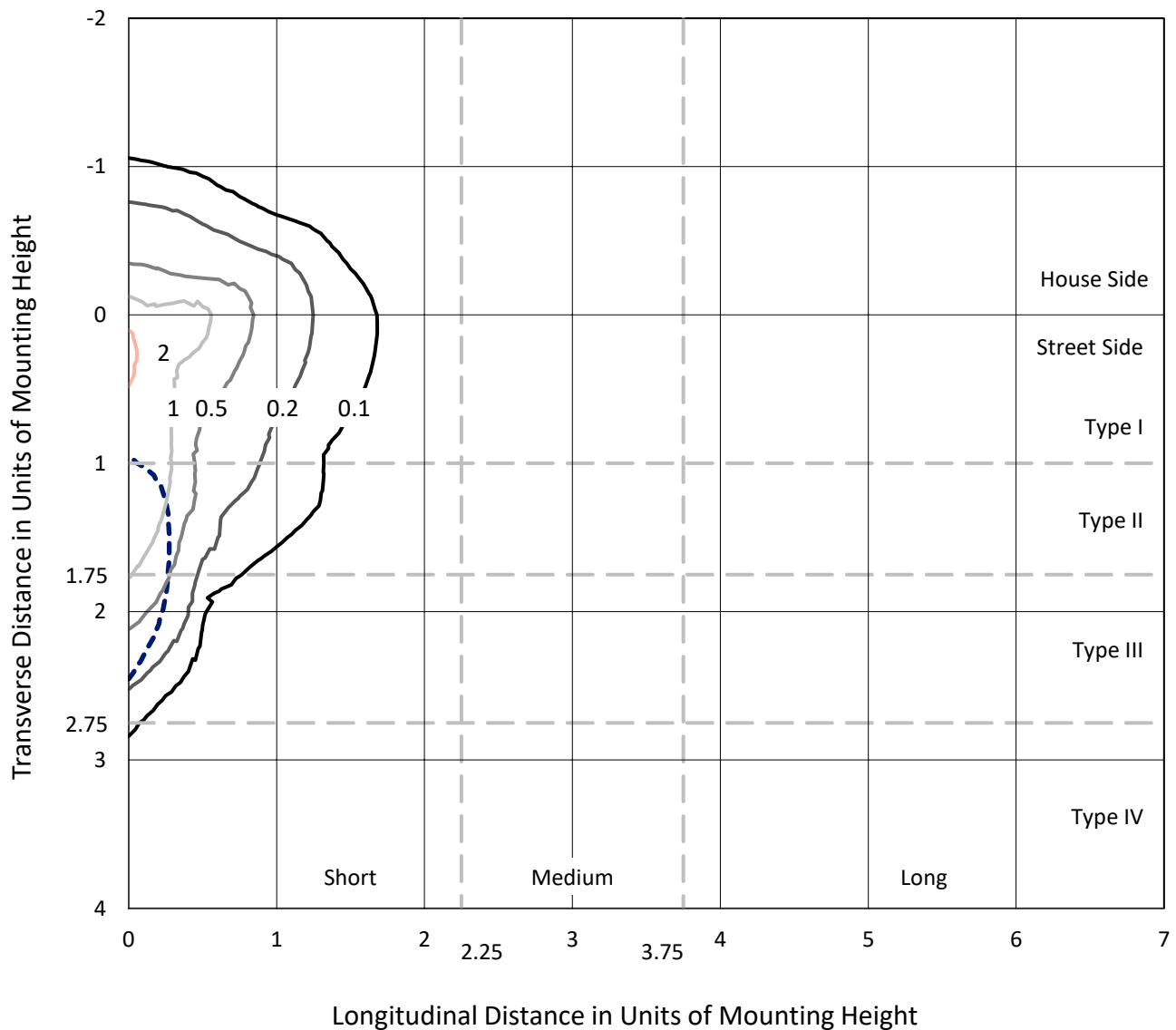
Input Watts (W): 79.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

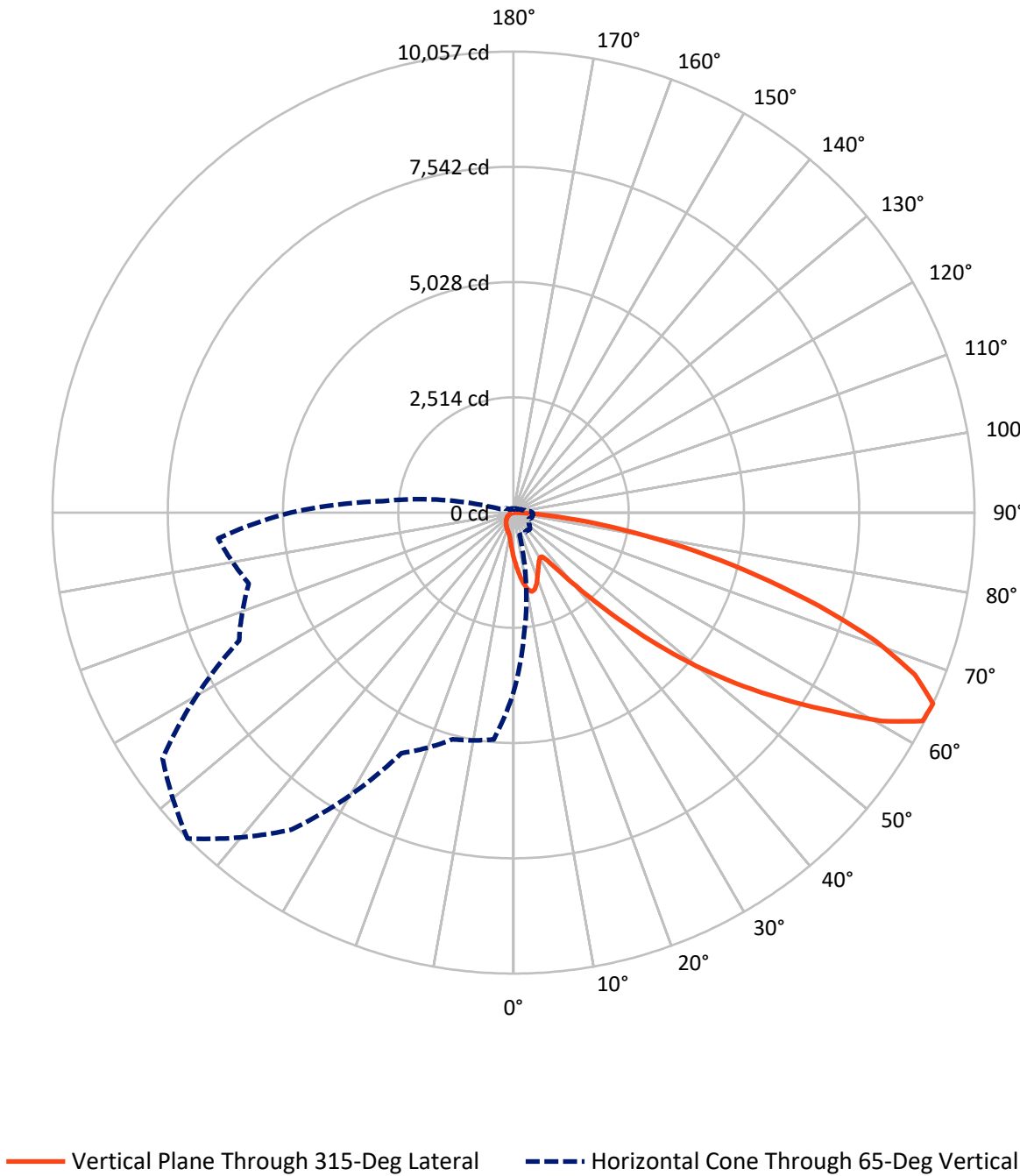
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.2 fc
Type IV - Short - N/A

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Luminous Intensity Polar Plot



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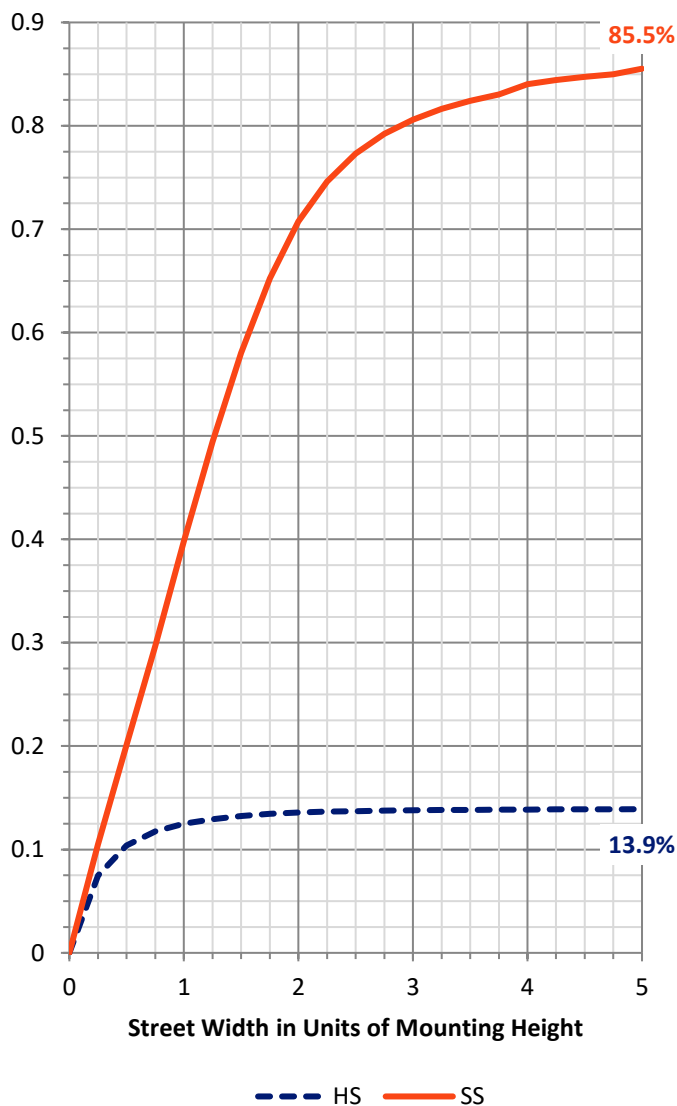
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1002.1	0.0	1002.1
	% Fixture	14.0	0.0	14.0
Street Side	Lumens	6153.4	0.0	6153.4
	% Fixture	86.0	0.0	86.0
Total	Lumens	7155.5	0.0	7155.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.5	1.4
10°-20°	292.4	4.1
20°-30°	430.8	6.0
30°-40°	553.5	7.7
40°-50°	895.1	12.5
50°-60°	1569.7	21.9
60°-70°	1964.1	27.4
70°-80°	1147.7	16.0
80°-90°	204.8	2.9
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°	7155.5	100.0
0°-180°	7155.5	100.0

Coefficient of Utilization



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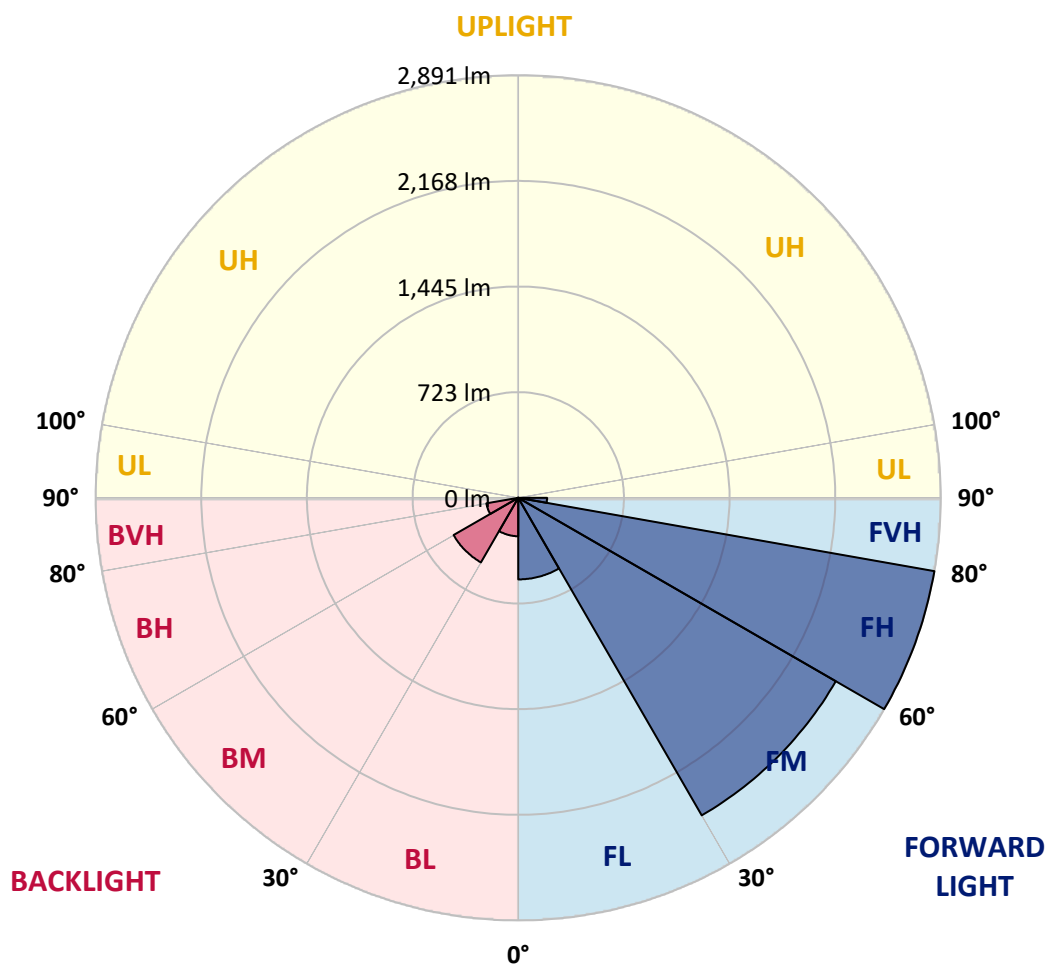
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	558.1	7.8			
FM	(30°-60°)	2507.9	35.0			
FH	(60°-80°)	2890.5	40.4			G2/5000
FVH	(80°-90°)	196.9	2.8			G2/225
BL	(0°-30°)	262.7	3.7	B1/500		
BM	(30°-60°)	510.3	7.1	B1/1000		
BH	(60°-80°)	221.3	3.1	B1/500		G1/500
BVH	(80°-90°)	7.9	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	990.8	990.8	990.8	990.8	990.8	990.8	990.8	990.8	990.8	990.8	990.8
