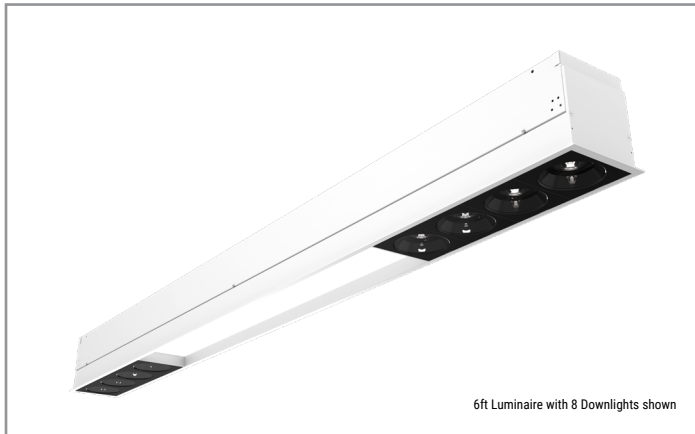


Project		Catalog #		Type	
Prepared by		Notes		Date	



6ft Luminaire with 8 Downlights shown

# NeoRay

## Define Patient

5in Define Recessed Adjustable Downlights



### Typical Applications

Healthcare • Hospitality

*Note: This product is not intended or approved as a medical device*

### Interactive Menu

- Order Information [page 2](#)
- Downlight Options [page 3](#)
- Photometric Data [page 4](#)
- VividTune [page 7](#)

### Product Certification



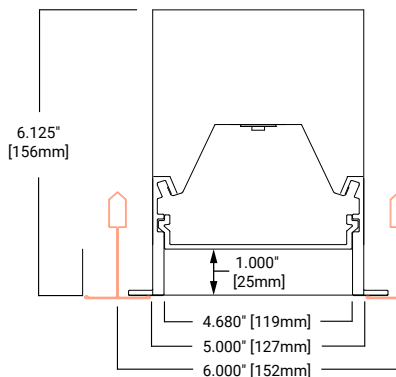
### Product Features



### Top Product Features

- Single luminaire installation for patient bed application
- Flexible solution with symmetric integrated adjustable downlights
- 4, 6, and 8 downlight configurations with premium hex louver option
- 4ft and 6ft luminaire lengths that fit in a 6in grid
- 5in aperture with 1in regressed lens of ambient section
- Wipedown lens and antimicrobial finish option

### Dimensions



S125RDR  
Regressed Housing

[additional product diagrams](#)

## Order Information

SAMPLE ORDER NUMBER: **DPT5-6F0-109S35-F-3DUCPDD-AMETG-A-1040S-1040N-1030W-0527W-BH**

Series	Length	Ambient Output			Ambient Optics
		Ambient Output	Ambient Performance	Ambient CRI/CCT	
<b>DPT5</b> = Define Patient	<b>4F0</b> = 4ft <b>6F0</b> = 6ft	<b>[Blank]</b> = None <b>37</b> = Lowest <b>61</b> = Low <b>85</b> = Medium <b>109</b> = High <b>127</b> = Highest ____ = Custom Lm/ft	<b>S</b> = Standard <b>V</b> = VividTune	<b>27</b> = 2700K, 90CRI <b>30</b> = 3000K, 90CRI <b>35</b> = 3500K, 90CRI <b>40</b> = 4000K, 90CRI <b>65</b> = VividTune 90CRI, 2700-6500K	<b>F</b> = Frosted Lens (Diffuse) <b>A</b> = Asymmetric
<b>Notes</b>	<b>Notes</b>	<b>Notes</b> Specify Custom Lumen Output to the nearest 10Lm/ft. Ambient section length varies with selected luminaire length and quantity of downlights. Reference Ambient Output table for more information. Nominal output will vary based on selected color and distribution. Performance is based on standard Define 5 at 3500K/80CRI/RDR housing/ Frosted Lens. Please refer to scaling data and IES files for other variables.	<b>Notes</b> VividTune available on Medium (85) and higher light levels. VividTune available with 0-10V (DD) Controls option only.	<b>Notes</b>	

