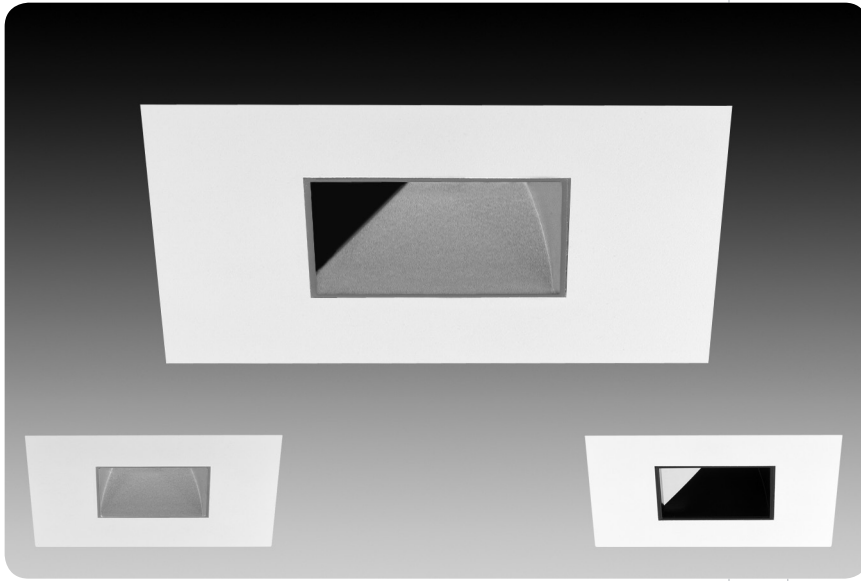


non-drywall hard ceiling, 2" aperture

id®

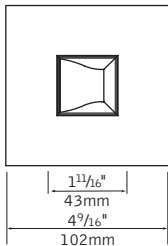
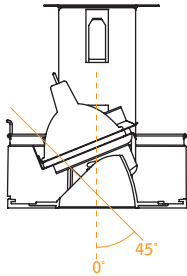


Covered by US Patent: 7,748,868

trim assembly

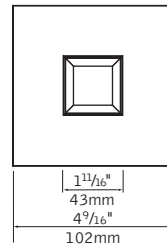
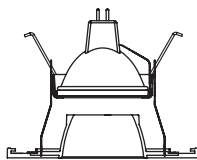
adjustable accent

trim with adjustment mechanism



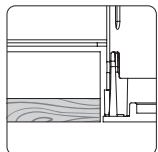
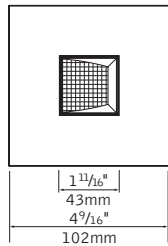
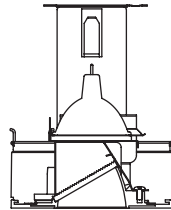
downlight

trim with fixed lamp tray

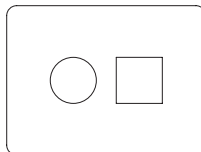


wall wash

trim with adjustment mechanism

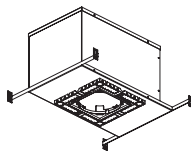


ceiling cutout dimensions: 4 11/16"



location template and depth guide

IC (air-tight)
16 1/2" x 10" x 9" h



features

Trims designed to integrate flush with wood or other non-drywall solid ceilings for a seamless appearance. Template available for precision cutting of ceiling material.

Gloves Off™ hot aiming of adjustable accent made simple with gear drive for both 45° vertical and 363° horizontal adjustment; Self locking.

Auto Memory remembers original lamp position after relamping. Lenses are independent of lamp, and remain undisturbed during relamping.

Perfect Fit™ installation process provides seamless integration in wood or other non-drywall solid ceilings, while maintaining optics in any ceiling thickness.

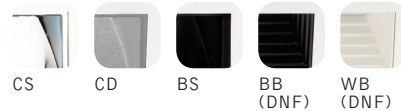
Adjustment mechanism provides for:

- easy relamping
- locking of both vertical and horizontal aiming
- lowers for easy lamp and lens access.

