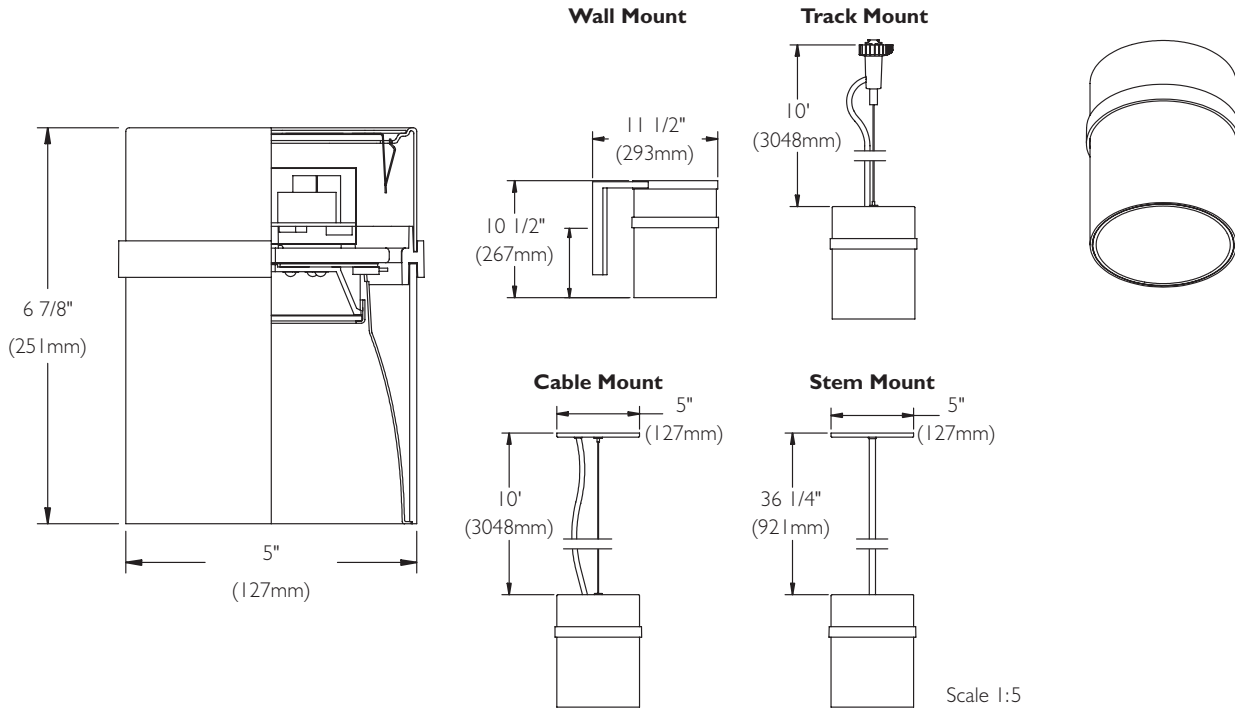


C4L05C

Calculite LED 4 1/2" Cylinder

Page 1 of 5



Ordering Guide: Cylinders

Frame-in Kit Series	Style	Color	Color Temperature	Reflector Finish	Input Voltage
C4L05	C (Cylinder)	W = White	27K (2700K)	CCL (Comfort Clear)	1 (120V) 2 (277V)
		B = Black	30K (3000K)		
		A = Painted Aluminum	35K (3500K)		
		40K (4000K)			

Example: C4L05CW35KCCL1

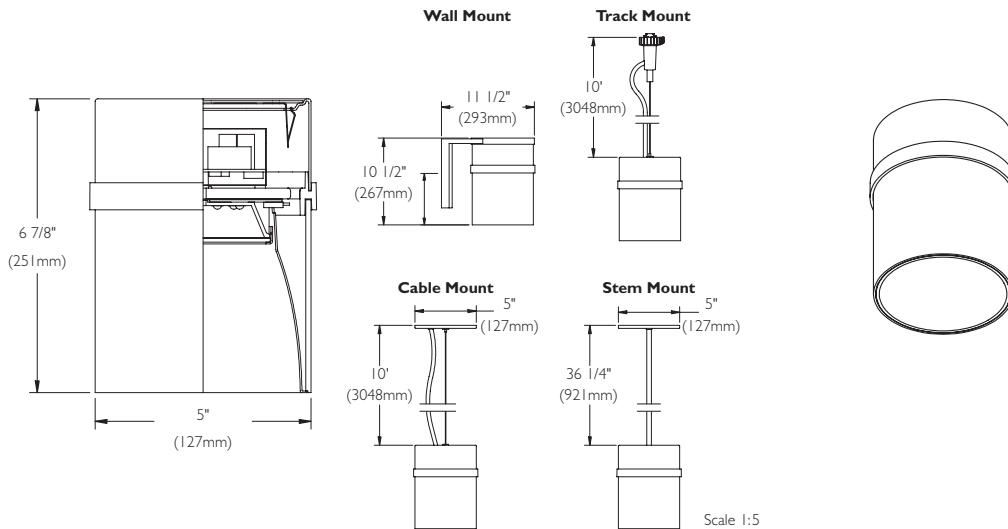
Job Information	Type:
Job Name:	
Cat. No.:	
Notes:	

