



### DESCRIPTION

3" LED dedicated remodel downlight for easy installation without replacing the ceiling.

Project Name: \_\_\_\_\_

Fixture Type: \_\_\_\_\_

Notes: \_\_\_\_\_

### 23 W Output performance

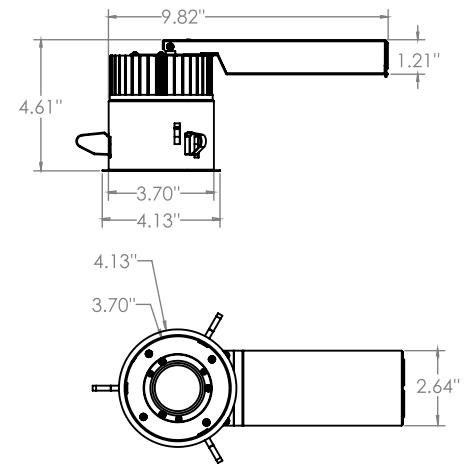
Color Temperature	2700K		3000K		3500K		4000K	
Color Rendering Index	90+ CRI	95+ CRI	90+ CRI	95+ CRI	90+ CRI	95+ CRI	90+ CRI	95+ CRI
Source Lumens (lm)	1900	1822	2120	1852	2310	1885	2450	--
Delivered Lumens (lm) (60° Beam Spread)	1340	1275	1500	1295	1630	1410	1730	--
Delivered Lumens (lm) (36° Beam Spread)	1428	1358	1598	1380	1736	1502	1843	--
Delivered Lumens (lm) (24° Beam Spread)	1519	1445	1700	1468	1847	1598	1961	--
Delivered Lumens (lm) (15° Beam Spread)	1504	1431	1684	1454	1830	1583	1942	--

For the 10W and 14W and option please use the multiplier chart below to calculate the output performance

Wattage	23W	14W	10W
Multiplier	1	0.61	0.43

Note: The 10W and 14W option does not dim to 1% and is not compatible with Dim to Warm

### DIMENSIONS



### ORDERING CODE

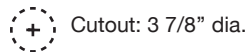
Example: **NVTN-3-RM-23W-30K-90C-3G-EM**

Product	Watts	Color Temp	Chip Type	CRI	Version	Optional
<b>NVTN-3-RM</b> 3-7/8" Remodel Housing, Non-IC	<b>23W</b> 23 Watts <b>14W</b> 14 Watts <b>10W</b> 10 Watts	<b>27K</b> 2700K <b>30K</b> 3000K <b>35K</b> 3500K <b>40K</b> 4000K <b>18K30K</b> Dim to Warm	ST Standard (Default)  <b>NB</b> Narrow Beam (when using 15D and 24D beam spread lens.) Not applicable for 18K30K color temp	<b>90C</b> CRI <b>95C</b> 95CRI	<b>3G</b> 3rd Gen	<b>EM</b> Emergency Driver

### TRIM ORDERING CODE

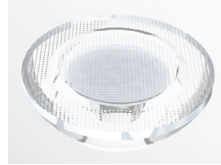
Example: **NVTN-3-TRIM-A-SQ-WH-WH**

Product	Type	Outer Finish	Inner Finish
<b>NVTN-3-TRIM-A</b> Self flanged trims	<b>SQ</b> Square <b>RD</b> Round	<b>WH</b> White <b>BK</b> Black <b>XX</b> Custom Power Coating  *Consult factory for colors	<b>WH</b> White <b>BK</b> Black <b>SH</b> Shower Trim (For Damp Locations) <b>XX</b> Custom Power Coating  *Consult factory for colors



## ■ BEAM SPREAD LENS / REFLECTOR (Factory installation option)

Factory Installed Beam Spread Lens (Optional 1)	
60	60° (Default)
36	36°
24	24°
15	15°



Beam Spread Lens

\*Please note that only 60° (default), 36°, 24°, 15° beam spread lens are included, and they are field changeable. Only check the box if factory installed beam spread lens (except 60°) or reflector is required. Additional charge will be applied for this option.