2.5°	1119.5	1100.2	1088.9	1060.8	1032.7	1010.0	979.5	959.3	935.1	911.9	891.2
5°	1247.6	1216.6	1179.2	1127.8	1081.1	1033.2	986.9	941.1	892.7	848.4	821.2
7.5°	1356.1	1311.2	1245.2	1177.1	1117.5	1059.8	1005.6	944.9	886.3	816.8	779.8
10°	1438.9	1381.7	1295.0	1205.7	1137.2	1079.0	1026.3	975.1	915.8	832.1	785.8
12.5°	1489.2	1428.0	1325.0	1220.6	1142.2	1077.1	1036.2	1013.5	990.4	907.0	852.8
15°	1526.1	1460.1	1346.2	1230.9	1130.8	1050.9	1020.9	1043.6	1070.2	1016.9	954.4
17.5°	1564.6	1495.1	1373.8	1235.3	1100.2	1000.2	987.4	1046.0	1107.6	1105.2	1043.0
20°	1601.0	1532.1	1398.0	1232.4	1050.9	938.6	949.9	1024.8	1096.3	1126.4	1092.9
22.5°	1643.0	1570.0	1421.2	1221.0	986.9	880.9	916.4	991.3	1053.9	1089.4	1079.0
25°	1694.2	1617.9	1453.7	1204.3	917.9	833.1	882.3	952.3	1003.2	1027.8	1027.3
27.5°	1749.5	1675.1	1497.0	1195.4	862.1	799.1	843.9	906.0	951.4	968.6	968.6
30°	1817.9	1741.6	1548.4	1185.5	825.6	779.3	804.0	852.3	896.7	913.9	913.9
32.5°	1892.9	1815.5	1597.7	1161.8	803.5	764.5	765.1	795.6	836.0	856.7	859.7
35°	1986.6	1904.2	1650.4	1110.1	785.8	747.3	727.1	741.9	775.4	800.0	806.5
37.5°	2120.1	2020.6	1714.9	1036.2	759.6	720.7	687.2	690.6	716.3	743.3	753.2
40°	2304.5	2176.8	1790.9	959.3	722.1	683.3	643.3	641.9	660.5	687.2	698.0
42.5°	2553.9	2383.3	1882.0	885.8	686.1	637.9	597.0	594.5	609.3	632.4	643.8
45°	2883.2	2647.6	1993.9	822.8	658.0	593.5	553.1	552.1	564.5	584.7	596.4
47.5°	3304.7	3014.8	2105.9	779.8	643.3	558.5	517.1	519.1	529.9	548.2	556.6
