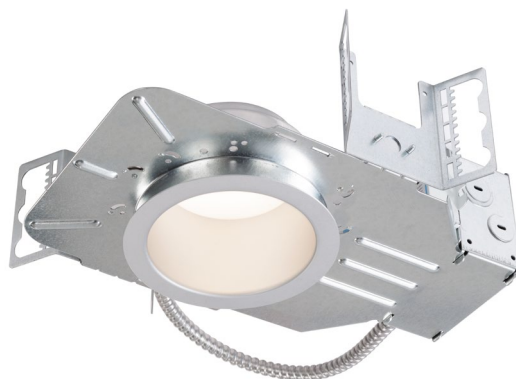# PHILIPS
LIGHTOLIER

Downlighting

LyteProfile

4" round downlight
and lensed wall wash with
tunable white technology

LED

Project: _____

Location: _____

Cat.No: _____

Type: _____

Lamps: _____ Qty: _____

Notes: _____

Philips Lightolier LyteProfile LED downlights with tunable white technology are designed for new construction and include downlight and wall wash distributions. They deliver dynamic white light between 2700K and 6500K based on pre-programmed recipes as a function of time or based on user preference.

Complete Product = Frame-in kit + Light engine + Reflector Order each separately

Ordering guide: Frame-in kit [1]

Example: P4RD15NDUVBTW

Series	Style	Lumens	Installation	Dimming	Input voltage	Version	Options
P4R	**D**	**15**	**N**	**D**	**U**	**VB**	**TW**
P4R LyteProfile 4" Round	**D** Downlight	**15** 1,500 lm	**N** Non-IC New construction	**D** Dali	**U** Universal (120/277V)	**VB** Version B	**TW** Tunable White

Ordering guide: Light engine

Example: P4RD865VBTW

Series	Style	CRI	CCT	Version	Options
P4R	**D**	**8**	**65**	**VB**	**TW**
P4R LyteProfile 4" Round	**D** Downlight	**8** 80 CRI	**65** 2700K-6500K	**VB** Version B	**TW** Tunable White

For 90 CRI, contact factory.

Ordering guide: Reflector

Example: P4RDCCP

Series	Style	Reflector	Flange
P4R			
P4R LyteProfile 4" Round	**D** Downlight **LW** Lensed wall wash	**CL** Clear **CC** Comfort clear **D** Clear diffuse (applied)	**Blank** White (painted) **P** Polished (matches aperture)
		W White (painted)	**Blank** White (painted)

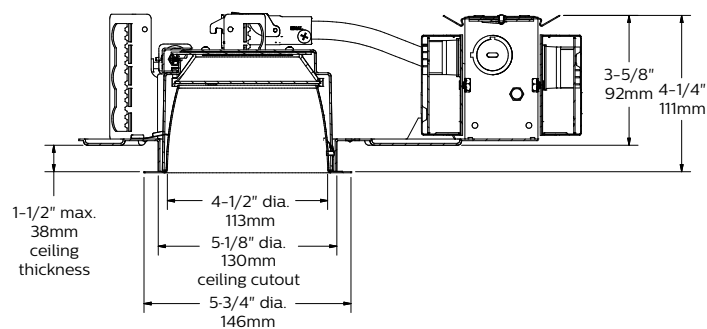1. Mounting Bars need to be ordered separately, see Options and Accessories on page 2 for Mounting Bar options.
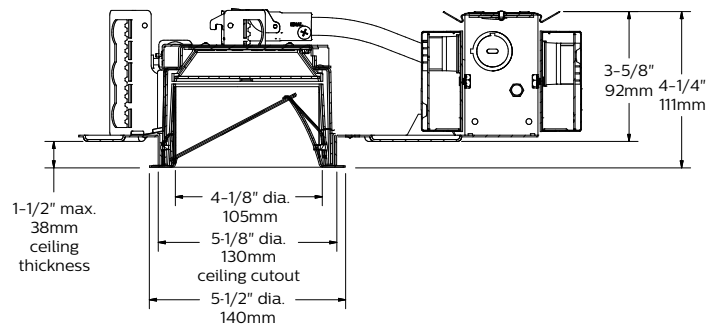
c UL us LISTED