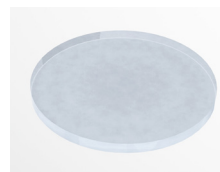
## ■ ADDITIONAL OPTIC ACCESSORIES (OPTIONAL)

Example: **NVTN-3-SH-CL**

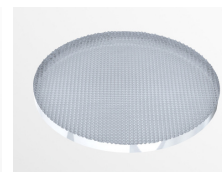
Accessory type
CL CLEAR LENS
LI LINEAR LENS
PR PRISMATIC LENS
SA SANDED LENS
SO SOFTENING LENS
MB MICRO LOUVER- BLACK
MG MICRO LOUVER- GREY



Clear Lens



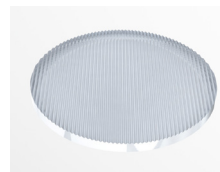
Softening Lens



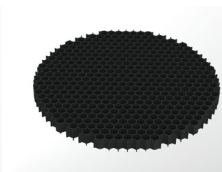
Prismatic Lens



Sanded Lens



Linear Lens



Micro-louver  
(Black or Grey)

\*Please note that this fixture can hold up to two different accessories

## ■ SPECIFICATIONS

### LED SYSTEM

- LED ENGINE: CREE: 2700K, 3000K, 3500K, 4000K, LUXTECH: 18K30K dim-to-warm, field-replaceable LED module solderless replacement process
- LUMENS/WATTS: 5 W, 15 W, 23W, up to 1900lm at 23W
- CRI: Minimum 90 color rendering index with an option of 95 CRI
- COLOR CONSISTENCY: 2-step binning LEDs
- OPTICS: 60° beam spread lens included, 60°, 36°, 24°, 15° lens available, field changeable. Additional optics available (see page 2)

### ELECTRICAL

- STANDARD DRIVER: 120-277VAC, fully dimmable using 0-10V (dim down to 1%), dim to off, forward-phase (TRIAC), or reverse-phase (ELV) dimmers (TRIAC & ELV dimming only at 120VAC). Driver is fully accessible from below the ceiling.
- EMERGENCY (Optional): Remote emergency battery pack provides backup power for 90 minutes. Remote emergency test switch included.

### MOUNTING

Accommodates to 1/2", 5/8", 3/4", 1.0" ceiling thickness in drywall and acoustical ceiling types.

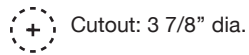
### CONSTRUCTION

- HOUSING: Heavy gauge cold rolled steel with through wire J-box
- HEAT SINK: Precision-cut extruded aluminum heat sink.
- TRIM: Die-cast aluminum with Solite glass
- TRIM ADAPTER: Die-cast aluminum, spackle flanges are use in sheetrock/mud-in ceiling applications. Acoustical ceiling adapter are available for flanged trim.
- FINISH: Housing-Standard power-coated matte black. Trim-White, Black, Consult factory for custom power coating finish.

### LISTING/WARRANTY

- APPROVALS: UL/C-UL listed, Suitable for dry/damp location. Airtight rated. Meets ASTM E283 standards.
- WARRANTY: 5 Year Limited Warranty, Ambient temperatures at fixture location should not exceed 40° C during normal operation.
- LED LIFE > 61,000 hours at 70% lumen maintenance (L70)
- WEIGHT: 4lbs
- Patents Pending

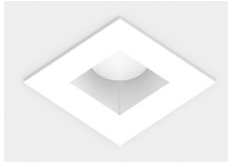




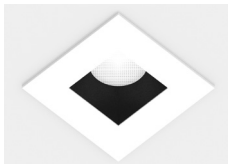
Cutout: 3 7/8" dia.

## ■ TRIM OPTIONS

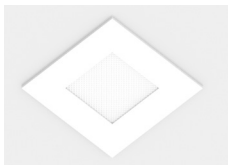
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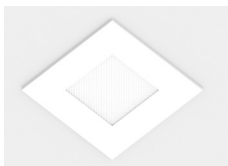
NVTN-3-TRIM-A-SQ-WH-WH



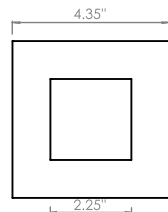
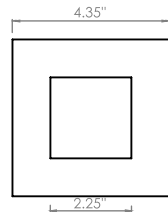
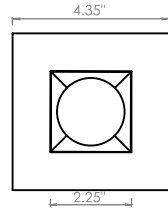
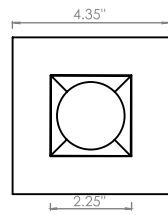
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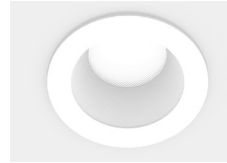
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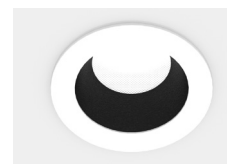
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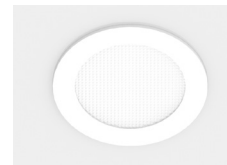
### Round