Smart Lock™ ring allows quick removal and re-assembly of trim components for field painting.

Standard white finish is field paintable.

reflector options

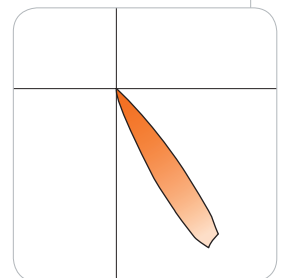


lens accessories



performance

Accent Clear Specular Reflector
Q71MR16/C/NSP15
4698 cd @ 30° (30° tilt)



Visit focalpointlights.com for complete photometric data.

January 2012 C

fixture:

project:

housing specifications

lamp

Halogen MR16 lamp provides numerous beam options from 10° to 40° (60° not recommended).

construction

(IC) Insulated ceiling housing for new construction applications with direct insulation contact. Unit is constructed of double wall 18ga. aluminum housing on a 20ga. CRS frame. Housing ships standard with locking bar hangers. Transformers and thermal protectors are accessible from below ceiling. Housing is gasketed and complies with ASTM E-283, air-tight energy codes. Fixture will not exceed 11lbs.

electrical

Porcelain bi-pin socket with #18 Teflon leads with keyed quick connection. Acoustically isolated transformer, replaceable from below, mounted outside of housing to ensure cool operation and minimize hum. Transformers available in either electronic or magnetic 120V or 277V. For residential dimming applications, toroidal magnetic transformer is available. Large junction box with pryouts. UL listed for thru branch wiring and two #14 90°C conductors for IC housing.

installation

Adjustable throat allows infinite adjustment for 3/4" to 1 1/4" thick ceilings. Shipped in 3/4" ceiling position.

Ceiling thickness adjustment sleeve locks with supplied 3/8" hex driver.

Sleeve allows fine tuning of the housing for a perfect fit. Comes with laser/string alignment guides.

Housing ships with dust cover and trim location template.

Installation Kit: 1/2" thick UHMW template, depth guide and location templates for wood ceiling installations

trim specifications

aesthetics

Die cast parabolic cone ensures glare free optics. Truncated cone cut allows full tilt of lamp. CS, CD and BS are painted finishes.(AA) Reflector is die-cast aluminum for sharp corners. Optional die-cast slope-sided baffle, consists of 1/8" steps. Black and white baffles are painted finishes. Optics sit flush with the front surface of the faceplate. (DNF) Specular kicker reflector and patterned glass provide smooth illumination down the wall. (WW)

Matte white finish may be used as a primer coat for field painting. Smart Lock™ ring allows disassembly for custom field painting.

adjustment mechanism

Auto Memory returns lamp to preset aiming position (AA,WW) or keeps lamp in a straight down aiming position (DNF).

Installation clip allows Downlight to be used in basic housing. Removable clips slide and lock into place to dedicate fixture to downlight use only.

Mechanism is matte black finish and holds lamp and lenses independently.

Tempered soft focus lens supplied as standard.

Lens tray can hold up to two (DNF) or three (AA,WW) accessories, up to 3/8" thick. Lenses remain undisturbed during relamping.

Hot aiming with Phillips screwdriver allows for 45°(AA) or 10°(WW) vertical tilt, and 363° rotation and locks into position. Mechanism pulls down for quick and easy relamping. Vertical angle and horizontal rotation indicators display positioning.

optics

50° cutoff to the lamp and lamp image.

Specular kicker and patterned glass lens with diffuse finish. (WW)

Lamp tray can hold up to two accessories, up to 1/4" thick. (DNF)

Wall Wash optics rotate for alignment to walls and lock in position. (WW)

construction

Trim stays captive to housing during relamping via torsion springs.

Torsion springs pull trim tight to the ceiling and install in 90° increments.

No visible fasteners within the trim.

Mechanical light traps eliminate light leaks.