P4R LyteProfile 4" round

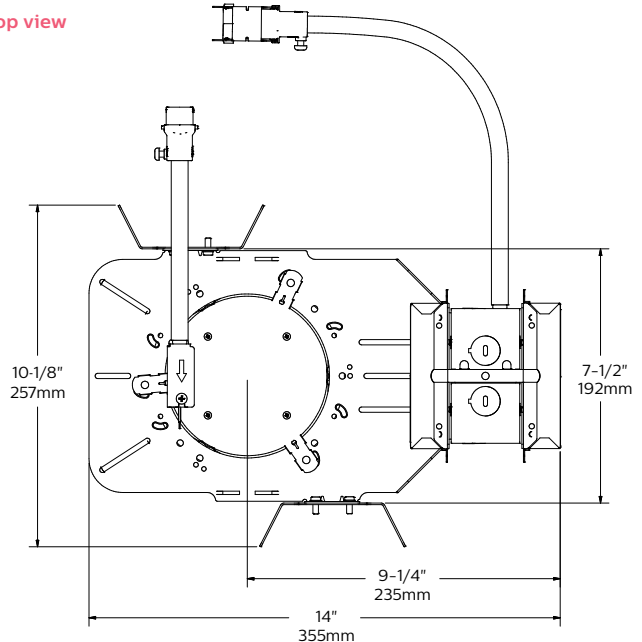## Commercial downlight and lensed wall wash with tunable white technology

Frame-in kit

Downlight side view

Top view

1-1/2" max. 38mm ceiling thickness

4-1/2" dia. 113mm

5-1/8" dia. 130mm ceiling cutout

5-3/4" dia. 146mm

3-5/8" 92mm 4-1/4" 111mm

Lensed wall wash side view

1-1/2" max. 38mm ceiling thickness

4-1/8" dia. 105mm

5-1/8" dia. 130mm ceiling cutout

5-1/2" dia. 140mm

3-5/8" 92mm 4-1/4" 111mm

10-1/8" 257mm

7-1/2" 192mm

9-1/4" 235mm

14" 355mm

Applications

Conference Centers: use precise white light for meetings/presentations

Education: create either a stimulating or calming classroom environment

Healthcare: relax patients and promote healing

Hospitality: promote welcoming atmosphere and enhance decor

Offices: select CCT based on daylight or time of the day to enhance performance and visual comfort

Retail: select CCT to enhance merchandise on display or mimic environment where clothing is worn

Features

Ceiling cutout: 5 1/8" (130mm).

Depth: 4 1/4" (111 mm) including light engine.

Power connection: Attaches to light engine via push-in connector (on frame). Removable cover provides access.

Junction box: 2" x 4" x 3 1/2" (22cu. in.) cULus listed for 90°C. Supply conductor .048" thick galvanized steel. Allows inspection from below.

Thermal protector: 1500 lumen fixtures are inherently protected. Meets NEC & cULus requirements. Do not install insulation above or within 3" of luminaire.

Thermal Management: Thermal design ensures specified performance levels are maintained

New construction

Mounting frame: Galvanized stamped steel for dry or plaster ceilings.

Mounting brackets: Galvanized Steel. Adjustable through aperture. Use lathing channel (3/4" or 1 1/2"), 1/2" EMT, or optional mounting bars. See Options and Accessories for mounting bar options.

Options and accessories

Dimming capability: DALI dimming to 10%

Mounting bars:

1950	18" long (set of 2)
1951	27" long (set of 2)
7994	Wood joist telescoping mounting bars (minimum 13 1/4" and maximum 24 1/2")

T-Bar anchor clips:

1956	Set of 4 for use with 18" or 27" mounting bars

Electrical

Electronic power supply: RoHS compliant Class 2 power unit for use in a damp or dry location. Class A sound rated unit tolerates sustained open circuit and short circuit output conditions without damage. Complies with FCC rules per Title 47 CFR Part 15 Non-Consumer (Class A) for EMI/RFI (conducted and radiated).