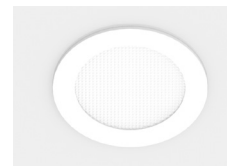
NVTN-3-TRIM-A-RD-WH-WH



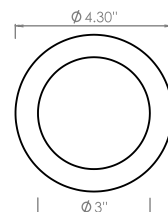
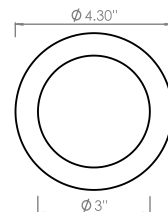
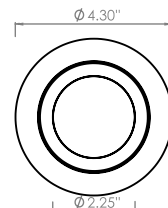
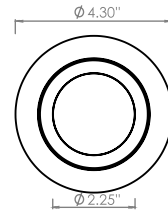
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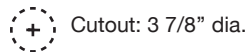


NVTN-3-TRIM-A-RD-WH-SH



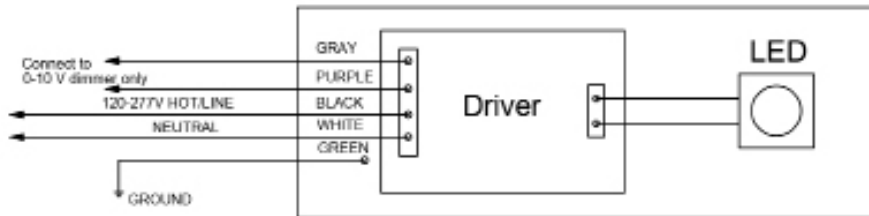
NVTN-3-TRIM-A-RD-WH-WW





Cutout: 3 7/8" dia.

## ■ WIRING DIAGRAM



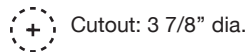
Note: Cap off purple and gray wires individually if 0-10 v dimming is not desired.

\* Compatible with 0-10 V/ forward-phase (TRIAC) & reverse-phase (ELV) dimming

## ■ DIMMER COMPATIBILITY CHART

Standard Driver ST					
Dimmer Manufacturer	Product	Part Number	Dimming Range	Qty. Fixture Per Control	Dimming Type
<b>120V/277V</b>					
Lutron	Diva	DVTV*/DVSTV/ DVSCSTV	100%-1%	1-14	0-10 V
Lutron	Nova T	NTSTV-DV	100%-1%	1-14	0-10 V
Lutron	Nova	NFTV	100%-1%	1-14	0-10 V
<b>120V Only</b>					
Lutron	Diva	DVELV-300P/DVSCSELV-300P	100%-10%	1-13	ELV
Lutron	Nova T	NTELV-300	100%-10%	1-13	ELV
Lutron	Nova T	NTELV-600	100%-10%	1-26	ELV
Lutron	Maestro	MAELV-600/MSCSELV-600M	100%-10%	1-26	ELV
Lutron	Skylark	SELV-303P/SELV-300P	100%-10%	1-13	ELV
Lutron	Diva	DVCL-153PH/DVCL-153P	100%-10%	1-6	TRIAC
Lutron	Diva	DVCL-253P/DVSCCL-253P	100%-10%	1-10	TRIAC
Lutron	Nova T	NTCL-250	100%-10%	1-10	TRIAC
Lutron	Maestro	MACL-153M/MACL-153MH	100%-10%	1-6	TRIAC
Lutron	Skylark	SCL-153P/SCL-153PH	100%-10%	1-6	TRIAC