50°	3850.4	3493.5	2139.9	758.2	643.3	539.8	485.0	494.9	503.8	517.6	522.5
52.5°	4504.5	3952.9	2027.4	738.4	647.2	542.2	458.0	479.2	485.5	497.3	499.4
55°	5110.9	4178.2	1743.0	711.3	648.2	557.5	434.8	466.3	478.2	482.6	482.1
57.5°	5462.7	4100.8	1409.3	665.4	644.3	567.8	419.9	450.6	473.2	476.2	471.7
60°	5395.7	3829.2	1037.6	630.5	615.2	564.0	415.5	426.4	462.4	466.8	460.9
62.5°	4879.1	3373.7	720.2	603.3	551.1	546.6	414.1	388.5	438.7	449.6	441.2
65°	3921.9	2656.0	508.7	519.6	483.1	509.2	406.2	349.0	410.1	425.0	412.0
67.5°	2845.3	1797.2	367.3	421.0	437.8	448.5	388.5	320.4	377.6	397.3	380.6
70°	1825.8	970.6	257.8	278.0	368.7	381.0	357.8	294.8	344.6	367.3	349.0
72.5°	1298.0	573.3	185.3	194.7	296.2	317.4	315.0	266.2	306.2	333.7	312.0
75°	895.6	316.0	125.3	139.0	214.9	257.8	243.0	228.7	259.3	287.4	266.2
77.5°	561.5	141.4	74.9	96.7	140.9	202.6	166.7	176.9	202.1	228.3	206.0
80°	312.5	54.7	41.9	64.1	76.9	147.4	92.1	113.9	148.8	167.6	149.9
82.5°	68.1	6.9	18.8	27.6	30.0	85.8	48.8	66.0	93.7	92.1	79.8
85°	0.0	0.0	3.5	3.9	1.9	37.0	17.7	21.7	30.5	28.6	21.7
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	990.8	990.8	990.8	990.8	990.8	990.8	990.8	990.8	990.8	990.8	990.8
2.5°	887.3	863.2	845.4	836.5	829.1	836.0	840.0	840.0	856.7	866.6	870.5
5°	804.0	760.7	727.5	705.4	692.1	696.5	701.4	706.8	728.1	742.4	751.7
7.5°	746.3	679.8	629.5	598.4	582.2	584.7	588.0	592.6	613.3	627.5	639.8
10°	735.4	639.8	568.9	528.0	508.2	504.8	502.8	501.3	513.6	524.5	534.3