Electrical				
Circuiting	Ambient Emergency	Voltage	Electrical Options	Controls
<b>2</b> = Two Circuit (Ambient   Downlight Group 1) <b>3</b> = Three Circuit (Ambient   Downlight Group 1   Downlight Group 2)	<b>D</b> = None (Standard) <b>E</b> = Emergency Circuit <b>T</b> = UL924 Bypass Relay Device	<b>U</b> = Universal (120V-277V) <b>1</b> = 120V <b>2</b> = 277V <b>3</b> = 347V	<b>[Blank]</b> = None <b>CP</b> = Airtight housing/Chicago Plenum	<b>DD</b> = Standard 0-10V (1%-100%) <b>5L</b> = DALI (1%-100%) <b>LH</b> = Lutron Hi-Lume (1%-100%)  <b>PS</b> = 0-10V (1%-100%) + Low Voltage Relay for Patient Control
<b>Notes</b> Three Circuit (3) option available with 6ft luminaire (6F0) only. Specify Three Circuit (3) option to allow Group 2 (Reading) Downlights. Reference Downlight Configuration Chart for more information.	<b>Notes</b> Emergency applies to ambient section only.	<b>Notes</b> 347V (3) available with 0-10V (DD) Controls option only. 347V (3) available with Standard Performance (S) option only.		<b>Notes</b> Low Voltage Relay (PS) is available with 0-10V (DD) only. Low voltage relay controls Downlight Group 2 (Reading). Not available with 347. Available with 6ft luminaire (6F0) and Three Circuit (3) option only.

Options		Downlight Aiming
Body Finish	Ceiling Type	
<b>W</b> = White <b>AM</b> = Antimicrobial  <b>C</b> = Custom Color (RAL) <b>CM</b> = Custom Color (Match)	<b>ETG</b> = 15/16in Extended Flat T-Grid <b>FTG</b> = 9/16in Fine Flat T-Grid <b>ETT</b> = 15/16in Flat T-Grid with Tegular Tiles <b>FTT</b> = 9/16in Flat T-Grid with Tegular Tiles <b>STG</b> = 9/16in Slotted Dimensional T-Grid <b>ITG</b> = 9/16in Interlude Dimensional T-Grid <b>GYP</b> = Visible Flange (Gypsum/Sheetrock) <b>FSR</b> = Flangeless (Gypsum/Sheetrock) <b>FES</b> = Finished Extruded Side (Wood Slat, Paneling, Fabric, Metal, etc)	<b>D</b> = Default <b>A</b> = Adjustable  <b>C</b> = Custom
<b>Notes</b> Custom Colors (C and CM) are available as ETO. Performance based on White (W) and may vary with selected finish.	<b>Notes</b>	<b>Notes</b> For applications varying from the default baseline, field aiming is available for all aiming options; all downlights are adjustable. Adjustable (A) will provide downlights aimed directly down at 0° tilt and 0° rotation. Use Custom Aiming Table to specify the aiming of each downlight to the nearest 5°. Recommended max tilt of 35° to prevent housing cutoff.

Continue on Next Page for Downlight Configuration



Order Information Continued

SAMPLE ORDER NUMBER: DPT5-6F0-109S35-F-3DUCPDD-AMETG-A-1040S-1040N-1030W-0527W-BH

Downlights								
Downlight Group 1 (Exam)								
Downlight A			Downlight B			Downlight C		
Z = None								
Output	CCT/CRI	Distribution	Output	CCT/CRI	Distribution	Output	CCT/CRI	Distribution
05 = 500Lm 10 = 1000Lm	27 = 2700K 30 = 3000K 35 = 3500K 40 = 4000K	S = 15° Spot N = 25° Narrow Flood F = 40° Flood W = 55° Wide Flood	05 = 500Lm 10 = 1000Lm	27 = 2700K 30 = 3000K 35 = 3500K 40 = 4000K	S = 15° Spot N = 25° Narrow Flood F = 40° Flood W = 55° Wide Flood	05 = 500Lm 10 = 1000Lm	27 = 2700K 30 = 3000K 35 = 3500K 40 = 4000K	S = 15° Spot N = 25° Narrow Flood F = 40° Flood W = 55° Wide Flood
<b>Downlight A Notes</b>			<b>Downlight B Notes</b>			<b>Downlight C Notes</b>		
			Downlight B Lumen Output is determined by selection of Downlight A.			Downlight C Lumen Output is determined by selection of Downlight A. Specify None (Z) for Downlight C to allow Group 2 (Reading Light) with 3 Downlights on each end (6 total Downlights). Reference Downlight Configuration Chart for more information.		
<b>Downlight Group 1 Notes</b>								
All lumen outputs must be the same in Group 1; Select Group 1 lumen output with Downlight A. All Downlights in Group 1 are always on the same circuit. Downlights are Portfolio Zin Universal LED Power Module (EU2B). Downlights are 90CRI. Nominal downlight output will vary based on selected color and distribution.								