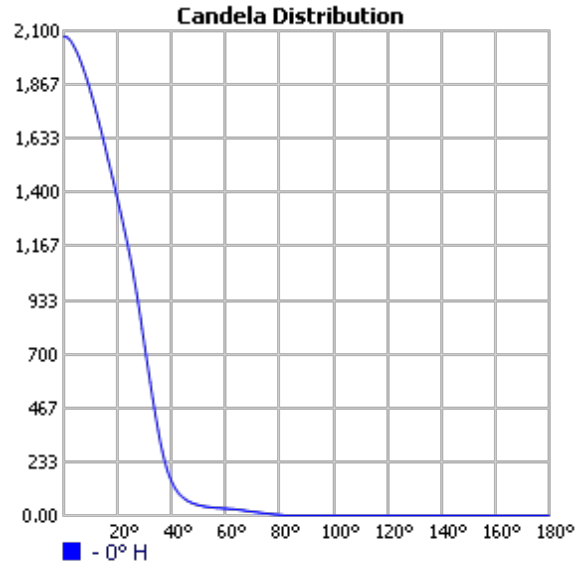
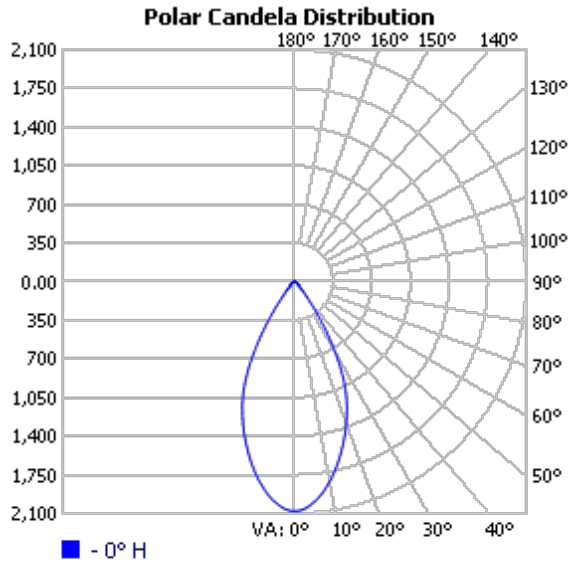
\* DVTV wires as a 24V switch. A power pack is required to switch 120 - 277 VAC



Cutout: 3 7/8" dia.

## ■ PHOTOMETRIC REPORT

**NVTN-3-IC-23W-30K-3G 60° Beam Spread**



### LUMENS PER ZONE

ZONE	LUMENS	% TOTAL	ZONE	LUMENS	% TOTAL
0-10	185.8	12.4%	90-100	0.000	0%
10-20	448.7	30.0%	100-110	0.000	0%
20-30	490.2	32.8%	110-120	0.000	0%
30-40	239.0	16.0%	120-130	0.000	0%
40-50	60.7	4.1%	130-140	0.000	0%
50-60	32.9	2.2%	140-150	0.000	0%
60-70	25.0	1.7%	150-160	0.000	0%
70-80	10.9	0.7%	160-170	0.000	0%
80-90	0.7	0.0%	170-180	0.000	0%

### ILLUMINANCE AT A DISTANCE

HEIGHT(FT)	CENTER BEAM		BEAM SPREAD(FT)		FIELD SPREAD(FT)	
	FOOTCANDLE		HORIZONTAL	VERTICAL	HORIZONTAL	VERTICAL
<b>4.00</b>	129.75 FC		3.9	3.9	6.3	6.3
<b>8.00</b>	32.44 FC		7.8	7.8	12.6	12.6
<b>12.00</b>	14.42 FC		11.6	11.6	18.9	18.9
<b>16.00</b>	8.11 FC		15.5	15.5	25.2	25.2
<b>20.00</b>	5.19 FC		19.4	19.4	31.5	31.5
			BEAM ANGLE		FIELD ANGLE	
			51.7°		76.5°	