PHILIPS
LIGHTOLIER

C4L05C

Calculite LED 4 1/2" Cylinder

Page 2 of 5



Features

Input Wattage: 9W (+/- 5%)

Cylinder Housing: Aluminum. Suitable for mounting over 3" or 4" outlet box.

Available in white, black, silver.

Mounting Capabilities: Ceiling, wall or track (see "Luminaire Options" below).

Reflector Cone: Aluminum. Provides 50° cutoff to source & source image. Self-flanged.

Power Connection: Attaches to frame-in kit via push-in connector (on frame). Removable cover provides access.

Technology

LED Board: Array of high brightness royal blue LED's.

Remote Phosphor Technology:

Remote phosphor technology provides increased efficiency and color consistency. Phosphor lens assembly positioned in front of LED array converts blue light to white. Color shift will not exceed +/- 100K over life.

Optical Mixing Chamber: Lightolier-specific mixing chamber redirects back-reflected light through aperture resulting in 20% increase in efficiency.

Thermal Management: Heat sink and thermal design along with clean room assembly ensures specified performance. 35°C maximum ambient environment.

Rated Life: Based on IESNA LM-80-2008. 50,000 hours at 70% lumen maintenance (L70)

Photometric Performance: Tested in accordance to IESNA LM-79-2008

Options

Wall Mount (C4CW): Cast aluminum plate. Suitable for mounting over 3" & 4" outlet boxes.

Track Mount (TM01): Suitable for Basic, Advent, Radius track systems. Silver color only. Cord: 18/3 AWM leads, 10 amps maximum. White color.

Options (continued)

Cable Mount (C4CC): 5" round decorative plate. No visible hardware. Holds aircraft cable. Chrome adjusting hardware for leveling. Cord: 18/3 AWM leads, 10 amps maximum. White color.

Stem Mount (C4CP): 5" round decorative plate. No visible hardware.

Cord: 18/3 AWM leads, 10 amps maximum. White color.

Dimming Capability: ELV. See LED-DIM specification sheet.

Emergency Capability (Inverter): See LED-LMI specification sheet.

Labels

UL (suitable for wet locations), cUL, I.B.E.W.
5 Year Warranty

Job Information	Type:
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PHILIPS

LIGHTOLIER

Calculite LED 4 1/2" Cylinder



Reflector Finish Multipliers

CL (x 1.00), **CCL** (x 0.94), **CCD** (x 0.93), **CCZ** (x 0.76), **WH** (x 0.82) — **CL** & **CCD** finishes are tested.

CCL, **CCZ** & **WH** are calculated.

10W LED, 2700K, CL FINISH TRIM

Candlepower Distribution	ANGLE	MEAN CP	LUMENS
	0	245	
	5	258	26
	10	285	
	15	302	85
	20	306	
	25	298	136
	30	276	
	35	238	145
	40	177	
	45	75	61
	50	7	2
	55	2	2
	60	1	
	65	1	1
	70	0	
	75	0	0
	80	0	0
	85	0	0
	90	0	0

Trim: C410LEDDL27KCLW
Output lumens: 457 lm
Correlated Color Temp¹: 2700K
Input Watts²: 8.7 w
Efficacy: 52.5 lm/w
CR³: 80
Spacing Criterion: 1.3