12.5°	779.8	641.9	542.7	492.9	468.8	458.5	446.6	437.3	439.2	446.1	458.5
15°	859.2	667.0	534.3	474.7	444.6	427.4	413.6	402.2	399.7	402.2	404.3
17.5°	949.9	701.0	533.4	458.9	421.5	403.7	392.4	382.0	378.5	379.0	381.5
20°	1010.0	728.1	530.4	441.2	399.2	383.6	373.6	363.3	359.9	360.8	361.3
22.5°	1016.0	742.4	525.9	421.5	377.1	363.8	353.9	344.6	344.1	344.1	347.1
25°	983.9	742.4	516.6	403.7	355.9	344.1	335.2	323.9	325.8	326.8	330.8
27.5°	934.1	724.6	498.9	389.4	337.6	325.3	316.4	306.2	308.6	310.1	314.5
30°	884.8	701.9	477.6	373.2	320.4	306.2	299.7	290.8	291.8	293.8	298.7
32.5°	839.0	677.8	452.5	359.9	303.2	288.8	283.9	274.1	275.5	277.6	282.9
35°	793.7	651.2	422.9	344.1	287.4	273.1	269.2	257.8	258.8	261.8	267.6
37.5°	744.9	623.1	398.8	328.3	272.1	257.3	253.4	241.5	242.5	246.0	252.9
40°	693.6	595.4	375.2	311.5	255.8	241.1	237.6	224.8	225.8	229.7	237.1
42.5°	641.9	565.4	356.9	289.9	239.0	223.3	219.9	208.0	209.5	213.9	221.3
45°	594.0	529.4	345.0	265.7	223.3	205.5	202.1	191.3	194.2	199.2	206.5
47.5°	553.1	492.4	340.1	245.5	206.5	187.3	184.4	175.5	180.4	185.8	191.8
50°	518.0	456.9	333.7	224.8	190.8	171.6	168.6	162.7	169.1	174.5	179.9
52.5°	492.9	416.6	319.9	206.0	176.9	158.3	157.2	154.3	160.2	165.1	170.0
55°	471.3	374.6	297.8	189.8	164.6	146.9	147.9	146.4	151.3	155.3	159.7
57.5°	451.5	338.1	269.7	176.9	151.3	137.0	140.0	138.1	140.5	143.0	148.4
60°	427.8	301.1	236.2	162.7	135.6	127.2	130.6	125.3	124.7	125.7	127.2