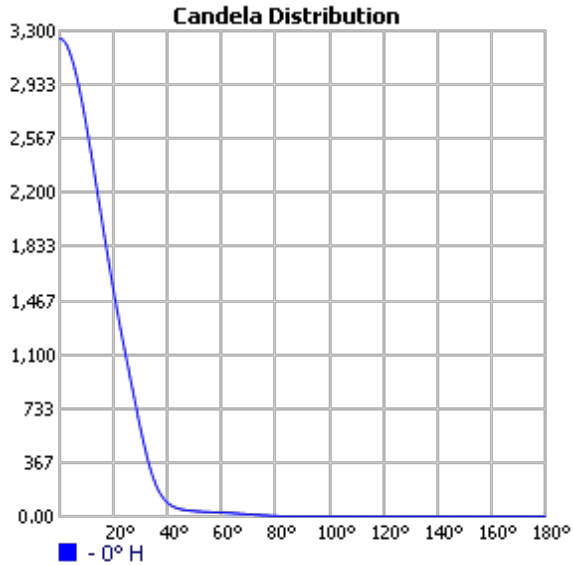
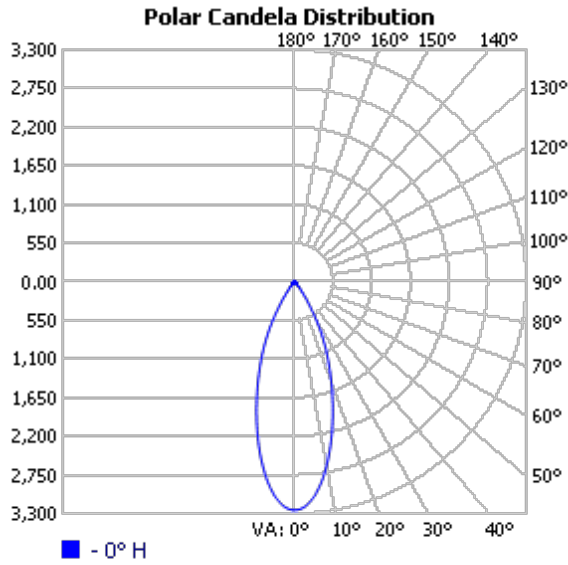
### COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE: 20%

RCC %:	80				70				50				30			10			0
RW %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	50	30	20	0	
RCR: 0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00	
1	1.13	1.11	1.08	1.06	1.11	1.08	1.06	.94	1.04	1.03	1.01	1.01	.99	.98	.97	.96	.95	.93	
2	1.08	1.03	.99	.95	1.06	1.01	.97	.87	.98	.95	.92	.95	.92	.90	.92	.90	.88	.87	
3	1.02	.96	.91	.87	1.00	.95	.90	.82	.92	.88	.85	.90	.86	.84	.87	.85	.82	.81	
4	.97	.90	.84	.80	.96	.89	.84	.77	.87	.82	.79	.85	.81	.78	.83	.80	.77	.75	
5	.93	.84	.79	.74	.91	.83	.78	.72	.82	.77	.73	.80	.76	.73	.78	.75	.72	.71	
6	.88	.79	.74	.69	.87	.79	.73	.67	.77	.72	.69	.76	.71	.68	.74	.71	.68	.66	
7	.84	.75	.69	.65	.83	.74	.69	.64	.73	.68	.64	.72	.67	.64	.71	.67	.64	.62	
8	.80	.71	.65	.61	.79	.70	.65	.60	.69	.64	.61	.68	.64	.60	.67	.63	.60	.59	
9	.77	.67	.61	.58	.76	.67	.61	.57	.66	.61	.57	.65	.60	.57	.64	.60	.57	.56	
10	.73	.64	.58	.54	.72	.63	.58	.54	.63	.58	.54	.62	.57	.54	.61	.57	.54	.53	

■ **PHOTOMETRIC REPORT**

**NVTN-3-IC-23W-30K-3G 36° Beam Spread**



**LUMENS PER ZONE**

ZONE	LUMENS	% TOTAL	ZONE	LUMENS	% TOTAL
0-10	279.7	17.5%	90-100	0.000	0%
10-20	573.4	35.9%	100-110	0.000	0%
20-30	471.8	29.5%	110-120	0.000	0%
30-40	168.6	10.5%	120-130	0.000	0%
40-50	41.9	2.6%	130-140	0.000	0%
50-60	28.6	1.8%	140-150	0.000	0%
60-70	22.3	1.4%	150-160	0.000	0%
70-80	10.5	0.7%	160-170	0.000	0%
80-90	1.1	0.1%	170-180	0.000	0%