Warp free die-cast aluminum faceplate, .040" thick flange.

labels

UL listed, Damp label standard. (AA, DNF) Wet label standard. (WW)

No visible labels when trim is installed.

housing ordering

housing series	FD4
Halogen Housing	FD4
lamp	MR
MR16 Lamp	MR
transformer type	
Electronic Dimming 120V, 11.7V	E1
Electronic Dimming 277V, 11.7V	E2
Toroidal Dimming 120V	M1T
faceplate type	SFN
Square—Non-Drywall Hard Ceiling (Ex. wood, stone)	SFN
housing type (50W max)	
New Construction IC Rated, up to 1 1/8" ceilings	IC
New Construction IC Rated, 1 1/2" to 2 1/2" ceilings	IC2
New Construction IC Rated, 2 3/4" to 3 1/2" ceilings	IC3
factory options	
Wattage Restriction Label (XX=wattage)	WRXX
Installation Kit (1/2" thick UHMW template, depth guide and location templates for wood ceiling installations; order one per project)	FD4-WK

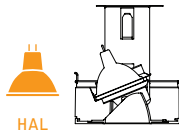
trim ordering

trim aperture	D2
2 3/4" Aperture	D2
faceplate type	SFN
Square—Non-Drywall Hard Ceiling (IC, SFN housing only)	SFN
optic	
Adjustable Accent	AA
Downlight	DNF
Wall Wash	WW
reflector color	
Clear Specular	CS
Clear Diffuse	CD
Black Specular	BS
Black Baffle (DNF only)	BB
White Baffle (DNF only)	WB
faceplate finish	
White	WH
Black	BK
Titanium Silver	TS
Aluminum Raw	AL
lens accessories (soft focus lens supplied as standard)	
Hex Louver	HL
Linear Spread Lens	LSL
Prismatic Spread Lens	PSL
Sand Blasted Lens	SBL
Clear Lens	CL
UV Lens	UVL

a complete unit consists of two line items, housing and trim
Focal Point recommends one Installation Kit per project

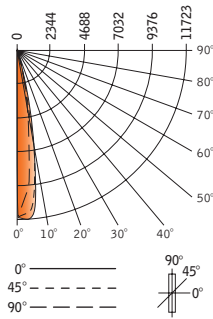
example:
FD4-MR-E1-SFN-IC-FD4-WK
D2-SFN-AA-CD-WH

sqr accent – reflector
id®



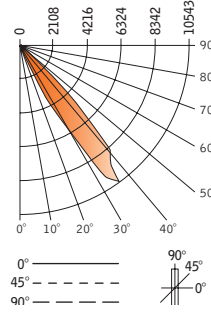
Luminaire: 71W MR16 adjustable accent, narrow spot distribution with microprismatic lens
Filename: D2SXAACS71NS15_0.ies and D2SXAACS71NS15_35.ies
Catalog #: D2-SX-AA-CS-WH
Efficiency: 68% (0° tilt), 54% (35° tilt)
Photometric Report #: 13637.0 and 13638.0

CANDLEPOWER DISTRIBUTION - 0° TILT



Vertical Angle	Horizontal Angle			
	0°	22.5°	45°	67.5° 90°
0°	6024	6024	6024	6024
5°	6020	5878	5718	5279 4807
15°	1155	1374	1204	1159 812
25°	78	90	143	80 57
35°	19	23	26	19 14
45°	9	9	11	7 3
55°	0	0	0	0 0
65°	0	0	0	0 0
75°	0	0	0	0 0
85°	0	0	0	0 0
90°	0	0	0	0 0

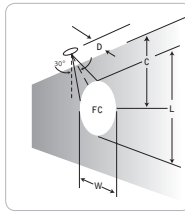
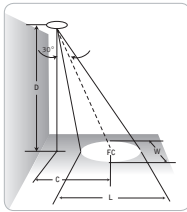
CANDLEPOWER DISTRIBUTION - 35° TILT



Vertical Angle	Horizontal Angle			
	0°	22.5°	45°	67.5° 90°
0°	320	320	320	320
5°	291	269	225	188 204
15°	404	337	235	142 58
25°	3241	1090	240	108 29
35°	10543	1420	71	16 10
45°	3706	285	29	3 0
55°	79	26	5	0 0
65°	10	0	0	0 0
75°	0	0	0	0 0
85°	0	0	0	0 0
90°	0	0	0	0 0