Downlight Group 2 (Reading)			Downlight Special Options		Special Options
Downlight D			Downlight Trim Color	Downlight Louver	
Z = None					
Output	CCT/CRI	Distribution	B = Black Trim and Black Baffle	Z = None H = Hex Louver	
05 = 500Lm 10 = 1000Lm	27 = 2700K 30 = 3000K 35 = 3500K 40 = 4000K	S = 15° Spot N = 25° Narrow Flood F = 40° Flood W = 55° Wide Flood			
<b>Downlight D Notes</b>			<b>Notes</b>		<b>Notes</b>
Group 2 (Downlight D) is available with 6ft luminaire (6F0) and Three Circuit (3) option only. Reference Downlight Configuration Chart for more information.			Hex Louver (H) is Portfolio LHEX black hexagonal-cell louver. Applies to all downlights are removable in the field.		
<b>Downlight Group 2 Notes</b>					
Downlights are Portfolio Zin Universal LED Power Module (EU2B). Downlights are 90CRI. Nominal downlight output will vary based on selected color and distribution.					

	4ft 2 Circuits (Ambient   Downlight Group 1)	6ft 2 Circuits (Ambient   Downlight Group 1)	6ft 3 Circuits (Ambient   Downlight Group 1   Downlight Group 2)
4 Downlights			
6 Downlights			
8 Downlights			

## Product Specifications

### Construction

- Available in Regressed Housing
- Precision cut housing trim extruded from 6063 aluminum with aluminum frame
- Extruded end-caps ensure a precise and uniform ceiling interface
- 5in Aperture nominal fits in 6in standard grid

### Finish

- Electrostatically applied polyester powder coat paint
- Antimicrobial White finish available

### Light Engine

- Modular LED tray assembly comprising reflector, light engine, LED driver and quick disconnect wire-harness for ease of installation and maintenance over the life of the luminaire
- 90 CRI
- Static CCT available in 2700K, 3000K, 3500K, and 4000K
- VividTune available in Ambient section only in 2700-6500K
- Downlight color variation within 2-step MacAdam ellipses

### LED Drivers

- Drivers accessible from below ceiling while fixture is installed

### Integrated Controls

- 0-10V dimming to 1%
- Low Voltage Relay for Patient Control of Downlight Group 2 (Reading) only
- Low Voltage Relay for Patient Control with dimming. 3 loads (2 dim)

### Mounting

- Recessed
- Refer to installation instructions for various ceiling interface details

### Lengths

- 4ft and 6ft luminaire lengths available

### Optics

- Linear Ambient Frosted Lens - High diffusion glare-free lens with lambertian distribution
- Linear Ambient Asymmetric - Low-glare lens with asymmetric distribution
- Downlight TIR optic in 15°, 25°, 40, or 55° provides smooth beam without color separation
- Maximum Downlight aiming is 35° tilt without a significant impact to beam cutoff

### Lumen Maintenance

- TM-21 life at 60,000 hours up to L84 and calculated L90 exceeds 100,000 hrs
- Derived from TM-21 standard @25°C ambient and typical operating conditions
- Downlight L90 exceeds 55,000 hrs

### Electrical

- Dimming provided as standard
- Dimming wires capped with wire-nuts for non-dimming applications

### Weight

- Max weight for 4ft Luminaire with 6 Downlights: 18.5lbs
- Max weight for 6ft Luminaire with 8 Downlights: 24lbs

### Approvals

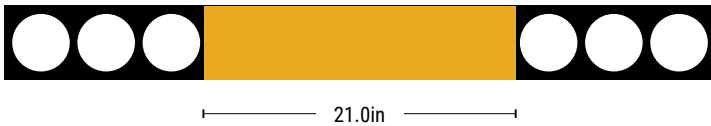
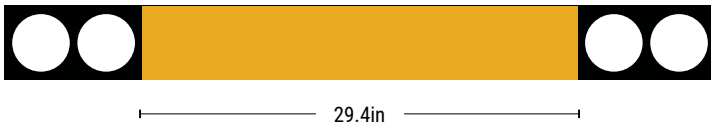
- cULus - listed for damp locations
- RoHS compliant
- Tested to IESNA LM-79 and LM-80
- Can be used for State of California Title 24 high efficacy luminaire