**ILLUMINANCE AT A DISTANCE**

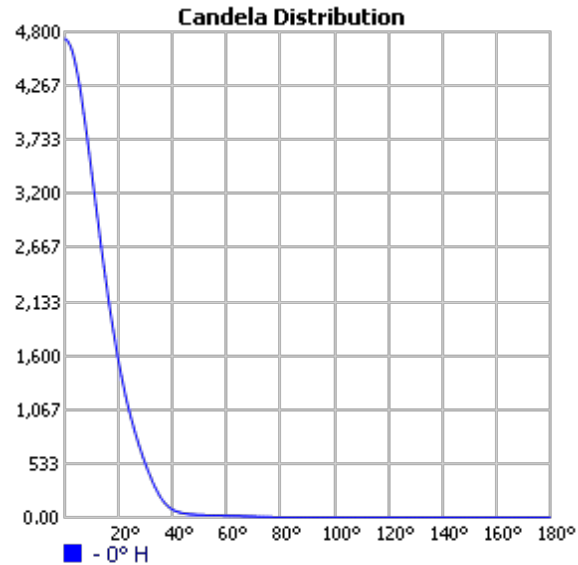
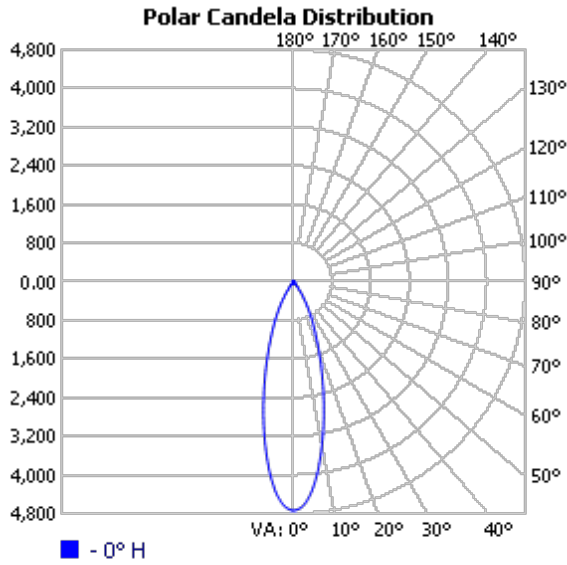
HEIGHT(FT)	CENTER BEAM		BEAM SPREAD(FT)		FIELD SPREAD(FT)	
	FOOTCANDLE		HORIZONTAL	VERTICAL	HORIZONTAL	VERTICAL
<b>4.00</b>	203.13 FC		2.8	2.8	5.3	5.3
<b>8.00</b>	50.78 FC		5.5	5.5	10.7	10.7
<b>12.00</b>	22.57 FC		8.3	8.3	16.0	16.0
<b>16.00</b>	12.70 FC		11.1	11.1	21.3	21.3
<b>20.00</b>	8.13 FC		13.9	13.9	26.6	26.6
			BEAM ANGLE		FIELD ANGLE	
			38.2°		67.3°	

**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

EFFECTIVE FLOOR CAVITY REFLECTANCE: 20%

RCC %:	80				70				50				30				10				0			
RW %:	70	50	30	0	70	50	30	0	50	30	20	10	50	30	20	10	50	30	20	10	50	30	20	10
RCR: 0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.00
1	1.14	1.11	1.09	1.07	1.11	1.09	1.07	.95	1.05	1.03	1.02	1.01	1.00	.99	.98	.97	.96	.96	.96	.96	.96	.96	.96	.94
2	1.09	1.04	1.00	.97	1.07	1.02	.99	.89	.99	.96	.94	.96	.94	.92	.94	.92	.90	.94	.92	.90	.94	.92	.90	.89
3	1.04	.98	.93	.90	1.02	.97	.92	.84	.94	.90	.88	.92	.89	.86	.89	.87	.85	.89	.87	.85	.89	.87	.85	.83
4	.99	.92	.87	.83	.98	.91	.87	.80	.89	.85	.82	.87	.84	.81	.85	.83	.80	.85	.83	.80	.85	.83	.80	.79
5	.95	.87	.82	.78	.94	.87	.82	.76	.85	.81	.77	.83	.79	.77	.82	.78	.76	.82	.78	.76	.82	.78	.76	.75
6	.91	.83	.78	.74	.90	.82	.77	.72	.81	.76	.73	.79	.76	.73	.78	.75	.72	.78	.75	.72	.78	.75	.72	.71
7	.87	.79	.74	.70	.86	.78	.73	.68	.77	.73	.69	.76	.72	.69	.75	.71	.69	.75	.71	.69	.75	.71	.69	.67
8	.84	.75	.70	.66	.83	.75	.70	.65	.74	.69	.66	.73	.69	.66	.72	.68	.65	.72	.68	.65	.72	.68	.65	.64
9	.81	.72	.67	.63	.80	.71	.66	.62	.71	.66	.63	.70	.66	.63	.69	.65	.62	.69	.65	.62	.69	.65	.62	.61
10	.77	.69	.64	.60	.77	.68	.63	.60	.68	.63	.60	.67	.63	.60	.66	.62	.60	.66	.62	.60	.66	.62	.60	.58