FOOTCANDLE VALUES
0° aiming angle - horizontal surface

D	C	FC	L	W
6'	0	168	1.6'	1.6'
8'	0	94	2.1'	2.1'
10'	0	60	2.6'	2.6'
12'	0	42	3.2'	3.2'
14'	0	31	3.7'	3.7'



FOOTCANDLE VALUES
35° aiming angle - horizontal surface

D	C	FC	L	W
6'	4.2'	134	2.4'	1.9'
8'	5.6'	73	3.2'	2.6'
10'	7'	48	4'	3.2'
12'	8.4'	32	4.8'	3.9'
14'	9.8'	24	5.5'	4.5'

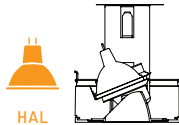
FOOTCANDLE VALUES
35° aiming angle - vertical surface

D	C	FC	L	W
2'	2.9'	382	1.6'	.9'
3'	4.3'	175	2.5'	1.4'
4'	5.7'	100	3.3'	1.8'
5'	7.1'	62	4.1'	2.3'
6'	8.6'	44	5'	2.8'

Footcandle results based on AG132; off the shelf lamp in fixture, with soft focus lens; Reflectances=0/0/0; LLF=1

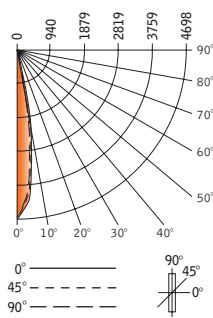
Go to www.focalpointlights.com for additional photometric data.

sqr accent – reflector
id®



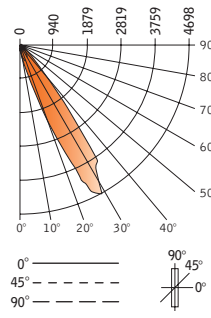
Luminaire: 71W MR16 adjustable accent, narrow spot distribution with microprismatic lens
Filename: D2SXAABSHA71NS15_0.ies and D2SXAABSHA71NS15_30.ies
Catalog #: D2-SX-AA-BS-WH
Efficiency: 71% (0° tilt), 56% (30° tilt)
Photometric Report #: 13569.0 and 13570.0

CANDLEPOWER DISTRIBUTION - 0° TILT



Vertical Angle	Horizontal Angle			
	0°	22.5°	45°	67.5° 90°
0°	5192	5192	5192	5192
5°	4388	4631	4595	4586 4531
15°	1046	1127	1250	1170 1209
25°	154	218	261	186 107
35°	18	25	30	15 12
45°	8	8	8	6 4
55°	1	1	0	0 0
65°	0	0	0	0 0
75°	0	0	0	0 0
85°	0	0	0	0 0
90°	0	0	0	0 0

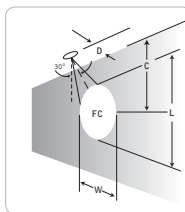
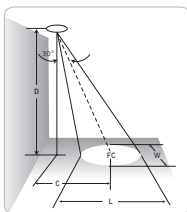
CANDLEPOWER DISTRIBUTION - 30° TILT



Vertical Angle	Horizontal Angle			
	0°	22.5°	45°	67.5° 90°
0°	153	153	153	153
5°	236	209	191	168 144
15°	844	705	372	183 95
25°	3605	1976	523	126 41
35°	3869	1524	201	26 8
45°	563	256	27	4 0
55°	48	21	6	0 0
65°	4	3	0	0 0
75°	0	0	0	0 0
85°	0	0	0	0 0
90°	0	0	0	0 0

FOOTCANDLE VALUES
0° aiming angle - horizontal surface

D	C	FC	L	W
6'	0	145	1.6'	1.6'
8'	0	81	2.1'	2.1'
10'	0	52	2.6'	2.6'
12'	0	36	3.2'	3.2'
14'	0	27	3.7'	3.7'