### Warranty

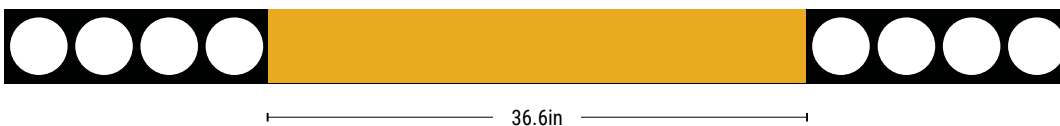
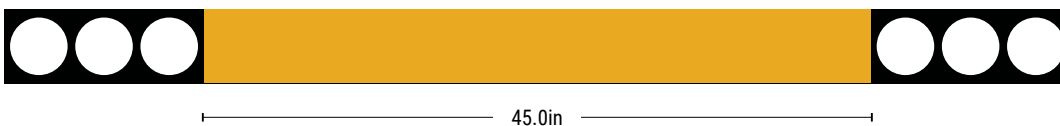
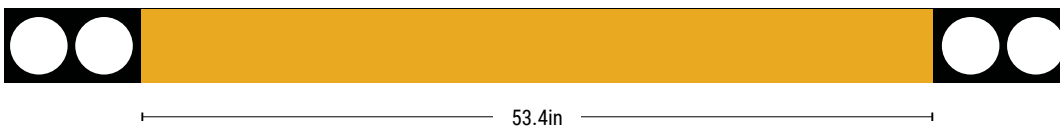
- Five year limited warranty standard
- [www.cooperlighting.com/legal](http://www.cooperlighting.com/legal)