CEILING	WALL	70	80%	90	10	70%	50%	30%	0%		
WALL	70	50	30	10	50	10	50	10	0		
RCR Zonal Cavity Method - Effective Floor Cavity Reflectance = 20%											
0	119	119	119	119	116	116	111	111	106	106	100
1	113	110	107	105	108	103	104	100	100	97	92
2	107	101	97	93	100	92	96	90	93	88	85
3	100	93	88	83	92	83	89	81	87	80	77
4	94	86	80	75	85	75	83	74	81	73	70
5	89	79	73	68	78	68	77	67	75	67	64
6	83	74	67	62	73	62	71	61	70	61	59
7	79	68	61	57	67	57	66	56	65	56	54
8	74	63	57	52	63	52	62	52	60	51	50
9	70	59	52	48	58	48	57	48	56	47	46
10	66	55	48	44	55	44	54	44	53	44	42

Single Unit Data

Height to Lighted Plane	Initial Footcandles	Beam Diameter
5'	10	7"
6'	7	9"
7'	5	10"
8'	4	12"
9'	3	13"

Multiple Unit Data - RCR 2

Spacing	Initial Watts/ Sq. Ft.	
5'	21	0.39
6'	13	0.25
7'	10	0.18
8'	8	0.15
9'	6	0.12

38'x38'x10' Room, Workplane 2 1/2' above floor, 80/50/20% Reflectances

CERTIFIED TEST REPORT NO. F09934B⁵

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 Wattage controlled to within 5%.

³ Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.

⁴ Color Rendering Index within +/- 2%.

10W LED, 2700K, CCL FINISH TRIM

Candlepower Distribution	ANGLE	MEAN CP	LUMENS
	0	245	
	5	254	25
	10	270	
	15	283	80
	20	283	
	25	272	124
	30	247	
	35	210	128
	40	153	
	45	70	57
	50	15	6
	55	6	6
	60	3	
	65	2	2
	70	1	
	75	1	1
	80	0	
	85	0	0
	90	0	0

Trim: C410LEDDL27KCCLW
Output lumens: 423 lm
Correlated Color Temp¹: 2700K
Input Watts²: 8.7 w
Efficacy: 48.6 lm/w
CR³: 80
Spacing Criterion: 1.2

CEILING	WALL	70	80%	90	10	70%	50%	30%	0%		
WALL	70	50	30	10	50	10	50	10	0		
RCR Zonal Cavity Method - Effective Floor Cavity Reflectance = 20%											
0	119	119	119	119	116	116	111	111	106	106	100
1	113	110	107	105	108	103	104	100	100	97	92
2	106	101	97	93	99	92	96	90	93	88	84
3	100	93	87	83	92	82	89	81	86	80	77
4	94	86	80	75	85	74	82	73	80	73	70
5	89	79	73	68	78	67	76	67	75	66	64
6	83	73	66	62	72	61	71	61	69	61	58
7	78	68	61	56	67	56	66	56	65	56	54
8	74	63	56	52	62	52	61	51	60	51	49
9	70	59	52	48	58	47	57	47	56	47	45
10	66	55	48	44	54	44	53	44	53	44	42

Single Unit Data

Height to Lighted Plane	Initial Footcandles	Beam Diameter
5'	10	7"
6'	7	8"
7'	5	9"
8'	4	10"
9'	3	12"

Multiple Unit Data - RCR 2

Spacing	Initial Watts/ Sq. Ft.	
5'	19	0.39
6'	12	0.25
7'	9	0.18
8'	7	0.15
9'	6	0.12

38'x38'x10' Room, Workplane 2 1/2' above floor, 80/50/20% Reflectances

CERTIFIED TEST REPORT NO. F09935⁵

10W LED, 2700K, CCD FINISH TRIM

Candlepower Distribution	ANGLE	MEAN CP	LUMENS
	0	256	
	5	259	26
	10	271	
	15	280	79
	20	275	
	25	260	118
	30	232	
	35	193	118
	40	139	
	45	74	59
	50	29	14
	55	14	5
	60	8	5
	65	5	5
	70	3	
	75	2	2
	80	1	
	85	0	0
	90	0	0

Trim: C410LEDDL27KCCDW
Output lumens: 421 lm
Correlated Color Temp¹: 2700K
Input Watts²: 8.7 w
Efficacy: 48.4 lm/w
CR³: 80
Spacing Criterion: 1.2