FOOTCANDLE VALUES
30° aiming angle - horizontal surface

D	C	FC	L	W
6'	3.5'	83	2.1'	1.8'
8'	4.6'	48	2.8'	2.4'
10'	5.8'	30	3.5'	3.0'
12'	6.9'	21	4.2'	3.6'
14'	8.1'	16	4.9'	4.3'

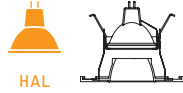
FOOTCANDLE VALUES
30° aiming angle - vertical surface

D	C	FC	L	W
2'	3.5'	251	2.2'	1.1'
3'	5.2'	13	3.3'	1.6'
4'	6.9'	64	4.4'	2.1'
5'	8.7'	40	5.6'	2.6'
6'	10.4'	28	6.7'	3.2'

Footcandle results based on AG132; off the shelf lamp in fixture, with soft focus lens; Reflectances=0/0/0; LLF=1

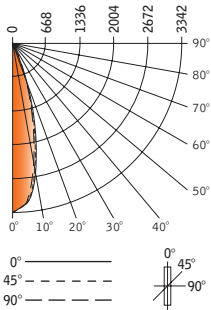
Go to www.focalpointlights.com for additional photometric data.

sqd downlight – reflector
id®



Luminaire: 71W MR16 downlight, narrow flood distribution with soft focus lens
 Filename: D2SXDNCSHA71NF25_0.ies
 Catalog #: D2-SX-DNF-CS-WH
 Efficiency: 72%
 Photometric Report #: 13639.0

CANDLEPOWER DISTRIBUTION



Spacing: .4
 Criterion: .5

Vertical Angle	Horizontal Angle				Zonal Lumens
	0°	22.5°	45°	67.5°	
0°	4163	4163	4163	4163	4163
5°	3838	3893	3954	4055	4047
15°	1175	1252	1405	1577	1561
25°	54	60	128	84	73
35°	9	9	12	8	7
45°	0	0	0	0	0
55°	0	0	0	0	0
65°	0	0	0	0	0
75°	0	0	0	0	0
85°	0	0	0	0	0
90°	0	0	0	0	0

LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt
0°-30°	814	71.4	99.3
0°-40°	820	71.9	100
0°-60°	820	71.9	100
0°-90°	820	71.9	100
Total Luminaire	820	71.9	100

LUMINANCE DATA (CD/M²)

Vertical Angle	0°	45°	90°
45°	0	0	0
55°	0	0	0
65°	0	0	0
75°	0	0	0
85°	0	0	0

CO-EFFICIENTS OF UTILIZATION

Floor	80				70				50				30				10				00			
Ceiling	70	50	30	10	84	84	84	84	80	80	80	80	76	76	76	76	73	73	73	73	72	72	72	72
Wall	86	86	86	86	84	84	84	84	80	80	80	80	76	76	76	76	73	73	73	73	72	72	72	72
RCR 0	83	82	81	80	82	81	79	78	76	75	74	73	75	74	73	72	73	72	71	70	69	68	67	66
1	83	82	81	80	82	81	79	78	76	75	74	73	75	74	73	72	73	72	71	70	69	68	67	66
2	81	78	77	75	79	77	74	75	73	73	71	70	73	71	71	70	71	70	69	68	67	66	65	64
3	79	76	74	72	78	75	71	73	70	70	69	67	72	69	70	68	70	68	67	66	66	65	64	63
4	77	73	71	69	76	73	69	71	68	68	66	65	70	67	69	67	69	67	66	65	64	63	62	61
5	75	71	69	67	74	71	66	69	66	66	64	63	68	65	67	64	67	64	63	62	61	60	59	58
6	73	70	67	65	73	69	65	68	65	65	63	62	66	63	65	63	65	63	62	61	60	59	58	57
7	72	68	65	64	71	68	64	67	63	63	61	60	65	63	64	62	64	62	61	60	59	58	57	56
8	70	66	64	62	70	66	62	65	62	62	60	59	64	62	63	61	63	61	60	59	58	57	56	55
9	69	65	62	61	68	65	61	64	60	60	58	57	63	60	62	60	62	60	59	58	57	56	55	54
10	67	63	61	59	67	63	59	62	59	59	57	56	62	59	61	58	61	58	57	56	55	54	53	52

Numbers indicate percentage values of reflectivity.

