

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: P196217

Luminaire Tested: **NVN-AF-05-LED-U-SLL**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196217
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24264)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: NVN-AF-05-LED-U-SLL
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 4000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT
ELIMINATOR LEFT OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 27167.5 lumens
Efficiency: N/A
Efficacy: 97.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B3 - U0 - G4

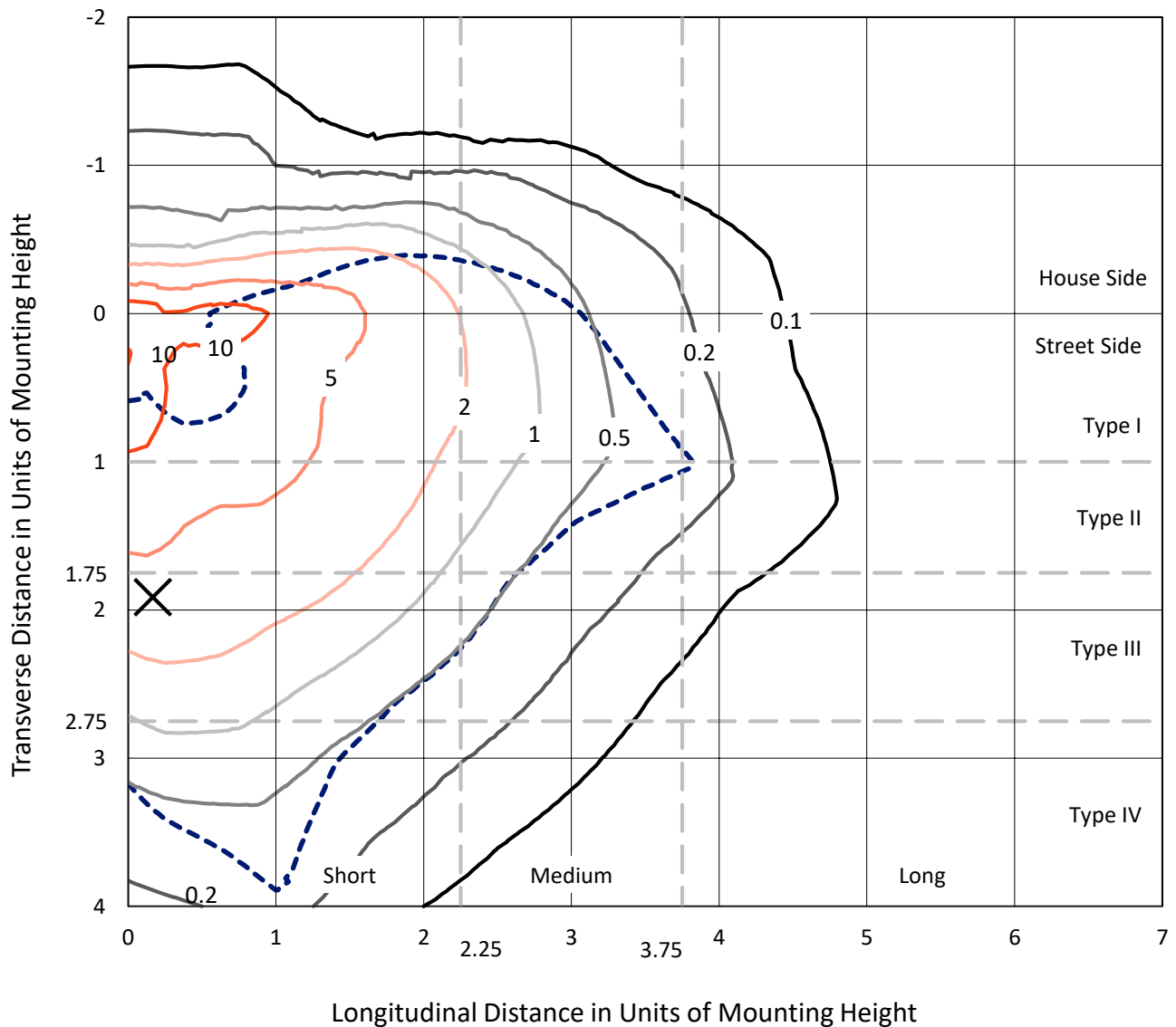
Input Watts (W): 279
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

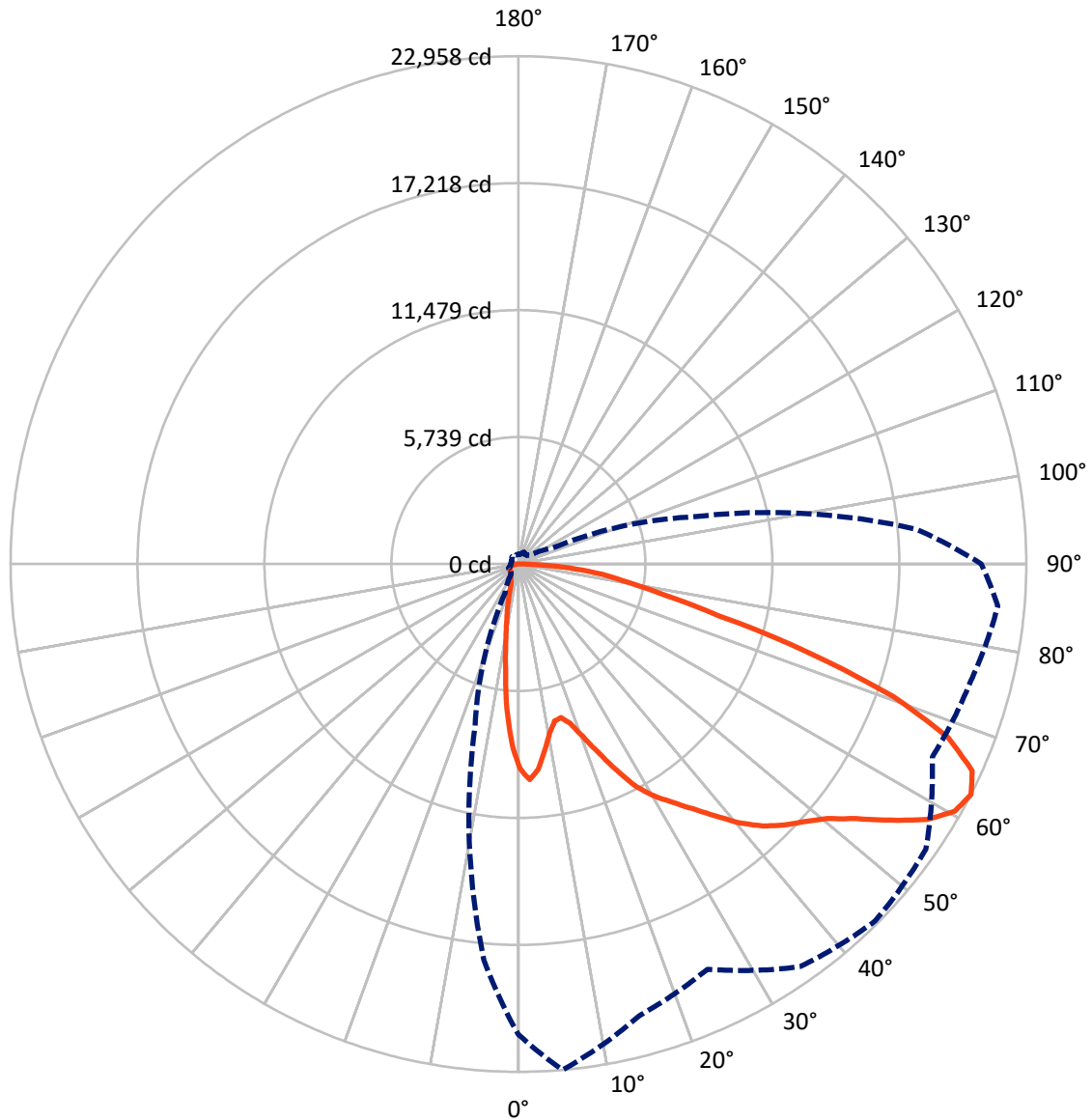
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 17 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 5-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4812.8	0.0	4812.8
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	22354.8	0.0	22354.8
	% Fixture	82.3	0.0	82.3
Total	Lumens	27167.5	0.0	27167.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	673.6	2.5
10°-20°	1230.3	4.5
20°-30°	1769.5	6.5
30°-40°	2710.1	10.0
40°-50°	3962.2	14.6
50°-60°	5765.1	21.2
60°-70°	6679.7	24.6
70°-80°	3482.0	12.8
80°-90°	895.1	3.3
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°	27167.5	100.0
0°-180°	27167.5	100.0



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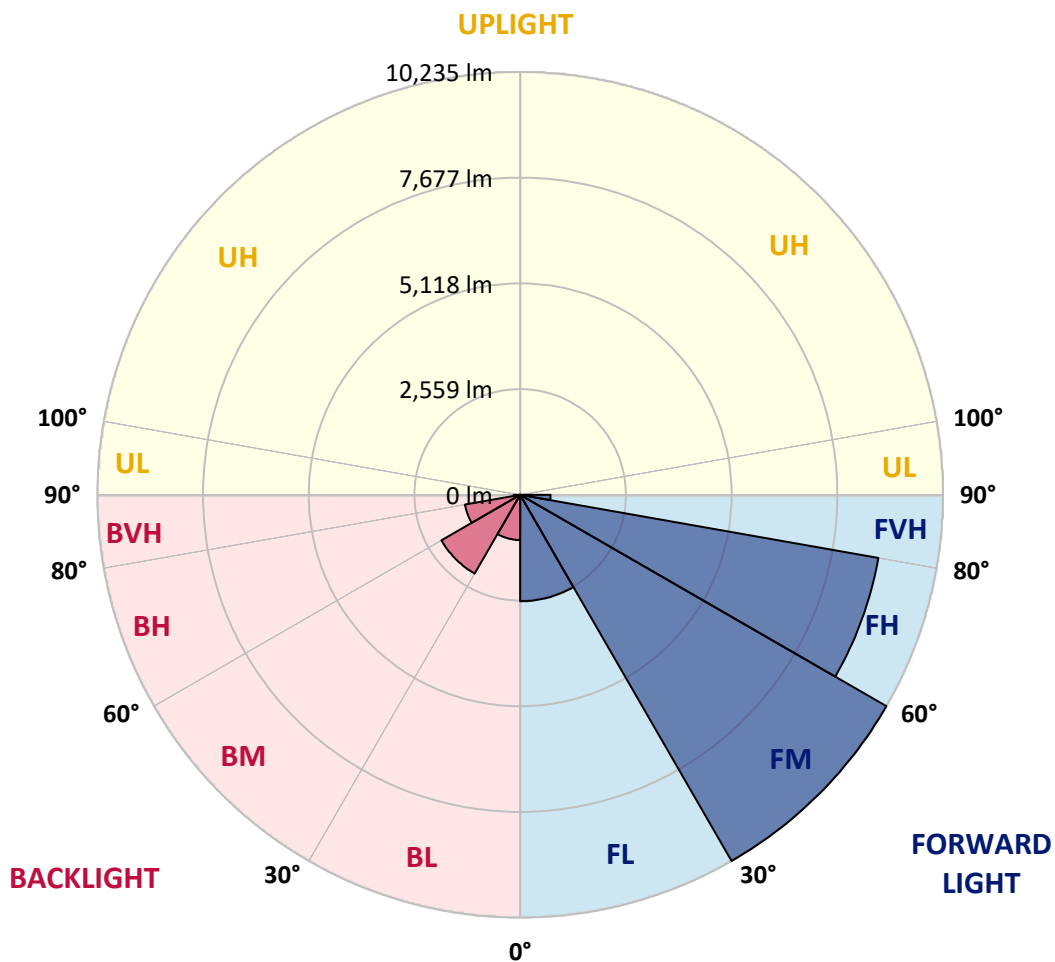
CATALOG NUMBER: NVN-AF-05-LED-U-SLL

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2578.3	9.5			
FM	(30°-60°)	10235.5	37.7			