CEILING	WALL	70	80%	90	10	70%	50%	30%	0%		
WALL	70	50	30	10	50	10	50	10	0		
RCR Zonal Cavity Method - Effective Floor Cavity Reflectance = 20%											
0	119	119	119	119	116	116	111	111	106	106	100
1	113	109	107	104	107	102	103	99	99	96	92
2	106	100	96	92	99	91	95	89	92	87	83
3	100	92	86	82	91	81	88	80	85	79	76
4	93	85	78	73	84	73	81	72	79	71	69
5	88	78	71	66	77	66	75	65	73	65	63
6	82	72	65	60	71	60	70	60	68	59	57
7	77	67	60	55	66	55	65	55	63	54	52
8	73	62	55	51	61	50	60	50	59	50	48
9	69	58	51	47	57	46	56	46	55	46	44
10	65	54	47	43	53	43	53	43	52	43	41

Single Unit Data

Height to Lighted Plane	Initial Footcandles	Beam Diameter
5'	10	7"
6'	7	8"
7'	5	9"
8'	4	10"
9'	3	12"

Multiple Unit Data - RCR 2

Spacing	Initial Watts/ Sq. Ft.	
5'	19	0.39
6'	12	0.25
7'	9	0.18
8'	7	0.15
9'	6	0.12

38'x38'x10' Room, Workplane 2 1/2' above floor, 80/50/20% Reflectances

CERTIFIED TEST REPORT NO. F09936⁵

Job Information Type:



¹Correlated Color Temperature within specs as defined in ANSI NEMA ANSLG C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.
²Wattage controlled to within 5%.
³Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.
⁴Color Rendering Index within +/- 2%.

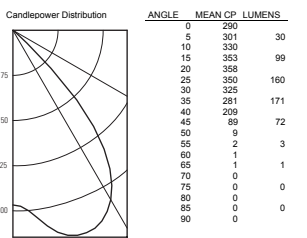
Calculite LED 4 1/2" Cylinder



Reflector Finish Multipliers

CL (x 1.00), **CCL** (x 0.94), **CCD** (x 0.93), **CCZ** (x 0.76), **WH** (x 0.82) — **CL** & **CCD** finishes are tested. **CCL**, **CCZ** & **WH** are calculated.

10W LED, 3500K, CL FINISH TRIM



Trim: C410LEDDL35KCLW
 Output lumens: 537 lm
 Correlated Color Temp¹: 3500K
 Input Watts²: 8.7 w
 Efficacy: 61.7 lm/w
 CRI³: 76
 Spacing Criterion: 1.3

CEILING	80%				70%				50%				30%				0%			
	WALL	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10	50	10	
RCR	Zonal Cavity Method - Effective Floor Cavity Reflectance = 20%	0	119	119	119	116	116	111	111	106	106	100	100	100	100	100	100	100	100	100
1	113	110	107	105	108	103	104	100	100	97	92	88	84	81	77	75	67	64	64	64
2	107	101	97	93	99	92	96	90	93	88	84	81	77	75	67	64	64	64	64	64
3	100	93	88	83	92	85	89	81	87	80	77	75	70	67	64	64	64	64	64	64
4	94	86	80	75	85	75	83	74	81	73	70	67	64	64	64	64	64	64	64	64
5	89	79	73	68	78	68	77	67	75	67	64	64	64	64	64	64	64	64	64	64
6	83	73	67	62	73	62	71	61	70	61	59	59	59	59	59	59	59	59	59	59
7	78	68	61	57	67	56	66	56	65	56	54	54	54	54	54	54	54	54	54	54
8	74	63	56	52	63	52	61	52	60	51	50	50	50	50	50	50	50	50	50	50
9	70	59	52	48	58	48	57	47	56	47	46	46	46	46	46	46	46	46	46	46
10	66	55	48	44	54	44	54	44	53	44	42	42	42	42	42	42	42	42	42	42

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	289	834.0%
0-40	461	85.9%
0-60	536	99.8%
0-90	536	100.0%

Single Unit Data

Height to Lighted Plane	Initial Footcandles	Beam Diameter
5'	12	7"
6'	8	9"
7'	6	10"
8'	5	12"
9'	4	13"

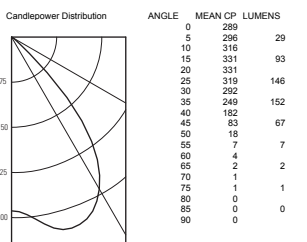
Multiple Unit Data - RCR 2

Spacing	Initial Watts/On Ctr.	Watts/Footcandles, Sq. Ft.
5'	24	0.39
6'	16	0.25
7'	11	0.18
8'	9	0.15
9'	8	0.12