## Ambient Section Lengths

### 4ft Luminaire Length



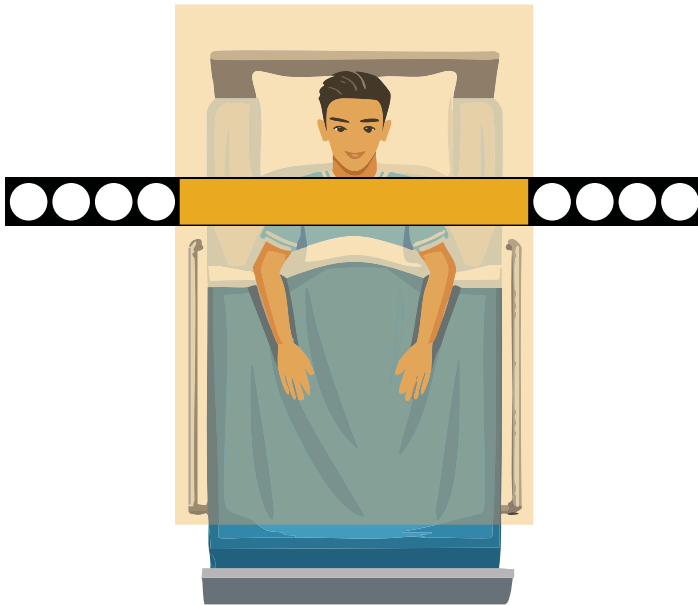
### 6ft Luminaire Length



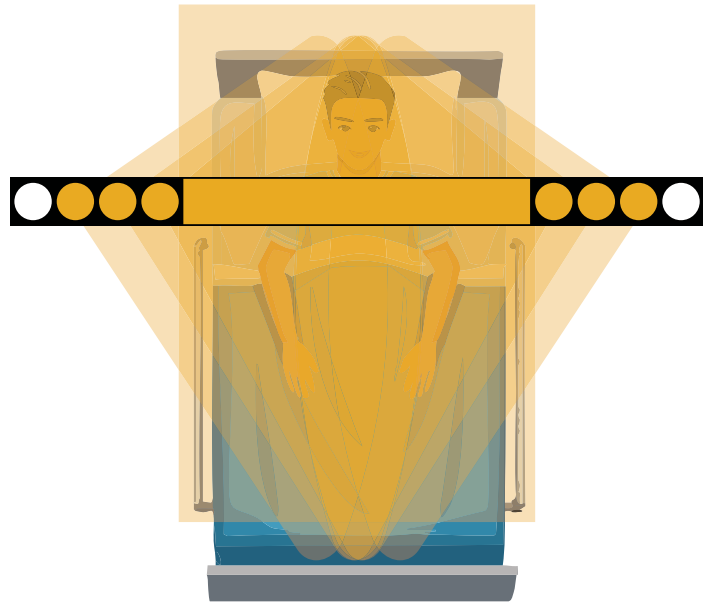
## Scenarios

6ft | 3 Circuit | 8 Downlight shown

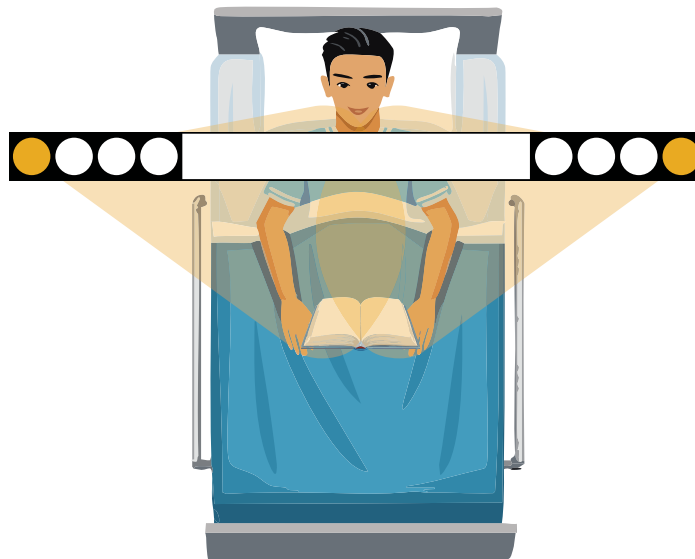
**Scenario 1 | Ambient Only**  
Ambient Circuit



**Scenario 2 | Exam**  
Ambient Circuit + Downlight Group 1 Circuit

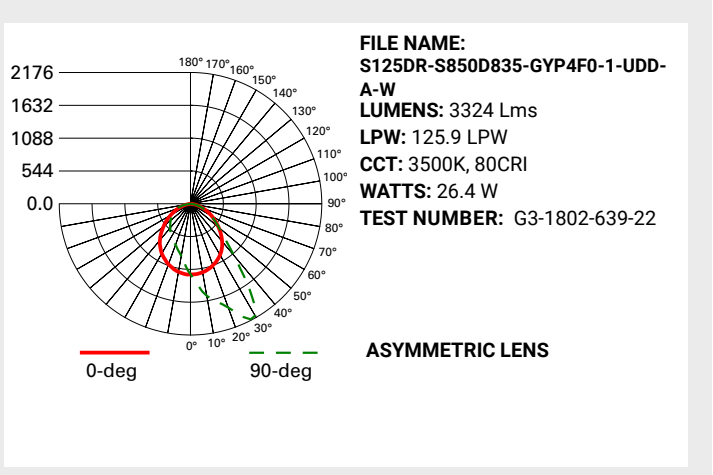
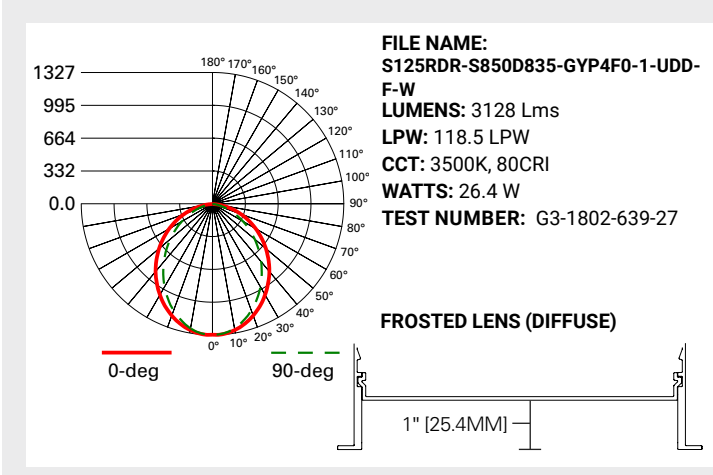


**Scenario 3 | Reading**  
Downlight Group 2 Circuit



Photometric Data

 View IES files



Photometric Overview and Performance Data

Linear Ambient Performance (3500K/90CRI)

Luminaire Length	Downlight Quantity	Ambient Output	Ambient Output	Frosted Lens (Lm)
4ft (4F0)	6 Downlights	21in	Lowest (37)	491
			Low (61)	810
			Medium (85)	1,128
			High (109)	1,447
			Highest (127)	1,686
4ft (4F0)	4 Downlights	29in	Lowest (37)	690
			Low (61)	1,138
			Medium (85)	1,586
			High (109)	2,033
			Highest (127)	2,369
6ft (6F0)	8 Downlights	36in	Lowest (37)	1,063
			Low (61)	1,753
			Medium (85)	2,442
			High (109)	3,132
			Highest (127)	3,649
6ft (6F0)	6 Downlights	45in	Lowest (37)	1,063
			Low (61)	1,753
			Medium (85)	2,442
			High (109)	3,132
			Highest (127)	3,649
6ft (6F0)	4 Downlights	53in	Lowest (37)	1,287
			Low (61)	2,122
			Medium (85)	2,957
			High (109)	3,792
			Highest (127)	4,418