FH	(60°-80°)	8804.6	32.4			G4/12000
FVH	(80°-90°)	736.3	2.7			G4/750
BL	(0°-30°)	1095.0	4.0	B3/2500		
BM	(30°-60°)	2202.0	8.1	B2/2500		
BH	(60°-80°)	1357.1	5.0	B3/2500		G3/2500
BVH	(80°-90°)	158.7	0.6			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	9262.0	9262.0	9262.0	9262.0	9262.0	9262.0	9262.0	9262.0	9262.0	9262.0	9262.0
2.5°	9561.3	9764.3	9996.7	10300.0	10506.8	10589.6	10658.5	10542.3	10430.0	10219.3	10144.4
5°	8931.1	9321.0	9961.2	10569.8	11105.7	11413.0	11507.5	11292.8	10910.7	10359.1	10067.6
7.5°	7995.4	8509.5	9409.7	10305.9	11074.2	11586.4	11623.7	11198.2	10445.8	9541.7	9068.9
10°	7177.9	7759.0	8801.1	9803.7	10617.2	11141.2	11038.7	10441.9	9533.8	8505.5	7971.8
12.5°	6703.2	7284.3	8345.9	9364.4	10130.6	10329.6	10120.8	9618.5	8757.7	7727.5	7189.7
15°	6602.7	7201.6	8184.5	9043.3	9518.0	9390.0	9183.1	8929.0	8316.5	7473.4	6953.4
17.5°	6906.0	7575.8	8399.1	8870.0	8850.3	8543.0	8369.7	8418.9	8314.4	7749.2	7205.5
20°	7530.6	8322.3	8944.8	8822.6	8318.4	7887.1	7786.6	8172.7	8655.3	8440.6	7843.7
22.5°	8351.9	9254.0	9689.4	8958.6	8040.7	7575.8	7556.1	8158.9	9275.7	9486.5	8759.6
25°	9279.7	10331.5	10439.9	9198.9	8011.1	7548.3	7530.6	8371.6	10022.3	10522.6	9786.0
27.5°	10414.3	11418.9	11066.3	9520.0	8141.2	7629.0	7640.8	8734.1	10800.3	11546.9	10942.2
30°	11269.1	12191.0	11452.3	9835.2	8349.9	7770.8	7800.4	9126.1	11219.9	12258.0	11866.0
32.5°	12068.9	12850.9	11822.7	10146.3	8655.3	7981.6	8084.0	9614.5	11724.1	12868.6	12738.6
35°	12953.3	13589.6	12234.4	10479.3	9092.5	8351.9	8499.6	10079.4	12224.5	13479.3	13603.4
37.5°	13955.9	14434.7	12681.5	10950.1	9722.8	9037.4	9120.1	10554.1	12573.2	14154.9	14531.1