38"x38"x10" Room, Workplane 2 1/2' above floor, 80/50/20% Reflectances

CERTIFIED TEST REPORT NO. F09951B¹

10W LED, 3500K, CCL FINISH TRIM



Trim: C410LEDDL35KCLW
 Output lumens: 499 lm
 Correlated Color Temp¹: 3500K
 Input Watts²: 8.7 w
 Efficacy: 57.4 lm/w
 CRI³: 76
 Spacing Criterion: 1.2

CEILING	80%				70%				50%				30%				0%			
	WALL	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10	50	10	
RCR	Zonal Cavity Method - Effective Floor Cavity Reflectance = 20%	0	119	119	119	116	116	111	111	106	106	100	100	100	100	100	100	100	100	100
1	113	110	107	105	108	103	104	100	100	97	92	88	84	81	77	75	67	64	64	64
2	106	101	97	93	99	92	96	90	93	88	84	81	77	75	67	64	64	64	64	64
3	100	93	87	83	92	82	89	81	86	80	77	75	70	67	64	64	64	64	64	64
4	94	86	79	75	84	74	82	73	80	72	70	67	64	64	64	64	64	64	64	64
5	88	78	72	68	78	67	76	67	74	66	64	64	64	64	64	64	64	64	64	64
6	83	73	66	62	72	61	71	61	69	60	58	58	58	58	58	58	58	58	58	58
7	78	68	61	56	67	56	66	56	64	55	54	54	54	54	54	54	54	54	54	54
8	74	63	56	52	62	51	61	51	60	51	49	49	49	49	49	49	49	49	49	49
9	69	59	52	47	58	47	57	47	56	47	45	45	45	45	45	45	45	45	45	45
10	66	55	48	44	54	44	53	44	53	43	42	42	42	42	42	42	42	42	42	42

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	268	83.8%
0-40	420	84.3%
0-60	495	99.3%
0-90	499	100.0%

Single Unit Data

Height to Lighted Plane	Initial Footcandles	Beam Diameter
5'	12	7"
6'	8	9"
7'	6	10"
8'	5	10"
9'	4	12"

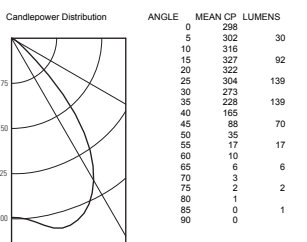
Multiple Unit Data - RCR 2

Spacing	Initial Watts/On Ctr.	Watts/Footcandles, Sq. Ft.
5'	22	0.39
6'	15	0.25
7'	11	0.18
8'	9	0.15
9'	7	0.12

38"x38"x10" Room, Workplane 2 1/2' above floor, 80/50/20% Reflectances

CERTIFIED TEST REPORT NO. F09952²

10W LED, 3500K, CCD FINISH TRIM



Trim: C410LEDDL35KCCDW
 Output lumens: 495 lm
 Correlated Color Temp¹: 3500K
 Input Watts²: 8.7 w
 Efficacy: 56.9 lm/w
 CRI³: 76
 Spacing Criterion: 1.2

CEILING	80%				70%				50%				30%				0%			
	WALL	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10	50	10	
RCR	Zonal Cavity Method - Effective Floor Cavity Reflectance = 20%	0	119	119	119	116	116	111	111	106	106	100	100	100	100	100	100	100	100	100
1	113	109	107	104	107	102	103	99	99	96	92	88	84	81	77	75	67	64	64	64
2	106	100	96	92	99	91	95	88	92	87	83	81	77	75	67	64	64	64	64	64
3	100	92	86	82	91	81	88	80	85	78	76	75	70	67	64	64	64	64	64	64
4	93	85	78	73	83	73	81	72	79	71	69	69	69	69	69	69	69	69	69	69
5	88	78	71	66	77	66	75	65	73	65	63	63	63	63	63	63	63	63	63	63
6	82	72	65	60	71	60	70	60	68	59	57	57	57	57	57	57	57	57	57	57
7	77	67	60	55	66	55	65	54	63	54	52	52	52	52	52	52	52	52	52	52
8	73	62	55	50	61	50	60	50	59	50	48	48	48	48	48	48	48	48	48	48
9	69	58	51	46	57	46	56	46	55	46	44	44	44	44	44	44	44	44	44	44
10	65	54	47	43	53	43	52	43	52	42	41	41	41	41	41	41	41	41	41	41