Lumen Adjustment Factors

CCT	Linear Ambient	Downlights
2700K	0.801	0.970
3000K	0.815	0.989
3500K	0.861	1.000
4000K	0.892	1.041

Optic	Downlights
15° Spot (S)	0.899
25° Narrow Flood (N)	0.977
40° Flood (F)	1.000
55° Wide Flood (W)	0.804

Optic	Linear Ambient
Frosted Lens (F)	1.000
Asymmetric (A)	1.009

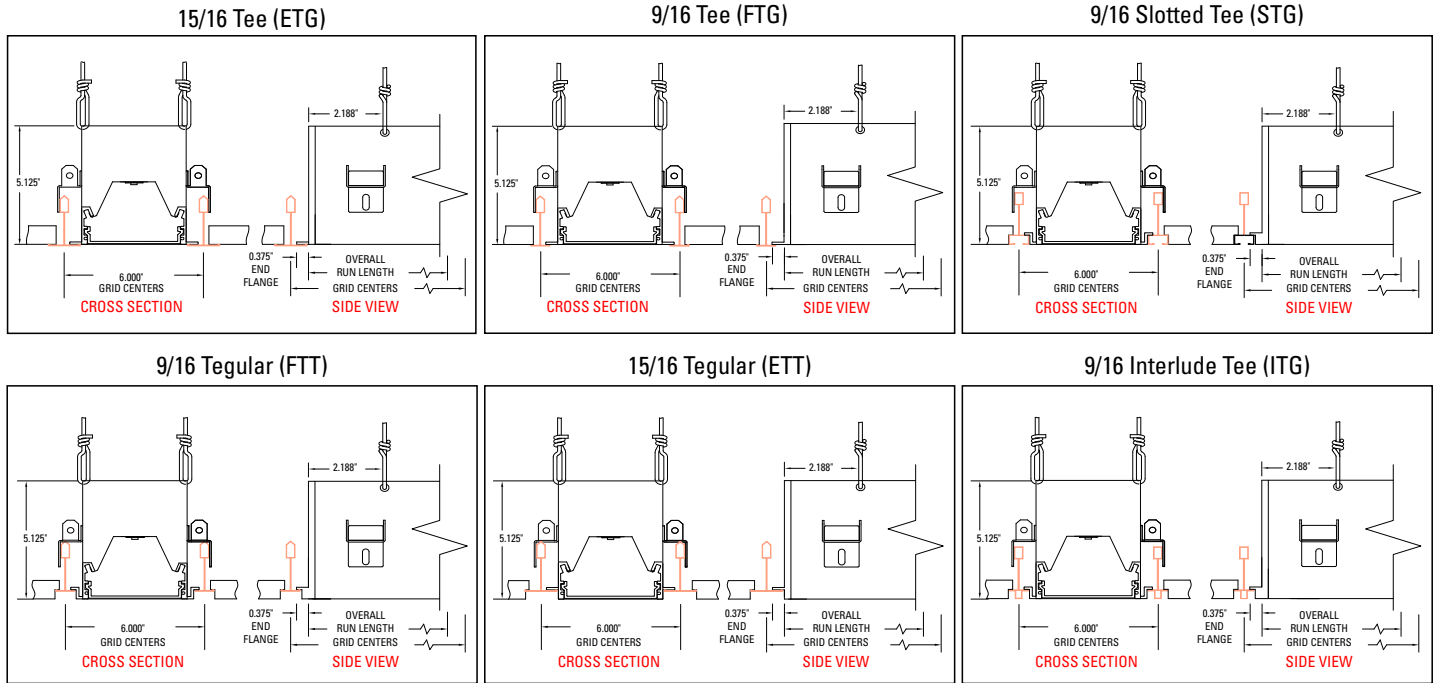
## Downlight Module Photometric Data

SPOT (15° BEAM)		CANDLEPOWER DISTRIBUTION		CONE OF LIGHT		CANDELA TABLE		ZONAL LUMEN SUMMARY			LUMINANCE	
<b>Test Number</b>	P264029					<b>Degrees Vertical</b>	<b>Candela</b>	<b>Zone</b>	<b>Lumens</b>	<b>% Fixture</b>	<b>Average Candela Degrees</b>	<b>Average 0° Luminance</b>
<b>Housing</b>	LD2B10D010					0	9316	0-30	945	97	45	4884
<b>Module</b>	EU2B1010SP158035					5	7438	0-40	965	99.1	55	1720
<b>Trim</b>	2LBD*LI					15	976	0-60	973	99.9	65	1167
<b>Lumens</b>	974					25	141	0-90	974	100	75	0
<b>Efficacy</b>	94.6 Lm/W	35	30	90-180	0	0	85	0				
<b>SC</b>	0.28	45	7	0-180	974	100						
		55	2									
		65	1									
		75	0									
		85	0									
		90	0									
<b>Test Number</b>	P218711					<b>Degrees Vertical</b>	<b>Candela</b>	<b>Zone</b>	<b>Lumens</b>	<b>% Fixture</b>	<b>Average Candela Degrees</b>	<b>Average 0° Luminance</b>
<b>Housing</b>	LD2B10D010					0	6104	0-30	987	96.2	45	3836
<b>Module</b>	EU2B0510NFL258035					5	5611	0-40	1019	99.3	55	676
<b>Trim</b>	2LBD*LI					15	1236	0-60	1026	100	65	0
<b>Lumens</b>	1026					25	229	0-90	1026	100	75	0
<b>Efficacy</b>	99.6 Lm/W	35	51	90-180	0	0	85	0				