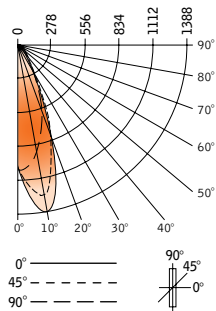
Go to www.focalpointlights.com for additional photometric data.

sqr wall wash
id®



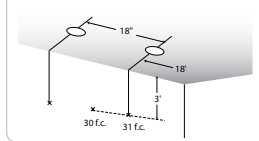
Luminaire: 71W MR16 downlight, narrow flood distribution with soft focus lens
 Filename: D2SXWVCS71NF25_0.ies
 Catalog #: D2-SX-WW-CS-WH
 Efficiency: 50%
 Photometric Report #: 13640.0

CANDLEPOWER DISTRIBUTION



Vertical Angle	0°	22.5°	Horizontal Angle		90°	Zonal Lumens
			45°	67.5°		
0°	1073	1073	1073	1073	1073	
5°	1388	1360	1263	1165	1037	101
15°	1230	1203	1097	969	764	221
25°	370	447	468	454	354	150
35°	101	96	105	128	110	53
45°	45	40	30	32	33	22
55°	21	20	14	17	13	13
65°	12	12	9	7	4	7
75°	5	5	5	2	0	2
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0

footcandle values - example



FOOTCANDLE VALUES - units 24" from the wall

distance from ceiling	18"	24"	30"	36"								
1'	4	4	4	3	3	3	3	2	3	3	2	3
2'	7	7	7	6	5	6	5	4	5	5	3	5
3'	10	9	10	8	7	8	6	6	6	6	4	6
4'	14	15	14	11	11	11	9	8	9	8	7	8
5'	18	18	18	14	14	14	11	11	11	10	9	10
6'	17	18	17	14	14	14	11	11	11	10	10	10
7'	15	16	15	13	13	13	10	10	10	9	9	9
8'	13	13	13	11	11	11	9	9	9	8	8	8
9'	10	11	10	9	9	9	7	8	7	6	7	6
10'	8	8	8	7	7	7	6	6	6	5	5	5

FOOTCANDLE VALUES - units 18" from the wall

distance from ceiling	18"	24"	30"	36"								
1'	7	6	7	6	4	6	3	3	3	5	2	5
2'	12	12	12	10	8	10	10	5	10	9	3	9
3'	19	19	19	15	14	15	14	10	14	13	6	13
4'	25	26	25	19	19	19	16	15	16	15	11	15
5'	23	24	23	18	18	18	15	14	15	13	11	13
6'	19	19	19	15	15	15	13	12	13	11	10	11
7'	15	15	15	12	12	12	10	10	10	8	8	8
8'	11	11	11	9	10	9	8	8	8	7	7	7
9'	9	9	9	7	8	7	6	6	6	5	5	5
10'	7	7	7	6	6	6	5	5	5	4	4	4

FOOTCANDLE VALUES - units 30" from the wall

distance from ceiling	18"	24"	30"	36"								
1'	3	3	3	2	2	2	2	2	2	2	1	2
2'	4	4	4	3	3	3	3	3	3	3	2	3
3'	6	6	6	5	5	5	4	4	4	4	3	4
4'	8	8	8	6	6	6	5	5	5	5	4	5
5'	10	11	10	9	9	9	7	7	7	6	6	6
6'	13	14	13	10	11	10	8	9	8	7	7	7
7'	13	14	13	11	11	11	9	9	9	8	8	8
8'	12	13	12	10	10	10	9	9	9	7	7	7
9'	11	11	11	9	9	9	8	8	8	7	7	7
10'	9	9	9	8	8	8	7	7	7	6	6	6