Lifetime: 50,000 hours at L70. Backed by a 5-year limited warranty. (see Philips.com/warranties for details)

Must order compatible Philips Lighting control system.

Controls

Luminaires are not sold individually and are only compatible with load controllers, sensors, user interfaces and front end software from Philips. Philips controls platform allows for more flexibility with customized lighting scenes and behaviors as well as scalability of the tunable white solution into a more extensive lighting network management system. To learn more about the Philips controls solution please visit our tunable white page or http://www.lightingproducts.philips.com/our-brands/philips-controls/dynalite.html

Labels

cULus.

P4R LyteProfile 4″ round

## Commercial downlight and lensed wall wash with tunable white technology

Electrical matrix

Frame–In Kit Specifications	Input volts	Input freq.	Input Current	LED drive current*	Input power*	LED power	THD factor	Power factor
P4RD15NDUVBTW 1500lm w/ Dali dimming	120V	50/60Hz	0.1702	0.350	20.4	15.7	<20%	>0.9
	277V	50/60Hz	0.0688	0.352	18.2	15.79	<20%	>0.9

* +/- 10%

Downlight: 1,500lm

Candela Curves
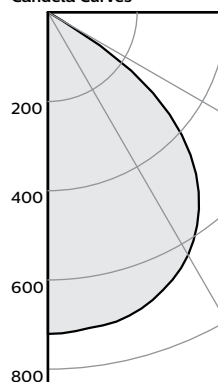
Angle	Mean CP	Lumens
0	721	
5	717	68
10	713	
15	704	199
20	686	
25	661	305
30	629	
35	583	364
40	526	
45	452	345
50	356	
55	228	190
60	37	
65	5	9
70	3	
75	1	2
80	1	
85	0	0
90	0	

Frame: P4RD15NDUVBTW
Light engine: P4RD865VBTW
Trim: P4RDCL

Report no[2]: 904GFR

Output lumens:	1481.7lm	Efficacy:	68.0lm/W
Input Watts[1]:	21.8W	CCT[1]:	2700 K
Spacing Criterion:	1.3	CRI:	>80
		Beam Angle:	99°

Single unit data

Height to Lighted Plane	Initial Center Beam Foot-Candles	Beam Dia. (ft)*
5'	29	6.5'
6'	20	7.8'
7'	15	9.1'
8'	11	10.4'
9'	9	11.7'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data – RCR 2

Spacing on center	Initial Center Beam Foot-Candles	Watts per Sq. Ft.
5'	64.4	0.97
6'	42.3	0.63
7'	30.2	0.49
8'	25.2	0.38
9'	20.1	0.30

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%
Wall	70	50	30	10	50	10	50	10	50	10	0
RCR	Zonal cavity method – Effective floor reflectance = 20%										
0	119	119	119	119	116	116	111	111	106	106	100
1	112	109	105	103	106	101	102	98	98	95	90
2	104	98	93	89	96	88	93	86	90	84	80
3	97	89	82	77	87	77	84	75	82	74	71
4	90	80	73	68	79	67	77	66	74	66	63
5	84	73	65	60	72	59	70	59	68	58	56
6	78	66	59	53	65	53	64	52	62	52	50
7	72	61	53	48	60	47	58	47	57	47	45
8	68	56	48	43	55	43	54	42	53	42	40
9	63	51	44	39	51	39	50	39	49	38	37
10	59	47	40	35	47	35	46	35	45	35	33

Room Cavity Ratio

Zonal lumens & percentages

Zone	Lumens	%Luminaire
0–30	572	38.6%
0–40	935	63.1%
0–60	1471	99.3%
0–90	1482	100.0%

Lensed wall wash: 1,500 downlight

Candela Curve

Downlight side   Wall wash side
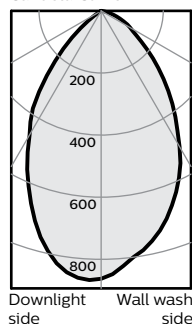
Frame: P4RD15NDUVBTW
Light engine: P4RD865VBTW
Trim: P4RLWCL