<b>SC</b>	0.39	45	7	0-180	1026	100						
		55	1									
		65	0									
		75	0									
		85	0									
		90	0									
<b>Test Number</b>	P218754					<b>Degrees Vertical</b>	<b>Candela</b>	<b>Zone</b>	<b>Lumens</b>	<b>% Fixture</b>	<b>Average Candela Degrees</b>	<b>Average 0° Luminance</b>
<b>Housing</b>	LD2B10D010					0	2577	0-30	938	90.2	45	10412
<b>Module</b>	EU2B0510FL408035					5	2467	0-40	1020	98.0	55	2702
<b>Trim</b>	2LBD*LI					15	1626	0-60	1040	99.9	65	0
<b>Lumens</b>	1041					25	581	0-90	1041	100	75	0
<b>Efficacy</b>	101 Lm/W	35	120	90-180	0	0	85	0				
<b>SC</b>	0.59	45	19	0-180	1041	100						
		55	4									
		65	0									
		75	0									
		85	0									
		90	0									
<b>Test Number</b>	P218801					<b>Degrees Vertical</b>	<b>Candela</b>	<b>Zone</b>	<b>Lumens</b>	<b>% Fixture</b>	<b>Average Candela Degrees</b>	<b>Average 0° Luminance</b>
<b>Housing</b>	LD2B10D010					0	1309	0-30	674	68.5	45	57541
<b>Module</b>	EU2B0510WFL558035					5	1250	0-40	873	88.7	55	18916
<b>Trim</b>	2LBD*LI					15	959	0-60	984	99.9	65	0
<b>Lumens</b>	985					25	644	0-90	985	100	75	0
<b>Efficacy</b>	95.6 Lm/W	35	313	90-180	0	0	85	0				
<b>SC</b>	0.73	45	105	0-180	985	100						
		55	28									
		65	0									
		75	0									
		85	0									
		90	0									

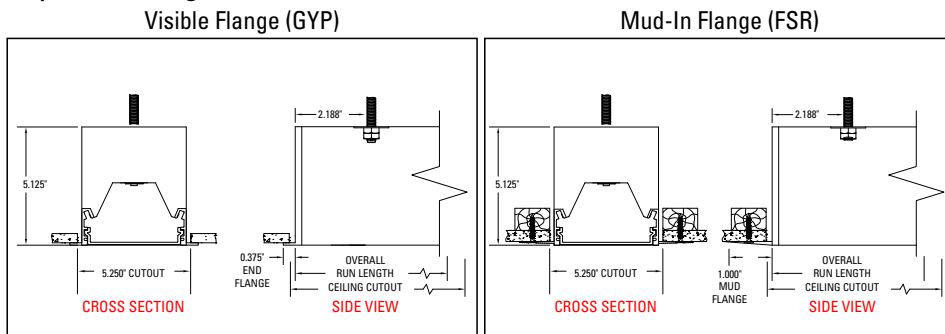
## Ceiling Type

Extruded Trim Flange Details - Refer to submittal drawings for detailed flange information - for additional options consult factory.