40°	14999.9	15382.1	13170.0	11578.5	10638.8	9963.2	10002.6	11162.8	12846.9	14854.2	15431.3
42.5°	15896.2	16193.6	13660.5	12358.5	11690.7	10906.7	10940.3	11818.8	13108.9	15456.9	16152.3
45°	16613.2	16831.8	14123.4	13179.9	12813.5	12084.6	12076.8	12486.5	13459.6	15965.2	16705.8
47.5°	17281.0	17397.2	14639.4	13979.6	13977.6	13601.4	13319.7	13274.4	13926.5	16392.6	17188.3
50°	18045.3	18088.5	15321.0	14787.2	15399.8	15340.7	14820.7	14275.1	14531.1	16873.3	17694.6
52.5°	19108.9	19110.9	16166.1	15575.1	16969.7	17156.8	16552.2	15407.7	15425.4	17808.9	18569.2
55°	20359.8	20446.4	17267.2	16518.6	18612.6	18931.6	18362.4	16753.1	16709.7	19317.7	19987.4
57.5°	21326.9	21785.9	18549.5	17698.6	20147.0	20562.6	20103.6	18147.7	18287.5	20873.8	21157.5
60°	21598.8	22672.3	19827.9	19022.3	21445.1	22069.6	21602.7	19654.6	19831.8	21884.4	21494.3
62.5°	21273.7	22957.9	21130.0	20208.1	22215.3	22814.1	22479.2	20641.4	21090.6	21754.4	20925.1
65°	20310.5	22544.2	22260.6	20712.3	21772.1	21984.8	21896.2	20692.7	21774.0	20525.2	19351.3
67.5°	18061.0	20948.7	21756.3	19634.8	19701.8	19473.3	19357.1	19286.2	21005.9	18541.6	16869.3
70°	14688.8	17999.9	19351.3	16432.0	15935.6	15715.0	15332.8	16278.3	18880.4	15797.7	13883.1
72.5°	11314.4	13770.8	15872.6	12457.0	11424.8	11499.6	11066.3	12447.1	15640.1	12212.7	10599.4
75°	8034.8	9390.0	12669.7	8950.7	7583.6	7579.8	7546.3	8958.6	12340.8	8765.6	7755.1
77.5°	5791.2	6760.3	9925.8	5990.1	5381.4	5450.4	5340.1	6088.6	9620.4	6305.3	5745.9
80°	4619.1	5005.2	6415.6	3994.7	4006.6	4168.1	4144.5	4164.1	6328.9	4565.9	4296.1
82.5°	3319.1	3799.8	4904.7	3061.1	2649.3	2820.8	2854.2	3088.6	4465.5	3228.5	2832.6
85°	1701.9	2316.5	4512.7	2651.4	1656.6	1372.9	1579.7	2436.7	3878.5	1934.3	1380.8
87.5°	330.9	642.1	3307.3	1473.4	744.6	376.2	620.5	1032.2	2255.4	350.7	171.3
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	9262.0	9262.0	9262.0	9262.0	9262.0	9262.0	9262.0	9262.0	9262.0	9262.0	9262.0
2.5°	10016.4	9764.3	9527.9	9283.6	9094.5	8864.1	8637.5	8440.6	8249.5	8123.5	8162.8
5°	9772.1	9157.6	8606.0	8093.9	7794.5	7434.0	7112.9	6843.0	6634.2	6500.3	6581.1
7.5°	8659.2	7827.9	7101.1	6425.5	6000.0	5533.1	5158.8	4894.9	4733.4	4642.8	4774.7
10°	7520.6	6587.0	5771.5	5068.3	4648.7	4252.8	3914.0	3634.2	3417.6	3315.2	3368.4
12.5°	6705.1	5667.0	4812.2	4339.5	3979.0	3624.4	3273.7	2946.8	2671.0	2545.0	2519.3
15°	6399.9	5172.7	4300.1	3772.1	3413.7	3027.5	2649.3	2298.8	2036.8	1928.5	1904.8
17.5°	6533.8	5066.3	3996.7	3372.3	2852.3	2383.5	1957.9	1627.0	1434.0	1372.9	1378.8
20°	7004.6	5105.6	3752.5	2960.6	2318.4	1763.0	1337.5	1109.0	1026.2	1012.5	1028.3
22.5°	7650.6	5267.2	3575.2	2606.1	1847.7	1282.4	994.7	886.4	864.7	862.8	878.5
25°	8503.6	5582.3	3457.0	2290.9	1459.6	1016.4	866.7	805.7	787.9	791.9	807.6
27.5°	9508.2	5982.2	3380.1	2019.0	1199.6	906.1	809.6	756.4	738.7	742.6	754.4
30°	10426.1	6332.9	3265.9	1814.2	1077.5	866.7	778.1	724.9	701.2	701.2	709.1
32.5°	11247.5	6636.2	3132.0	1660.6	965.2	778.1	705.2	663.8	646.1	652.0	655.9
35°	11976.3	6795.8	3027.5	1569.9	874.6	717.0	644.2	600.8	577.1	581.1	587.0
37.5°	12693.3	6856.8	2958.6	1520.7	809.6	679.5	612.6	577.1	551.6	547.6	545.6
40°	13374.9	6843.0	2893.6	1506.9	766.3	652.0	592.9	561.4	535.8	529.9	527.9
42.5°	13963.8	6797.7	2832.6	1469.5	736.7	632.3	577.1	549.5	524.0	516.1	512.2
45°	14501.6	6770.2	2765.5	1400.5	752.5	624.4	569.3	539.7	516.1	506.3	502.3
47.5°	15098.4	6868.7	2690.8	1325.6	748.5	626.4	569.3	535.8	512.2	502.3	498.4
50°	15809.5	7201.6	2598.2	1223.2	713.1	669.7	567.3	529.9	508.2	502.3	494.4
52.5°	16814.1	7741.3	2470.1	1091.3	685.5	715.0	565.3	520.1	502.3	492.4	482.6
55°	18191.0	8281.0	2304.6	951.4	642.1	683.5	569.3	508.2	488.5	478.6	466.9
57.5°	19319.7	8690.7	2095.8	835.2	602.7	646.1	563.3	494.4	472.7	462.9	453.1
60°	19246.8	8730.1	1896.9	760.4	579.1	581.1	577.1	484.6	459.0	451.1	443.2
62.5°	18055.1	8243.6	1711.7	722.9	561.4	529.9	589.0	472.7	445.2	437.3	431.4
65°	16071.5	7110.9	1613.3	722.9	545.6	502.3	514.1	457.0	431.4	423.5	419.6
67.5°	13556.0	5714.4	1520.7	738.7	524.0	482.6	466.9	441.2	417.6	409.7	405.8
70°	10865.4	4497.0	1455.7	730.8	504.3	460.9	441.2	419.6	395.9	393.9	390.1
72.5°	8523.3	3612.6	1426.1	730.8	474.8	435.4	415.6	399.9	376.2	374.3	368.4
75°	6829.2	2712.4	1304.0	717.0	445.2	401.8	384.1	370.3	346.7	348.6	344.7
77.5°	5288.9	1918.5	1089.3	646.1	407.7	364.4	350.7	340.7	313.2	315.2	315.2
80°	4136.6	1248.8	845.1	535.8	364.4	321.1	311.2	303.3	273.8	277.7	277.7
82.5°	2834.5	742.6	612.6	431.4	313.2	273.8	271.8	260.0	228.5	230.5	234.4
85°	1548.2	488.5	407.7	319.1	246.2	222.6	218.6	212.8	183.2	183.2	185.2
87.5°	285.6	262.0	240.3	210.7	165.5	159.6	153.6	159.6	137.9	133.9	133.9
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°	9262.0	9262.0	9262.0	9262.0	9262.0	9262.0	9262.0	9262.0	9262.0	9262.0	9262.0
2.5°	8070.3	7934.3	7839.8	7757.0	7558.1	7571.9	7599.4	7638.9	7514.7	7579.8	7660.5
5°	6500.3	6388.0	6303.3	6171.4	5893.6	5795.1	5732.1	5704.5	5519.3	5558.7	5645.5
7.5°	4792.5	4790.5	4761.0	4613.2	4278.4	4075.5	3941.5	3900.2	3785.9	3829.3	3961.3
10°	3374.2	3409.7	3395.9	3263.9	2964.5	2818.7	2789.2	2871.9	2873.9	2958.6	3185.2
12.5°	2438.6	2418.9	2401.2	2292.8	2068.3	2044.7	2111.6	2225.8	2253.5	2344.1	2580.4
15°	1820.1	1772.8	1763.0	1678.3	1530.5	1552.2	1601.4	1660.6	1662.5	1725.5	1920.6
17.5°	1365.0	1365.0	1380.8	1325.6	1219.3	1209.4	1183.9	1168.1	1144.5	1170.1	1276.4
20°	1059.8	1109.0	1148.4	1116.9	1020.4	973.0	923.8	892.3	874.6	876.6	908.1
22.5°	908.1	947.5	998.7	983.0	902.1	841.1	809.6	787.9	774.2	774.2	791.9
25°	831.2	856.8	904.1	896.2	827.4	778.1	752.5	730.8	715.0	713.1	730.8
27.5°	770.2	785.9	817.4	813.6	742.6	711.1	695.3	681.6	671.7	669.7	687.4
30°	715.0	722.9	738.7	732.7	679.5	648.0	642.1	636.3	630.3	632.3	657.9
32.5°	665.8	671.7	681.6	673.7	622.5	594.8	585.0	577.1	571.2	577.1	606.7
35°	610.6	628.4	640.2	636.3	581.1	547.6	525.9	506.3	498.4	504.3	537.8
37.5°	563.3	592.9	608.7	604.8	547.6	508.2	480.6	476.7	476.7	484.6	518.0
40°	545.6	567.3	581.1	575.2	518.0	478.6	462.9	457.0	459.0	466.9	502.3
42.5°	529.9	549.5	553.5	541.7	484.6	459.0	449.1	441.2	445.2	455.0	490.5
45°	516.1	531.8	529.9	512.2	457.0	439.3	439.3	433.3	435.4	443.2	480.6
47.5°	506.3	514.1	510.1	492.4	437.3	423.5	429.4	429.4	433.3	439.3	476.7
50°	490.5	496.4	492.4	476.7	421.6	409.7	415.6	423.5	427.5	433.3	466.9
52.5°	474.8	478.6	476.7	460.9	405.8	397.9	397.9	405.8	413.7	421.6	451.1
55°	459.0	462.9	464.8	453.1	393.9	386.1	384.1	384.1	392.0	403.8	435.4
57.5°	447.1	447.1	451.1	443.2	382.2	372.3	362.4	364.4	374.3	384.1	415.6
60°	433.3	435.4	441.2	433.3	366.4	350.7	342.8	352.6	356.5	366.4	399.9
62.5°	421.6	421.6	425.4	419.6	352.6	336.9	330.9	340.7	340.7	350.7	384.1
65°	411.6	409.7	409.7	407.7	338.8	323.0	319.1	323.0	325.0	334.9	368.4
67.5°	403.8	393.9	393.9	397.9	325.0	309.2	307.3	307.3	309.2	321.1	350.7
70°	386.1	378.2	376.2	390.1	311.2	291.5	291.5	287.6	291.5	297.5	329.0
72.5°	366.4	360.5	358.5	378.2	297.5	271.8	267.9	266.0	267.9	273.8	303.3
75°	340.7	336.9	340.7	370.3	283.7	250.2	244.3	242.2	242.2	244.3	275.8
77.5°	311.2	307.3	336.9	344.7	275.8	224.5	218.6	214.7	210.7	210.7	246.2
80°	275.8	273.8	325.0	291.5	263.9	197.0	187.1	181.3	177.3	175.3	210.7
82.5°	240.3	236.4	277.7	228.5	218.6	161.5	147.7	136.0	130.0	130.0	161.5
85°	197.0	195.0	218.6	167.5	151.7	118.2	98.5	88.7	80.7	80.7	104.4
87.5°	143.8	139.8	136.0	100.5	76.8	53.2	37.4	35.5	31.5	29.6	43.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P196217

CATALOG NUMBER: NVN-AF-05-LED-U-SLL

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	9262.0	9262.0	9262.0	9262.0	9262.0	9262.0	9262.0	9262.0
2.5°	7780.7	7944.1	8253.4	8507.5	8846.4	9118.2	9427.4	9561.3
5°	5804.9	6063.0	6535.7	6939.6	7498.9	8017.1	8608.0	8931.1
7.5°	4164.1	4546.3	4904.7	5409.1	6108.3	6803.6	7567.9	7995.4
10°	3445.2	3795.8	4103.1	4461.6	5001.3	5783.3	6695.3	7177.9
12.5°	2854.2	3232.4	3557.4	3941.5	4394.6	5101.8	6141.8	6703.2
15°	2188.4	2600.1	2990.2	3453.1	4008.5	4816.2	5976.4	6602.7
17.5°	1499.0	1940.2	2420.9	2986.2	3655.9	4696.0	6133.9	6906.0
20°	1018.3	1341.4	1863.4	2533.1	3338.8	4638.9	6480.6	7530.6
22.5°	837.2	983.0	1374.9	2107.7	3078.8	4701.9	7043.9	8351.9
25°	768.2	847.0	1069.6	1733.4	2879.8	4869.3	7806.2	9279.7
27.5°	724.9	791.9	937.6	1465.5	2696.6	5097.8	8734.1	10414.3
30°	699.3	762.3	884.4	1327.7	2529.2	5294.8	9531.9	11269.1
32.5°	642.1	689.5	789.9	1248.8	2409.0	5454.4	10235.0	12068.9
35°	573.2	630.3	713.1	1197.7	2405.2	5529.2	10896.9	12953.3
37.5°	547.6	602.7	663.8	1170.1	2428.8	5592.3	11706.4	13955.9
40°	531.8	581.1	630.3	1166.2	2448.4	5641.5	12498.3	14999.9
42.5°	518.0	567.3	624.4	1138.5	2440.6	5708.5	13199.5	15896.2
45°	514.1	563.3	638.2	1097.2	2438.6	5812.8	13757.1	16613.2
47.5°	510.1	585.0	634.2	1051.9	2430.7	6033.5	14385.3	17281.0
50°	506.3	624.4	606.7	988.8	2371.6	6409.7	15230.4	18045.3
52.5°	504.3	630.3	577.1	902.1	2265.2	6967.1	16467.5	19108.9
55°	496.4	598.8	525.9	787.9	2111.6	7567.9	17793.1	20359.8
57.5°	478.6	533.8	496.4	675.7	1891.0	7987.5	18772.1	21326.9
60°	522.0	459.0	476.7	618.5	1627.0	8062.4	18815.4	21598.8
62.5°	498.4	417.6	457.0	598.8	1441.8	7573.8	17954.6	21273.7
65°	397.9	395.9	439.3	618.5	1414.3	6480.6	16500.9	20310.5
67.5°	362.4	380.1	421.6	642.1	1432.0	5105.6	14361.7	18061.0
70°	338.8	360.5	397.9	663.8	1463.5	4022.3	11562.6	14688.8
72.5°	315.2	332.9	374.3	685.5	1441.8	3173.3	9254.0	11314.4
75°	285.6	301.4	340.7	628.4	1237.1	2332.2	7353.2	8034.8
77.5°	252.2	266.0	299.4	496.4	929.8	1623.1	5507.6	5791.2
80°	216.7	222.6	248.2	362.4	606.7	971.1	4191.7	4619.1
82.5°	171.3	173.4	189.1	266.0	378.2	620.5	2907.4	3319.1
85°	110.3	114.3	122.1	187.1	254.1	397.9	1485.2	1701.9
87.5°	37.4	43.4	43.4	90.6	124.1	220.7	455.0	330.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)