■ **PHOTOMETRIC REPORT**  
NVTN-3-IC-23W-30K-3G 24° Beam Spread



**LUMENS PER ZONE**

ZONE	LUMENS	% TOTAL	ZONE	LUMENS	% TOTAL
0-10	383.4	22.6%	90-100	0.000	0%
10-20	654.4	38.5%	100-110	0.000	0%
20-30	434.6	25.6%	110-120	0.000	0%
30-40	151.7	8.9%	120-130	0.000	0%
40-50	32.9	1.9%	130-140	0.000	0%
50-60	19.9	1.2%	140-150	0.000	0%
60-70	15.0	0.9%	150-160	0.000	0%
70-80	7.0	0.4%	160-170	0.000	0%
80-90	0.6	0.0%	170-180	0.000	0%

**ILLUMINANCE AT A DISTANCE**

	CENTER BEAM	BEAM SPREAD(FT)		FIELD SPREAD(FT)	
HEIGHT(FT)	FOOTCANDLE	HORIZONTAL	VERTICAL	HORIZONTAL	VERTICAL
4.00	295.81 FC	2.2	2.2	4.8	4.8
8.00	73.95 FC	4.3	4.3	9.5	9.5
12.00	32.87 FC	6.5	6.5	14.3	14.3
16.00	18.49 FC	8.6	8.6	19.0	19.0
20.00	11.83 FC	10.8	10.8	23.8	23.8
		BEAM ANGLE		FIELD ANGLE	
		30.2°	30.2°	61.5°	61.5°

**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

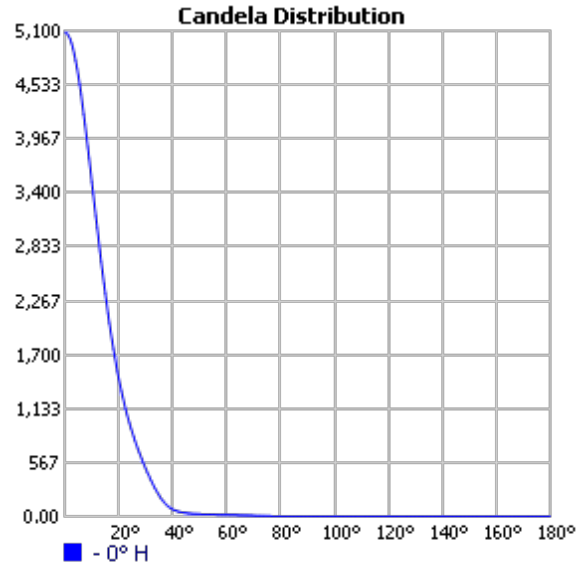
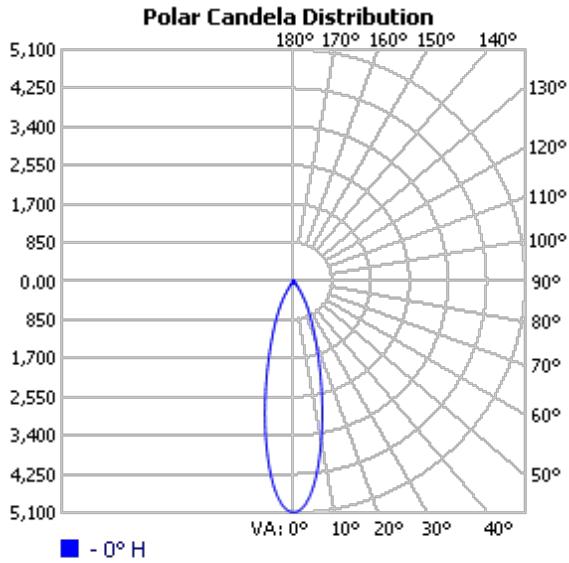
EFFECTIVE FLOOR CAVITY REFLECTANCE: 20%

RCC %:	80				70				50				30				10				0
RW %:	70	50	30	0	70	50	30	0	50	30	20	10	50	30	20	10	50	30	20	10	0
RCR: 0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.02	1.02	1.02	1.00
1	1.14	1.12	1.10	1.08	1.12	1.10	1.08	.95	1.06	1.04	1.03	1.02	1.01	1.00	.99	.98	.97	.97	.97	.97	.95
2	1.10	1.05	1.02	.99	1.07	1.04	1.00	.91	1.00	.98	.96	.97	.95	.94	.95	.93	.92	.92	.92	.92	.90
3	1.05	1.00	.95	.92	1.03	.98	.94	.86	.96	.92	.90	.93	.91	.88	.88	.85	.87	.87	.87	.87	.86
4	1.01	.94	.90	.86	.99	.93	.89	.82	.91	.88	.85	.89	.86	.84	.88	.85	.83	.84	.81	.79	.81
5	.97	.90	.85	.81	.95	.89	.84	.79	.87	.83	.80	.86	.82	.80	.84	.81	.79	.81	.78	.77	.78
6	.93	.86	.81	.77	.92	.85	.80	.75	.84	.80	.76	.82	.79	.76	.81	.78	.75	.78	.75	.74	.74
7	.90	.82	.77	.74	.89	.81	.77	.72	.80	.76	.73	.79	.75	.73	.78	.75	.72	.77	.74	.72	.71
8	.87	.79	.74	.70	.86	.78	.73	.69	.77	.73	.70	.76	.72	.70	.75	.72	.69	.74	.71	.69	.68
9	.84	.76	.71	.67	.83	.75	.70	.66	.74	.70	.67	.73	.70	.67	.73	.69	.67	.72	.69	.67	.65
10	.81	.73	.68	.65	.80	.72	.68	.64	.71	.67	.64	.71	.67	.64	.70	.67	.64	.71	.67	.64	.63



## ■ PHOTOMETRIC REPORT

### NVTN-3-IC-23W-30K-3G 15° Beam Spread



#### LUMENS PER ZONE

ZONE	LUMENS	% TOTAL	ZONE	LUMENS	% TOTAL
0-10	405.1	24.1%	90-100	0.000	0%
10-20	645.8	38.4%	100-110	0.000	0%
20-30	410.2	24.4%	110-120	0.000	0%
30-40	148.2	8.8%	120-130	0.000	0%
40-50	32.2	1.9%	130-140	0.000	0%
50-60	19.7	1.2%	140-150	0.000	0%
60-70	14.8	0.9%	150-160	0.000	0%
70-80	6.8	0.4%	160-170	0.000	0%
80-90	0.6	0.0%	170-180	0.000	0%

#### ILLUMINANCE AT A DISTANCE

HEIGHT(FT)	CENTER BEAM		BEAM SPREAD(FT)		FIELD SPREAD(FT)	
	FOOTCANDLE		HORIZONTAL	VERTICAL	HORIZONTAL	VERTICAL
<b>4.00</b>	318.06 FC		2.0	2.0	4.6	4.6
<b>8.00</b>	79.52 FC		4.0	4.0	9.2	9.2
<b>12.00</b>	35.34 FC		6.0	6.0	13.8	13.8
<b>16.00</b>	19.88 FC		8.0	8.0	18.4	18.4
<b>20.00</b>	12.72 FC		10.1	10.1	23.0	23.0
			BEAM ANGLE		FIELD ANGLE	
			28.2°		59.9°	

#### COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

		EFFECTIVE FLOOR CAVITY REFLECTANCE: 20%											
RCC %:		80				70				50			
RW %:		70	50	30	0	70	50	30	0	50	30	20	0
RCR: 0		1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06
1		1.14	1.12	1.10	1.08	1.12	1.10	1.08	.95	1.06	1.04	1.03	1.02
2		1.10	1.05	1.02	.99	1.08	1.04	1.01	.91	1.01	.98	.96	.98
3		1.05	1.00	.96	.92	1.03	.98	.95	.87	.96	.93	.90	.94
4		1.01	.95	.90	.87	.99	.94	.89	.83	.92	.88	.85	.90
5		.97	.90	.85	.82	.96	.89	.85	.79	.88	.84	.81	.86
6		.94	.86	.81	.78	.92	.86	.81	.76	.84	.80	.77	.83
7		.90	.83	.78	.74	.89	.82	.77	.73	.81	.77	.74	.80
8		.87	.79	.74	.71	.86	.79	.74	.70	.78	.74	.71	.77
9		.84	.76	.71	.68	.83	.76	.71	.67	.75	.71	.68	.74
10		.81	.73	.69	.65	.80	.73	.68	.65	.72	.68	.65	.72