Output lumens:	1095lms
Input Watts:	21.7W
Efficacy:	50.5lm/w
CCT[1]:	2700 K
CRI:	>80

Report no[2]: 903GFR

Multiple unit data

Foot-candles on wall	2' from wall		
		3' on center	
1	18	11	18
2	29	23	29
3	28	26	28
4	23	22	23
5	18	18	18
6	14	15	14
7	12	12	12
8	10	10	10
9	8	8	8
10	7	7	7
12	6	6	6
14	5	5	5

Distance from ceiling in feet

Multiple unit data

Foot-candles on wall	3' from wall		
		3' on center	
1	6	6	6
2	14	13	14
3	18	18	18
4	19	19	19
5	18	18	18
6	16	16	16
7	14	13	14
8	12	12	12
9	10	10	10
10	9	9	9
12	7	7	7
14	6	6	6

Distance from ceiling in feet

Multiple unit data (shown above)

| Foot-candles on wall	3' from wall		
		4' on center	
1	6	4	6
2	11	10	11
3	15	13	15
4	15	14	15
5	14	13	14
6	12	12	12
7	10	10	10
8	9	9	9
9	8	8	8
10	7	7	7
12	6	6	6
14	5	5	5

Distance from ceiling in feet

1. Correlated Color Temperature: within specs as defined in ANSI_NEMA_ANSLG C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.
2. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.
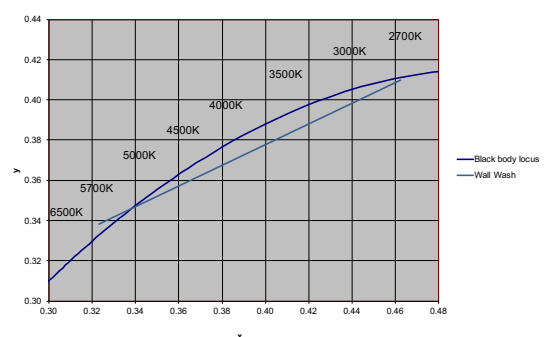
P4R   LyteProfile 4" round

Commercial downlight and lensed wall wash with tunable white technology

Color information

LyteProfile 4" downlight	2700K	3000K	3500K	4000K	5000K	6500K
Flux	1482	1487	1419	1386	1404	1547
Power	21.8	21.8	19.8	18.8	18.7	19.6
Efficacy	68.0	68.1	71.5	73.9	75.2	79.1
CCT	2682	2879	3318	3836	4656	6086
CRI	82	83	85	87	86	84
R9	13	19	27	31	29	14
x	0.4601	0.4418	0.4107	0.3844	0.3547	0.3201
y	0.4087	0.3992	0.3831	0.3695	0.3537	0.3348
Duv	−0.0007	−0.0026	−0.0045	−0.0046	−0.0026	−0.0025
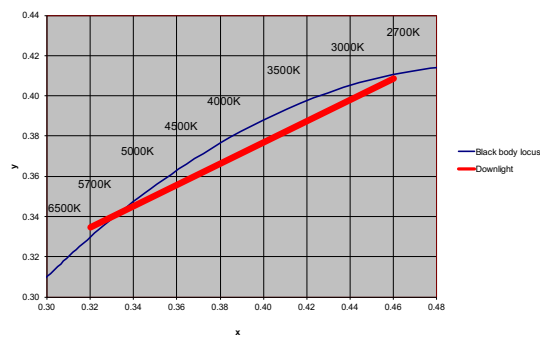
LyteProfile 4" lensed wall wash	2700K	3000K	3500K	4000K	5000K	6500K
Flux	1095	1099	1051	1035	1038	1121
Power	21.7	21.8	19.8	19.0	18.8	19.2
Efficacy	50.5	50.5	53.1	54.5	55.4	58.3
CCT	2663	2856	3299	3796	4552	5930
CRI	81	83	85	87	86	84
R9	13	18	27	31	29	14
x	0.4623	0.4440	0.4122	0.3865	0.3581	0.3231
y	0.4100	0.4005	0.3845	0.3714	0.3566	0.3381
Duv	−0.0004	−0.0023	−0.0042	−0.0042	−0.0025	