Footcandle results based on AGI32; off the shelf lamp in fixture, with microprismatic lens; Reflectances=0/0/0; LLF=1

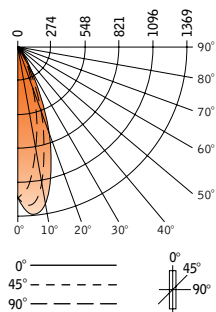
Go to www.focalpointlights.com for additional photometric data.

sqr wall wash
id®



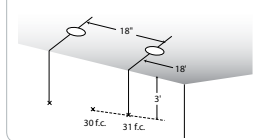
Luminaire: 71W MR16 downlight, narrow flood distribution with microprismatic lens
 Filename: D2SXWVBSHA71NF25_0.ies
 Catalog #: D2-SX-WW-BS-WH
 Efficiency: 41%
 Photometric Report #: 13573.0

CANDLEPOWER DISTRIBUTION



Vertical Angle	0°	22.5°	Horizontal Angle		90°	Zonal Lumens
			45°	67.5°		
0°	1242	1242	1242	1242	1242	
5°	1369	1326	1289	1206	1111	108
15°	1023	940	823	698	599	181
25°	372	329	301	245	198	103
35°	124	105	96	85	73	47
45°	55	44	36	33	29	22
55°	18	15	14	12	8	7
65°	6	5	4	1	0	2
75°	2	1	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0

footcandle values - example



FOOTCANDLE VALUES - units 24" from the wall

distance from ceiling	18"	24"	30"	36"								
1'	2	2	2	2	1	2	1	1	1	1	1	1
2'	8	7	8	6	5	6	6	4	6	5	3	5
3'	11	10	11	9	8	9	8	6	8	7	4	7
4'	13	13	13	11	10	11	9	7	9	8	6	8
5'	14	14	14	11	10	11	10	8	10	9	7	9
6'	13	13	13	11	10	11	9	8	9	8	7	8
7'	11	12	11	9	9	9	8	8	8	7	6	7
8'	10	10	10	8	8	8	7	7	7	6	6	6
9'	8	8	8	7	7	7	6	6	6	5	5	5
10'	7	7	7	6	6	6	5	5	5	4	4	4

FOOTCANDLE VALUES - units 18" from the wall

distance from ceiling	18"	24"	30"	36"								
1'	5	4	5	4	3	4	4	2	4	4	1	4
2'	14	13	14	12	9	12	11	6	11	11	4	11
3'	19	17	19	16	12	16	14	9	14	14	6	14
4'	20	19	20	16	14	16	14	10	14	13	7	13
5'	18	17	18	14	13	14	12	10	12	11	8	11
6'	14	14	14	11	11	11	9	9	9	8	7	8
7'	11	11	11	9	9	9	7	7	7	6	6	6
8'	9	9	9	7	7	7	6	6	6	5	5	5
9'	7	7	7	6	6	6	5	5	5	4	4	4
10'	5	6	5	5	5	5	4	4	4	3	3	3

FOOTCANDLE VALUES - units 30" from the wall

distance from ceiling	18"	24"	30"	36"								
1'	1	1	1	1	0	1	1	0	1	1	0	1
2'	4	4	4	3	3	3	3	2	3	2	2	2
3'	7	7	7	5	5	5	5	4	5	4	3	4
4'	9	8	9	7	6	7	6	5	6	5	4	5
5'	10	10	10	8	8	8	7	6	7	6	5	6
6'	10	10	10	9	8	9	7	7	7	6	5	6
7'	10	10	10	8	8	8	7	7	7	6	6	6
8'	9	9	9	8	8	8	7	6	7	6	5	6
9'	8	8	8	7	7	7	6	6	6	5	5	5
10'	7	7	7	6	6	6	5	5	5	4	4	4

Footcandle results based on AGI32; off the shelf lamp in fixture, with microprismatic lens; Reflectances=0/0/0; LLF=1

Go to www.focalpointlights.com for additional photometric data.