62.5°	392.9	251.4	201.1	144.9	121.8	116.3	117.8	107.4	99.5	99.5	101.1
65°	344.1	202.1	168.6	125.3	106.0	101.6	100.6	85.8	74.9	73.9	78.4
67.5°	287.4	166.2	140.0	105.5	88.3	85.3	86.3	75.4	64.6	63.6	68.5
70°	234.1	137.6	112.9	84.3	68.1	71.0	75.4	64.6	54.2	52.8	57.2
72.5°	190.2	109.5	88.3	64.6	50.3	58.6	64.1	52.8	42.8	41.9	45.8
75°	146.9	80.4	63.1	43.9	36.5	45.3	50.3	38.4	30.5	29.1	32.5
77.5°	98.1	49.8	35.5	27.6	21.7	31.1	33.5	20.2	17.7	17.2	19.7
80°	59.7	23.2	15.3	13.3	7.4	11.4	13.3	8.4	9.3	9.8	11.8
82.5°	30.0	6.5	2.5	0.5	0.0	0.0	3.9	1.9	3.9	4.9	7.4
85°	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.5	4.4
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9
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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	990.8	990.8	990.8	990.8	990.8	990.8	990.8	990.8	990.8	990.8	990.8
2.5°	898.1	918.8	938.6	970.1	1002.7	1034.6	1067.2	1098.8	1110.1	1118.5	1137.2
5°	794.6	833.5	878.9	941.6	1008.6	1077.6	1147.6	1211.7	1240.8	1260.4	1304.8
7.5°	687.7	738.4	803.5	897.7	1002.7	1112.5	1222.5	1323.6	1370.4	1408.4	1475.9
10°	581.7	636.8	719.2	826.7	968.6	1126.4	1278.2	1417.2	1477.8	1525.6	1617.3
12.5°	488.5	540.3	626.5	745.3	915.4	1115.5	1310.3	1477.3	1548.8	1602.6	1703.1
15°	422.9	459.4	535.9	664.0	852.3	1080.6	1312.2	1505.9	1584.3	1640.5	1727.7
17.5°	386.4	398.8	448.5	581.2	782.3	1034.6	1294.0	1515.8	1599.6	1651.9	1712.5
20°	366.7	368.7	382.5	473.8	692.6	991.8	1276.7	1525.6	1613.9	1657.7	1676.0
22.5°	351.0	351.0	354.4	387.4	576.8	940.5	1271.3	1542.9	1633.6	1660.7	1623.3
25°	336.7	336.7	337.6	346.6	456.9	862.1	1267.8	1569.5	1660.7	1668.1	1565.1
27.5°	321.8	322.4	322.4	327.3	368.2	755.6	1253.1	1604.0	1693.3	1677.9	1509.4
30°	307.1	308.1	308.1	311.5	325.8	631.0	1224.0	1645.4	1735.6	1690.7	1454.2
32.5°	292.3	293.3	293.3	296.2	306.6	503.8	1187.5	1683.4	1778.6	1696.2	1402.9
35°	277.1	278.5	277.6	281.5	292.3	400.8	1141.1	1721.4	1824.9	1713.5	1377.8
37.5°	261.8	262.7	262.2	266.2	278.5	346.0	1087.4	1750.0	1887.9	1751.9	1407.8
40°	246.5	246.0	246.0	250.4	263.7	330.3	1019.9	1795.3	1978.7	1819.5	1538.9
42.5°	230.7	230.7	229.7	234.6	250.9	318.5	955.3	1876.7	2110.8	1926.9	1771.6
45°	216.4	215.9	213.9	218.3	238.6	297.8	932.6	2028.5	2305.9	2100.9	2053.1
47.5°	202.6	202.1	197.2	201.1	223.8	279.0	1017.4	2276.9	2576.6	2356.8	2316.8
50°	190.2	190.8	181.4	184.8	209.0	264.8	1201.3	2599.3	2935.9	2701.3	2566.7
52.5°	179.0	179.0	166.7	168.6	190.8	251.8	1376.3	2948.8	3410.2	3181.9	2858.1
55°	167.6	166.7	152.8	153.8	172.5	233.7	1402.4	3289.8	4057.0	3905.0	3256.3
57.5°	154.8	152.8	140.0	140.0	155.8	220.4	1215.5	3552.1	4859.4	4967.9	3830.6
60°	139.0	137.6	129.1	126.7	142.5	232.2	857.7	3582.7	5377.0	6381.1	4930.4
62.5°	118.8	120.7	116.3	112.9	129.7	241.1	508.2	3336.7	5251.8	6830.7	6247.6
65°	93.7	101.6	100.6	98.1	142.5	203.1	300.2	2864.5	4867.8	6467.9	5978.9
67.5°	79.8	85.3	83.8	83.8	149.3	154.3	188.8	2238.0	4339.3	6037.6	5340.6
70°	68.1	73.5	68.1	68.1	112.9	93.7	130.6	1562.6	3769.0	5561.3	4921.5
72.5°	56.2	61.6	55.7	51.8	90.2	70.0	95.6	976.5	3227.8	5065.4	4634.6
75°	42.8	49.3	44.9	40.0	59.7	52.3	72.5	567.3	2674.2	4333.9	4226.0
77.5°	27.2	35.5	33.5	28.1	43.9	37.9	52.3	337.6	2063.4	3386.5	3635.0
80°	16.8	18.2	18.8	17.7	25.1	25.6	35.5	192.3	1412.2	2360.2	2839.9
82.5°	10.9	10.9	8.4	9.3	12.3	14.8	20.2	72.5	830.1	1436.9	1976.7
85°	7.9	6.9	4.4	4.4	5.9	7.4	7.9	22.1	336.7	567.3	773.0
87.5°	3.9	3.5	1.4	1.9	3.0	2.5	1.9	1.0	84.8	181.4	127.2
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):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	990.8	990.8	990.8	990.8	990.8	990.8	990.8	990.8
2.5°	1147.1	1162.4	1163.4	1163.4	1150.0	1149.5	1122.5	1119.5
5°	1350.6	1360.5	1362.9	1358.0	1331.5	1311.7	1259.0	1247.6
7.5°	1537.0	1556.7	1556.7	1544.9	1501.5	1461.0	1384.7	1356.1
10°	1685.8	1708.6	1703.7	1679.5	1624.7	1569.1	1476.3	1438.9
12.5°	1758.3	1781.4	1768.6	1741.1	1687.9	1629.1	1531.6	1489.2
15°	1756.8	1750.4	1737.2	1733.7	1708.1	1663.7	1572.5	1526.1
17.5°	1694.2	1640.0	1629.6	1664.2	1696.7	1685.8	1608.0	1564.6
20°	1595.2	1500.5	1491.2	1557.2	1649.8	1697.2	1641.0	1601.0
22.5°	1490.7	1388.6	1366.9	1439.9	1579.4	1700.7	1682.9	1643.0
25°	1391.5	1289.0	1267.3	1335.4	1501.0	1694.7	1728.3	1694.2
27.5°	1308.7	1209.7	1189.5	1257.5	1425.6	1677.9	1773.6	1749.5
30°	1244.7	1153.0	1138.2	1203.8	1360.5	1657.2	1831.3	1817.9
32.5°	1207.2	1140.2	1145.6	1199.4	1325.5	1634.6	1886.5	1892.9
35°	1244.1	1247.1	1294.5	1316.6	1358.0	1631.2	1961.4	1986.6
37.5°	1428.0	1530.6	1628.7	1610.5	1517.3	1671.1	2073.3	2120.1
40°	1741.1	1951.6	2110.8	2041.3	1806.7	1793.3	2234.5	2304.5
42.5°	2123.6	2480.5	2742.7	2556.4	2179.8	2007.3	2464.7	2553.9
45°	2527.3	3132.6	3545.7	3158.2	2577.6	2307.0	2813.2	2883.2
47.5°	2952.7	3925.2	4459.7	3825.7	2946.3	2648.1	3288.4	3304.7
50°	3418.1	4794.3	5391.3	4492.7	3302.2	3039.0	3869.1	3850.4
52.5°	3861.2	5688.0	6303.2	5162.6	3614.8	3524.1	4542.9	4504.5
55°	4284.2	6581.2	7220.6	5806.3	3909.6	4164.9	5343.5	5110.9
57.5°	4774.7	7384.3	8166.1	6453.1	4321.6	4997.0	6238.7	5462.7
60°	5499.7	8296.7	9235.2	7339.4	5105.4	5871.4	6559.6	5395.7
62.5°	6425.5	9135.7	10012.6	8208.0	5892.6	6036.0	6086.9	4879.1
65°	6605.4	9348.1	10056.5	8440.2	5791.0	5120.2	4969.3	3921.9
67.5°	6128.3	8964.1	9443.2	8007.8	5122.6	3956.8	3729.1	2845.3
70°	5592.9	8232.1	8374.6	7272.9	4505.5	2910.3	2518.4	1825.8
72.5°	5044.2	7255.6	6960.8	6316.0	3959.8	2119.2	1816.5	1298.0
75°	4392.6	5971.4	5483.0	5247.9	3278.6	1663.2	1314.2	895.6
77.5°	3517.6	4203.3	4072.6	4067.7	2463.7	1215.1	877.0	561.5
80°	2481.4	2727.9	2661.4	3063.6	1652.8	881.4	528.0	312.5
82.5°	1201.3	1508.4	1548.4	1824.4	804.0	518.5	121.8	68.1
85°	470.3	727.5	613.7	692.6	225.8	144.4	3.0	0.0
87.5°	52.8	84.3	77.4	61.1	27.6	5.9	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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