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	260	52.5%
0-40	400	80.7%
0-60	485	98.2%
0-90	495	100.0%

Single Unit Data

Height to Lighted Plane	Initial Footcandles	Beam Diameter
5'	12	7"
6'	8	9"
7'	6	10"
8'	5	10"
9'	4	12"

Multiple Unit Data - RCR 2

Spacing	Initial Watts/On Ctr.	Watts/Footcandles, Sq. Ft.
5'	22	0.39
6'	14	0.25
7'	10	0.18
8'	9	0.15
9'	7	0.12

38"x38"x10" Room, Workplane 2 1/2' above floor, 80/50/20% Reflectances

CERTIFIED TEST REPORT NO. F09953³

- 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 Wattage controlled to within 5%.
- 3 Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.
- 4 Color Rendering Index within +/- 2%.

Job Information Type:



¹Correlated Color Temperature within specs as defined in ANSI NEMA ANSLG C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.
²Wattage controlled to within 5%.
³Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.
⁴Color Rendering Index within +/- 2%.

Calculite LED 4 1/2" Cylinder

Reflector Finish Multipliers

CL (x 1.00), **CCL** (x 0.94), **CCD** (x 0.93), **CCZ** (x 0.76), **WH** (x 0.82) — **CL** & **CCD** finishes are tested.
CCL, **CCZ** & **WH** are calculated.



10W LED, 4000K, CL FINISH TRIM

Candlepower Distribution	ANGLE	MEAN CP	LUMENS
	0	296	
	5	312	31
	10	344	
	15	369	104
	20	374	
	25	366	167
	30	340	
	35	295	181
	40	222	
	45	102	80
	50	11	
	55	3	3
	60	1	
	65	1	1
	70	0	
	75	0	0
	80	0	
	85	0	0
	90	0	

Trim:
C410LEDDL40KCLW

Output lumens: 568 lm
 Correlated Color Temp¹: 4000K
 Input Watts²: 8.7 w
 Efficacy: 65.3 lm/w
 CRI³: 76
 Spacing Criterion: 1.3

CEILING	80%				70%				50%				30%				0%			
WALL	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10	50	10	50	10
RCR 1	119	119	119	119	116	116	111	111	106	106	100	100	100	100	100	100	100	100	100	100
RCR 2	113	110	107	105	108	103	104	100	100	97	92	92	93	88	86	86	86	80	77	77
RCR 3	100	93	88	83	92	82	89	81	86	80	77	77	80	73	70	70	75	66	64	64
RCR 4	94	86	80	75	85	74	82	73	80	73	70	70	76	67	64	64	67	58	54	54
RCR 5	89	79	73	68	78	67	76	67	75	66	64	64	71	61	58	58	69	61	58	58
RCR 6	83	73	66	62	72	61	71	61	69	61	58	58	66	56	54	54	64	55	54	54
RCR 7	78	68	61	56	67	56	66	56	64	55	54	54	61	51	49	49	60	51	49	49
RCR 8	74	63	56	52	62	51	61	51	57	47	45	45	57	47	45	45	56	47	45	45
RCR 9	69	59	52	47	58	47	57	47	56	47	45	45	54	43	42	42	52	43	42	42
RCR 10	65	55	48	44	54	44	53	43	52	43	42	42	52	43	42	42	52	43	42	42

ZONAL LUMENS AND PERCENTAGES		
ZONE	LUMENS	% LUMINAIRE
0-30	302	53.5%
0-40	483	85.1%
0-60	567	99.8%
0-90	568	100.0%

Height to Lighted Plane	Single Unit Data		Beam Diameter
	Initial Footcandles	Beam Diameter	
5'	12	7"	
6'	8	9"	
7'	6	10"	
8'	5	12"	
9'	4	13"	

Spacing On Cir.	Multiple Unit Data - RCR 2	
	Initial Footcandles	Watts/Sq Ft
5'	25	0.39
6'	17	0.25
7'	12	0.18
8'	10	0.15
9'	8	0.12

38'x38'x10' Room, Workplane 2 1/2' above floor, 80/50/20% Reflectances

CERTIFIED TEST REPORT NO. F09321⁴

- 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 Wattage controlled to within 5%.
- ³ Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.
- ⁴ Color Rendering Index within +/- 2%.



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Job Information Type: