

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: STREETWORKS

Report Number: P196280

Luminaire Tested: **NVN-AF-02-LED-U-T2R-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196280
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24459)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: NVN-AF-02-LED-U-T2R-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 4000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10549.7 lumens
Efficiency: N/A
Efficacy: 124.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G2

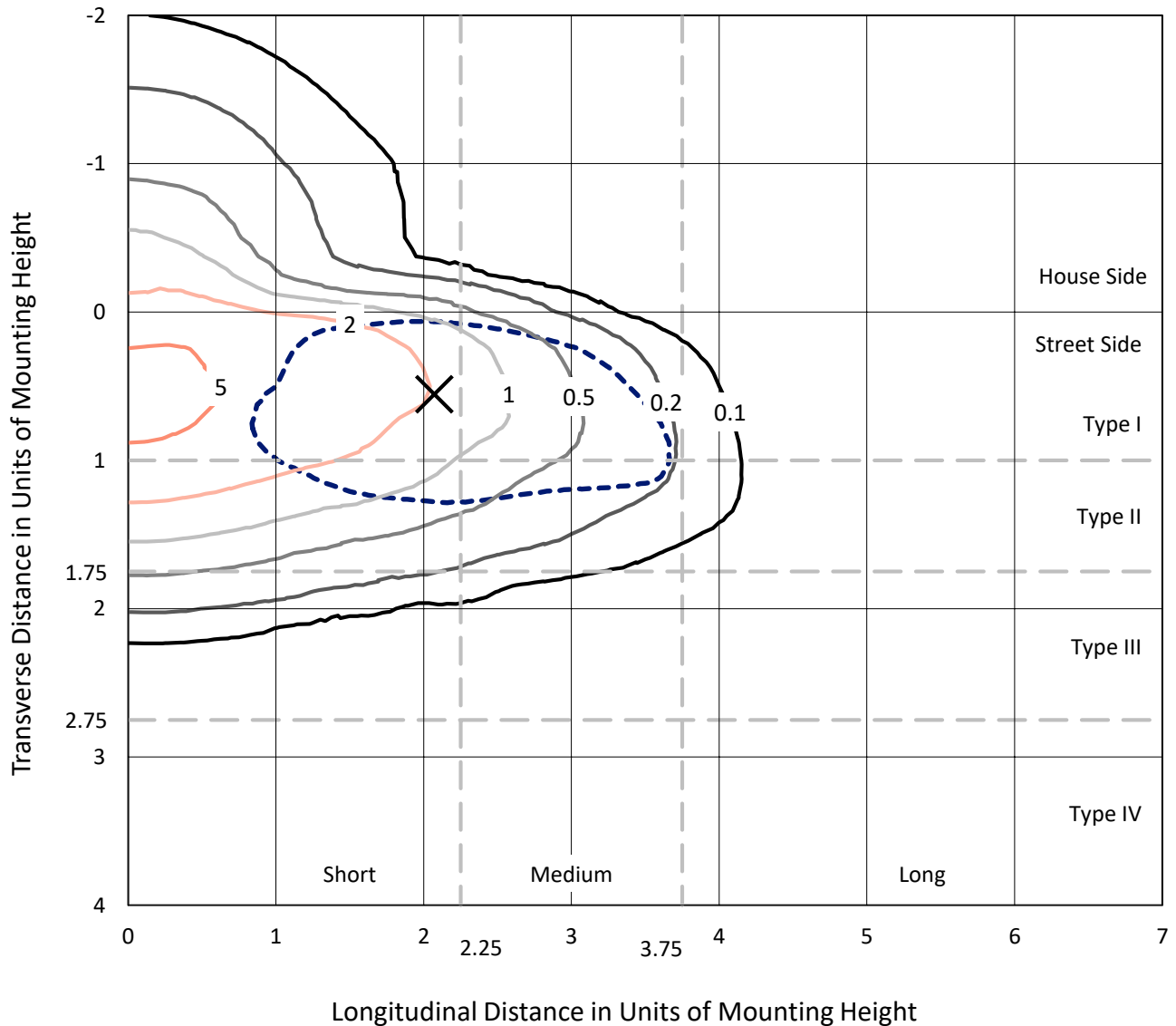
Input Watts (W): 85
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

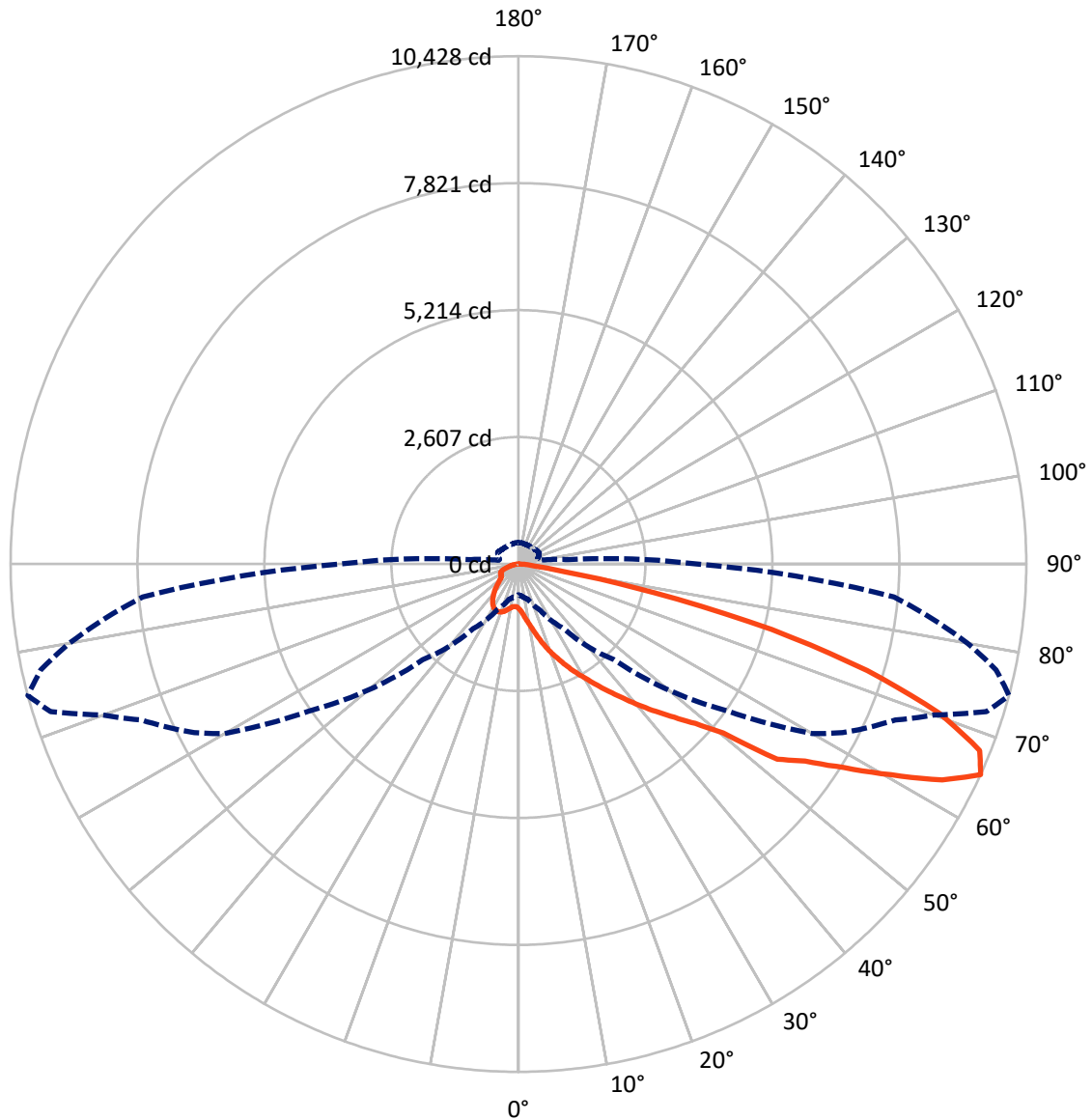
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 6.6 fc
 Type II - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1585.2	0.0	1585.2
	% Fixture	15.0	0.0	15.0
Street Side	Lumens	8964.4	0.0	8964.4
	% Fixture	85.0	0.0	85.0
Total	Lumens	10549.7	0.0	10549.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.9	1.0
10°-20°	412.2	3.9
20°-30°	831.8	7.9
30°-40°	1412.6	13.4
40°-50°	1970.3	18.7
50°-60°	2414.8	22.9
60°-70°	2272.0	21.5
70°-80°	996.3	9.4
80°-90°	131.8	1.2
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°	10549.7	100.0
0°-180°	10549.7	100.0



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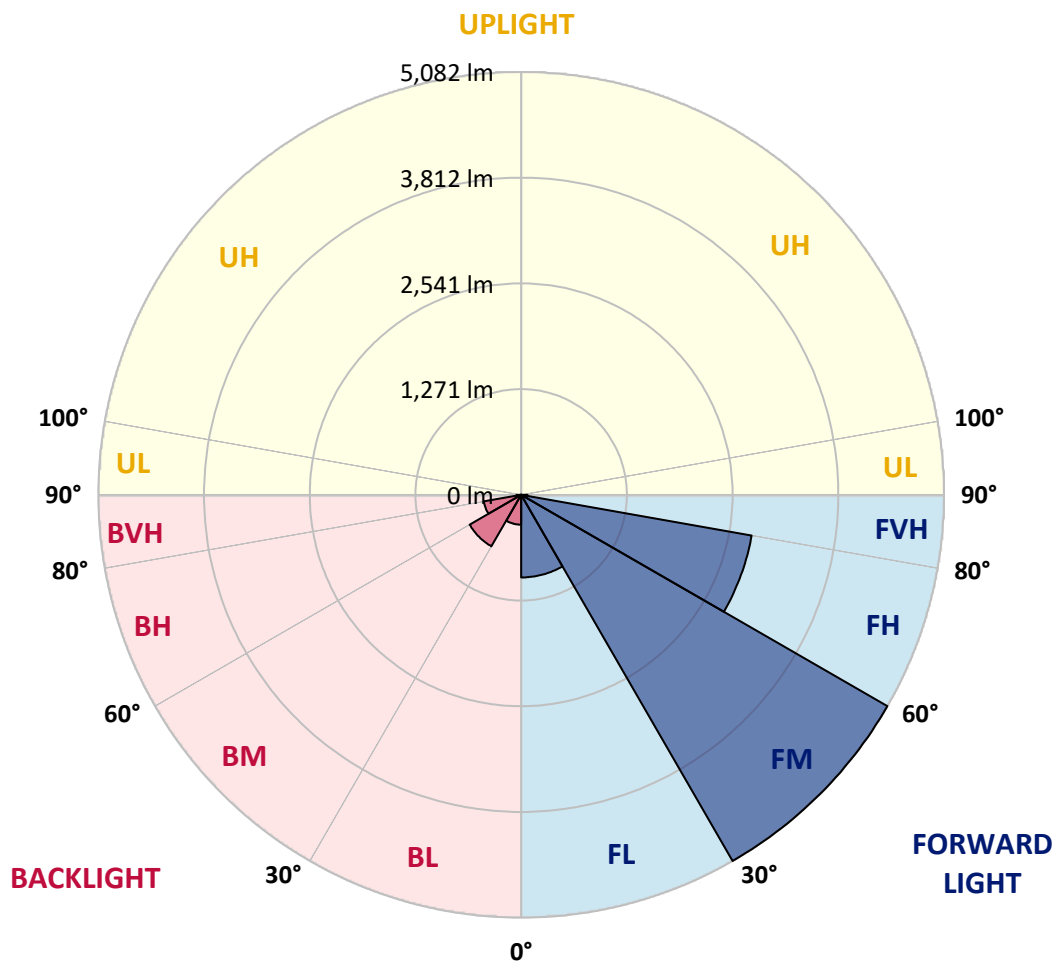
CATALOG NUMBER: NVN-AF-02-LED-U-T2R-800

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	993.0	9.4			
FM (30°-60°)	5082.4	48.2			
FH (60°-80°)	2812.6	26.7			G2/5000
FVH (80°-90°)	76.4	0.7			G1/100
BL (0°-30°)	358.9	3.4	B1/500		
BM (30°-60°)	715.3	6.8	B1/1000		
BH (60°-80°)	455.6	4.3	B1/500		G1/500
BVH (80°-90°)	55.4	0.5			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	57.5°	60°	62.5°	65°
0°	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1
2.5°	1150.9	1137.5	1138.9	1120.1	1092.6	1062.3	1037.6	1024.2	1012.7	1009.3	990.5
5°	1505.4	1488.5	1482.5	1439.6	1375.2	1298.6	1222.7	1193.3	1169.1	1154.3	1118.1
7.5°	1795.3	1786.5	1778.5	1738.9	1675.1	1577.1	1454.9	1411.4	1371.1	1326.8	1283.2
10°	1992.6	1989.2	1985.9	1958.3	1905.3	1820.0	1688.6	1640.9	1590.6	1534.2	1477.1
12.5°	2141.5	2141.5	2144.2	2121.4	2089.2	2023.4	1904.0	1859.7	1808.7	1749.7	1684.5
15°	2241.6	2244.3	2258.4	2265.0	2248.2	2206.0	2101.2	2062.4	2014.0	1955.7	1891.2
17.5°	2308.0	2313.4	2334.2	2356.3	2377.7	2363.0	2285.2	2249.0	2205.3	2151.6	2091.2
20°	2462.3	2455.6	2456.3	2449.6	2481.2	2492.5	2449.6	2419.4	2384.5	2335.5	2280.5
22.5°	2786.5	2773.7	2740.9	2657.0	2618.8	2614.7	2589.2	2573.0	2546.2	2515.3	2460.3
25°	3209.3	3194.6	3129.4	2991.2	2877.0	2771.7	2724.7	2714.7	2697.2	2676.4	2636.9
27.5°	3646.2	3630.0	3546.2	3371.7	3222.7	3009.9	2863.6	2850.2	2834.2	2825.4	2806.7
30°	4030.7	4013.3	3930.8	3753.6	3573.7	3320.0	3051.0	3003.9	2976.4	2979.1	2968.4
32.5°	4368.3	4352.9	4260.3	4079.7	3897.2	3650.9	3293.9	3220.7	3159.0	3136.2	3144.2
35°	4651.6	4637.4	4536.1	4354.2	4170.4	3965.7	3606.6	3496.5	3395.9	3332.8	3325.4
37.5°	4818.0	4809.9	4738.8	4584.5	4401.9	4251.6	3956.9	3834.7	3686.5	3594.5	3554.2
40°	4808.6	4817.3	4805.2	4735.4	4593.9	4484.4	4322.0	4201.3	4056.2	3919.3	3837.5
42.5°	4671.7	4683.8	4738.1	4774.3	4736.1	4669.7	4640.8	4550.9	4420.7	4275.7	4162.3
45°	4483.8	4494.5	4564.9	4695.9	4805.2	4824.0	4920.0	4875.0	4765.0	4641.4	4516.6
47.5°	4195.8	4216.6	4298.5	4506.6	4767.0	4948.2	5154.2	5175.0	5111.3	5009.3	4892.5
50°	3779.1	3806.6	3921.4	4217.3	4622.0	5075.7	5502.6	5581.7	5556.2	5452.8	5334.7
52.5°	3352.2	3379.7	3532.8	3847.5	4388.5	5128.1	5845.4	6048.1	6194.5	6301.2	6321.9
55°	2907.9	2938.8	3106.6	3469.0	4077.1	5061.6	6090.4	6320.6	6468.9	6580.3	6625.3
57.5°	2406.6	2441.6	2603.9	2970.3	3636.8	4794.5	6362.9	6689.1	6909.8	7081.7	7178.4
60°	1831.5	1875.1	2043.5	2412.6	3058.3	4283.1	6484.4	6966.9	7317.9	7575.6	7728.6
62.5°	1161.0	1205.3	1380.5	1763.7	2399.9	3584.4	6140.8	6844.8	7443.4	7824.6	8105.1
65°	633.5	652.9	750.3	1038.9	1618.1	2781.1	5269.6	6099.9	6962.2	7502.4	7933.3
67.5°	475.2	477.8	487.9	558.3	861.7	1877.8	4120.0	4880.4	5838.1	6533.4	7048.1
70°	416.1	416.1	417.5	418.1	467.8	1017.4	2791.2	3491.1	4369.0	5072.3	5712.0
72.5°	373.2	369.1	367.8	359.7	366.4	521.5	1519.4	2148.3	2888.5	3677.7	4274.4
75°	322.1	321.5	321.5	313.4	317.4	367.1	659.1	1030.8	1604.6	2339.5	2926.8
77.5°	278.5	273.8	274.5	269.8	282.5	281.2	312.7	424.8	698.7	1228.9	1716.1
80°	229.6	226.2	228.2	225.5	245.6	208.1	210.7	259.7	347.0	538.9	759.7
82.5°	169.8	171.1	183.9	182.5	206.7	140.2	154.4	194.0	233.5	268.4	292.0
85°	99.3	101.4	132.2	138.9	151.7	73.9	94.6	115.4	130.2	144.3	150.4
87.5°	10.7	14.1	73.9	75.8	67.8	22.2	38.3	48.3	51.7	55.0	48.3
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):

	67.5°	70°	72.5°	75°	77.5°	80°	85°	90°	95°	100°	102.5°
0°	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1
2.5°	984.5	975.8	966.4	961.1	951.7	943.6	928.8	916.8	903.4	894.0	889.9
5°	1100.0	1079.1	1057.0	1041.0	1020.8	1003.3	969.8	929.5	916.8	889.9	883.2
7.5°	1250.3	1212.7	1175.2	1144.3	1109.4	1080.5	1024.2	951.7	942.2	899.3	889.9
10°	1426.8	1371.8	1316.0	1268.5	1217.4	1173.1	1089.9	987.9	977.8	922.8	913.4
12.5°	1624.1	1557.0	1485.2	1414.0	1353.7	1291.3	1177.8	1044.2	1028.2	963.1	950.3
15°	1827.5	1755.0	1671.8	1585.9	1511.4	1428.9	1285.8	1118.1	1088.5	1012.0	994.6
17.5°	2028.1	1949.6	1862.4	1766.4	1679.2	1580.5	1402.7	1200.6	1149.6	1060.4	1038.2
20°	2222.1	2142.3	2050.3	1956.3	1847.6	1734.8	1522.2	1281.9	1204.0	1100.6	1071.7
22.5°	2398.6	2330.2	2238.2	2130.1	2020.1	1893.3	1643.6	1363.1	1251.7	1131.5	1094.6
25°	2584.5	2522.1	2430.8	2326.8	2198.6	2057.7	1769.1	1440.2	1289.9	1148.3	1102.6
27.5°	2772.4	2718.7	2632.8	2523.4	2385.8	2229.4	1896.6	1511.4	1320.7	1153.7	1098.6
30°	2973.1	2931.5	2852.3	2730.2	2591.2	2418.1	2035.5	1581.2	1340.3	1146.3	1080.5
32.5°	3163.0	3161.6	3091.2	2964.3	2814.6	2624.1	2181.9	1651.7	1350.3	1125.5	1048.9
35°	3360.3	3387.8	3334.8	3214.0	3056.3	2844.9	2343.6	1726.8	1351.0	1088.5	1008.0
37.5°	3584.4	3633.4	3610.0	3495.2	3329.4	3096.6	2533.4	1811.3	1346.9	1037.6	948.3
40°	3839.4	3906.5	3905.9	3809.3	3632.1	3378.4	2754.3	1906.0	1337.5	973.7	877.8
42.5°	4131.4	4211.3	4233.4	4138.1	3958.9	3686.5	3007.3	2010.0	1322.8	910.7	803.3
45°	4465.6	4536.1	4577.7	4489.1	4309.3	4022.0	3297.9	2128.1	1304.7	829.5	718.1
47.5°	4823.3	4905.3	4967.7	4891.8	4699.8	4404.5	3642.2	2280.5	1297.9	736.9	626.1
50°	5267.0	5351.5	5486.4	5452.2	5346.9	5109.2	4370.4	2640.2	1300.7	649.0	549.0
52.5°	6367.6	6561.5	6732.0	6656.1	6405.8	5998.5	4962.2	2840.2	1244.2	577.1	495.3
55°	6699.8	6920.0	7171.6	7140.1	6899.8	6489.1	5430.0	3007.3	1189.9	524.8	460.4
57.5°	7281.0	7540.7	7892.4	7885.6	7591.0	7128.6	6032.0	3207.3	1166.4	494.6	442.9
60°	7896.4	8227.3	8713.2	8789.0	8468.9	7987.7	6743.4	3452.9	1169.7	477.8	432.9
62.5°	8346.1	8831.2	9538.0	9764.8	9387.6	8857.4	7481.7	3698.6	1149.6	458.4	420.8
65°	8373.6	9072.2	10074.8	10427.9	10046.0	9364.8	7742.0	3650.2	1028.8	432.2	401.3
67.5°	7702.4	8612.5	9830.6	10217.8	9827.2	9052.1	7285.7	3191.2	836.3	386.6	367.8
70°	6415.2	7471.6	8736.0	9167.5	8844.7	8060.1	6340.8	2548.9	624.8	326.1	317.4
72.5°	4957.5	5942.7	7091.1	7490.4	7243.4	6553.5	5001.2	1857.7	446.3	264.4	257.7
75°	3544.2	4383.1	5216.6	5369.0	5125.4	4491.8	3244.9	1160.3	312.7	216.8	207.4
77.5°	2194.5	2740.2	3039.5	2843.5	2532.8	2105.3	1320.7	573.2	208.1	176.5	167.2
80°	973.7	1142.9	1067.0	950.9	750.9	617.5	403.3	254.3	134.2	136.3	130.8
82.5°	327.5	346.3	336.9	334.9	302.0	264.4	171.1	110.1	75.2	87.3	85.2
85°	159.7	167.2	167.8	173.8	151.0	117.4	46.3	43.6	32.2	47.0	49.0
87.5°	48.3	49.0	44.3	48.3	39.0	26.8	8.7	12.1	6.0	11.5	11.5
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):

	105°	107.5°	110°	112.5°	115°	117.5°	120°	122.5°	125°	127.5°	130°
0°	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1
2.5°	882.5	879.8	875.1	869.8	868.4	861.7	859.7	856.3	854.4	851.0	848.3
5°	874.5	869.8	864.4	858.4	858.4	848.9	845.0	840.9	840.9	834.8	832.2
7.5°	882.5	876.5	870.4	865.1	867.1	856.3	852.3	848.3	847.6	841.6	838.9
10°	905.3	899.3	891.9	886.6	884.5	875.9	871.1	865.1	861.0	857.0	853.0
12.5°	940.2	932.2	922.8	911.3	906.6	899.3	891.9	883.8	874.5	870.4	864.4
15°	981.8	968.4	955.6	941.6	928.8	921.5	911.3	898.7	885.9	880.6	872.5
17.5°	1016.1	1002.0	983.9	967.1	944.3	938.3	924.1	908.7	887.9	885.9	873.8
20°	1044.9	1023.5	1001.3	981.2	946.2	943.0	925.5	907.4	877.8	877.8	863.1
22.5°	1061.0	1031.5	1005.4	978.5	934.9	932.2	912.1	890.6	854.4	855.7	837.6
25°	1063.8	1028.2	995.2	963.1	912.7	908.1	882.5	859.1	819.5	816.7	798.0
27.5°	1053.0	1011.4	973.1	934.2	879.8	869.8	841.6	813.3	774.5	767.7	747.7
30°	1028.2	979.2	936.2	891.3	834.2	818.1	788.6	759.7	720.2	711.4	692.6
32.5°	988.6	932.8	885.2	840.3	777.1	757.0	727.5	698.7	660.4	653.7	636.2
35°	936.2	873.8	823.5	775.8	712.7	691.9	663.7	638.2	603.3	600.7	588.6
37.5°	870.4	805.4	751.7	706.0	646.3	635.6	606.7	587.9	559.0	561.7	555.7
40°	796.0	729.5	678.5	638.2	586.6	577.1	559.8	545.6	520.8	528.1	528.9
42.5°	720.8	654.4	608.0	571.8	527.5	521.5	509.4	501.3	482.5	497.3	503.3
45°	635.6	573.8	534.2	506.7	473.8	473.8	467.8	467.1	454.4	475.2	481.2
47.5°	553.0	504.7	477.2	460.4	437.6	448.4	446.3	451.6	442.2	463.7	469.1
50°	490.6	457.1	440.3	432.2	416.1	432.9	436.9	444.3	436.2	455.0	459.0
52.5°	451.0	428.8	419.4	417.5	406.0	426.9	433.5	440.3	430.9	448.4	447.6
55°	428.8	414.1	410.7	414.7	406.0	426.2	432.9	437.6	429.5	441.6	440.9
57.5°	420.8	412.8	414.7	420.8	414.7	431.5	434.9	440.3	432.2	437.6	440.3
60°	420.1	420.1	428.2	436.2	432.2	444.3	446.3	445.6	438.2	438.9	440.3
62.5°	416.1	426.2	439.6	452.3	451.0	465.7	467.1	458.4	452.3	445.6	443.7
65°	403.3	420.1	439.6	457.1	459.7	482.5	485.2	476.5	472.5	461.0	452.3
67.5°	375.1	396.6	419.4	440.9	445.6	476.5	482.5	485.9	487.9	480.5	469.1
70°	327.5	349.6	373.2	397.9	404.7	438.9	451.6	467.1	479.2	489.9	485.9
72.5°	266.5	286.5	306.7	329.5	339.6	375.1	391.9	418.8	437.6	465.1	476.5
75°	211.4	223.5	235.6	249.7	257.7	292.6	313.4	345.7	371.1	409.4	434.9
77.5°	166.4	172.5	178.5	184.5	187.9	207.4	224.1	256.4	285.9	334.2	371.8
80°	128.2	131.6	132.2	134.2	132.9	142.3	148.3	167.8	193.2	240.9	285.2
82.5°	82.6	85.2	86.5	89.9	83.3	95.3	99.3	101.4	114.8	149.7	181.2
85°	46.3	47.0	47.7	49.0	39.6	51.7	52.4	49.0	47.7	61.8	69.8
87.5°	11.5	10.7	11.5	11.5	4.7	10.7	10.7	7.4	5.3	10.0	8.1
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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CATALOG NUMBER: NVN-AF-02-LED-U-T2R-800

CANDELA DISTRIBUTION (continued):

	135°	145°	155°	165°	175°	180°
0°	914.1	914.1	914.1	914.1	914.1	914.1
2.5°	842.3	840.9	841.6	838.2	836.9	837.6
5°	828.8	826.1	826.1	824.1	821.4	821.4
7.5°	834.8	829.5	827.5	823.5	819.5	820.1
10°	844.2	834.8	828.2	822.1	817.4	817.4
12.5°	850.3	833.5	823.5	815.4	810.1	810.1
15°	851.6	826.1	811.4	802.7	797.3	797.3
17.5°	843.6	811.4	792.6	781.2	775.2	776.5
20°	823.5	783.9	761.7	749.6	743.6	744.3
22.5°	792.0	746.2	720.8	706.7	700.6	700.6
25°	749.0	699.3	671.8	660.4	655.0	655.0
27.5°	700.0	649.0	624.8	616.1	612.7	612.7
30°	645.0	602.6	585.2	579.2	573.8	573.8
32.5°	598.6	568.5	562.4	554.3	540.2	539.6
35°	561.7	558.3	553.7	529.5	509.4	506.7
37.5°	541.6	561.7	532.2	490.6	474.4	473.8
40°	530.8	549.6	498.7	478.5	476.5	476.5
42.5°	505.3	518.7	496.6	485.2	485.2	485.9
45°	478.5	489.9	501.3	491.2	494.6	495.3
47.5°	459.7	482.5	501.3	492.7	499.3	503.3
50°	442.2	475.8	491.2	491.2	498.7	499.3
52.5°	438.2	466.5	481.9	489.3	489.9	486.5
55°	438.9	459.0	474.4	483.9	479.9	479.9
57.5°	438.2	455.0	468.4	471.8	473.8	473.8
60°	438.9	449.7	460.4	459.0	465.7	465.7
62.5°	440.9	442.2	447.6	446.3	456.3	456.3
65°	445.6	432.9	429.5	430.9	442.9	442.2
67.5°	454.4	420.1	409.4	410.1	427.5	424.8
70°	467.1	402.6	386.6	382.6	412.0	407.3
72.5°	471.2	382.6	357.0	353.0	370.4	357.0
75°	452.3	366.4	325.5	312.1	304.7	300.6
77.5°	403.3	356.4	292.6	264.4	253.0	250.3
80°	334.2	335.5	249.7	216.1	251.0	250.3
82.5°	252.4	289.9	200.0	187.2	181.9	151.7
85°	122.1	218.1	153.6	128.9	77.1	73.1
87.5°	10.7	91.2	88.6	57.7	26.2	24.9
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)