### Grid Ceiling Systems



### Drywall Ceiling

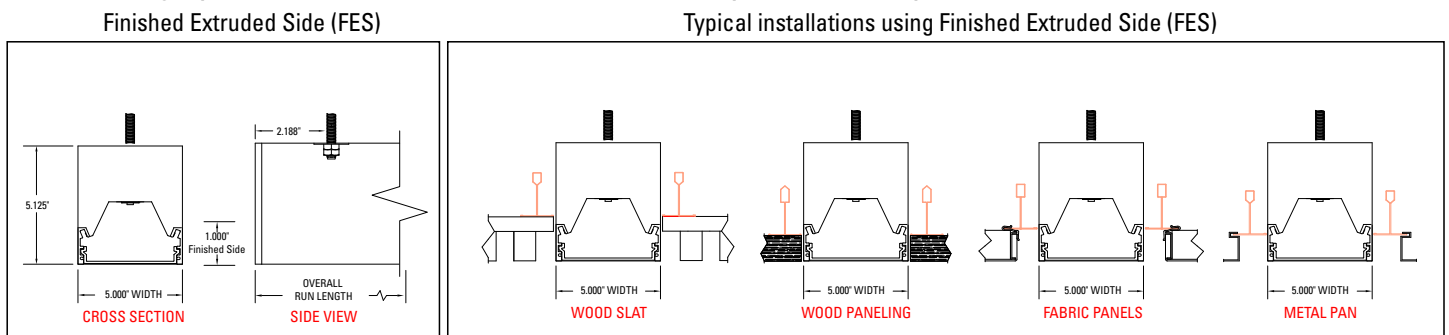


NOTE: ACTUAL LENGTH OF GYP/FSR FIXTURES WILL BE 1" SHORTER IN LENGTH THAN TOTAL REQUESTED RUN LENGTH FOR ALL RECESSED / PERIMETER FIXTURES

OVERALL RUN LENGTH = 'FIXTURE ORDER LENGTH' - 1'  
 E.G. - OVERALL RUN LENGTH OF 3' 11" WILL SHIP WHEN ORDERING A '4F0' FIXTURE

CEILING CUTOUT = 'OVERALL RUN LENGTH' + 0.250"  
 OR CEILING CUTOUT = 'FIXTURE ORDER LENGTH' - 0.750"  
 E.G. - CEILING CUTOUT WHEN ORDERING A '4F0' LENGTH FIXTURE WILL BE 3' 11.250"

### Other Ceiling Systems (Wood, Fabric, Metal Pan, Tech Style, HD Box Style)

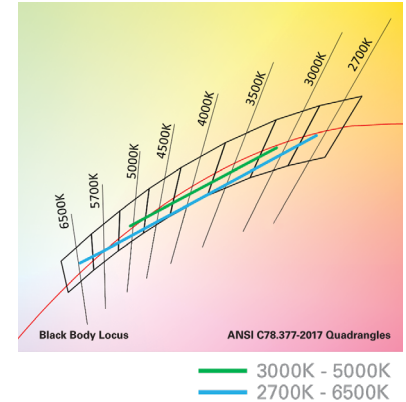






### Define Patient with VividTune Tunable White

VividTune tunable white luminaires deliver high-quality light in a broad range of continuously variable color temperatures and intensities. Create a dynamic environment by adjusting the ambient light warmer or cooler to influence mood, support the task at hand, or create a dramatic ambience. The ability to control correlated color temperature and intensity separately using simple controls is the next evolution of LED lighting for the commercial, educational, healthcare, and hospitality space. The unparalleled flexibility and number of available lighting environments enable users to find the right light with tunable white.



### Performance Data\*

Tunable White - Lumen Adjustment Factors	
CCT	2700K-6500K
	90 CRI
2700K	0.861
3000K	0.895
3500K	0.940
4000K	0.970
4500K	0.995
5000K	1.015
6500K	1.042

\* Lumen adjustment factors are for reference and may be different for each product selected. Refer to IES files for actual performance data on each.

### Controlling VividTune Tunable White

VividTune luminaires make tunable white more accessible by using simple and familiar controls. From wall dimmers to wireless controls, VividTune tunable white luminaires are compatible with industry standard 0-10V dimming controls. A single 0-10V dimming input is used to control intensity (brightness) while a second 0-10V dimming input is used to adjust CCT. For suggested control configurations, go to [www.cooperlightingsolutions.com](http://www.cooperlightingsolutions.com) for tunable white application guides.

