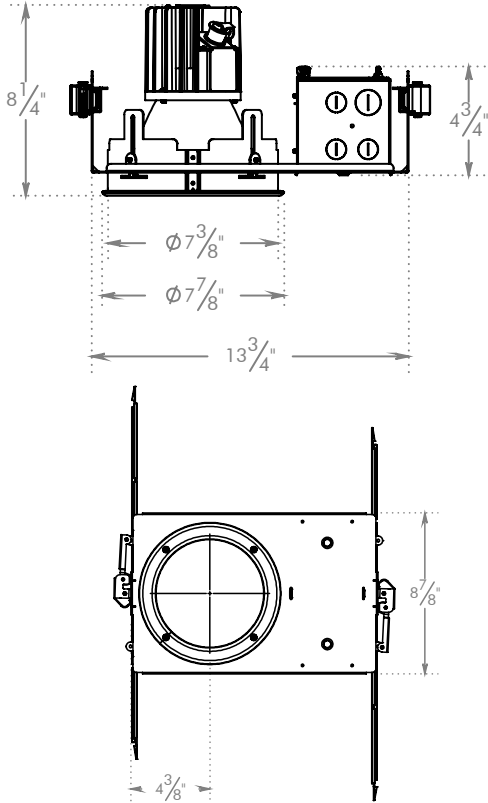




NOMINAL LUMENS	DELIVERED LUMENS	WATTAGE
6000	5861	67W
5000	4912	56W
4000	4043	44W
3000	3211	39W
2000	1906	25W
1000	1040	12W

Based on 4000K, 90+CRI with semi-specular chrome reflector.
Actual wattage may vary +/-5%

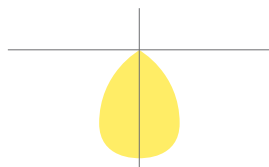
FEATURES

HL6-IP-VR is a sealed recessed LED downlight designed for vandal-resistant or cleanroom environments. The cleanroom-style construction provides a smooth, easy-to-maintain surface and an architectural look. A one-piece gasket inserted between the trim ring and housing completely seals the lens to the housing, meeting ISO 5, Class 100 requirements. An MIL-STD-461G certification makes the HL6-IP-VR suitable for environments requiring conducted emission mitigation. Antimicrobial white finish is optional. Fixture is IP65 dust and water resistant.

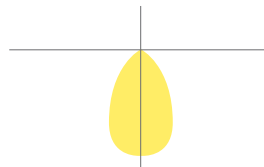
LUMENS	1000, 2000, 3000, 4000, 5000, 6000 (Custom lumen packages available)
CCT & DYNAMIC PLATFORMS	22K, 27K, 30K, 35K, 40K, 50K* Tunable White, Dims to Warm
CRI	90+ Standard, 98+ Optional
COLOR QUALITY	2 Step MacAdam Ellipse
DISTRIBUTION	MD (Medium Distribution), WD (Wide)
TRIM OPTIONS	Downlight
REFLECTOR COLORS	CL (Semi-Specular Chrome), SHZ (Low Iridescent Satin Haze), WH (White)
TRIM RING COLOR	WH (White), SS (Stainless Steel), WH-AN (White Antimicrobial)
DIMMING	0-10V Flicker Free 1% Dimming Standard (DIM10), LUTH, ELDO10.1, DIMTR, LUT2W(Up to 40W)
EMERGENCY	10W - Up to 1000L Output 20W - Up to 2000L Output
LIFETIME	L70 at 102,000 Hours
PHOTOMETRIC TESTS	In Accordance with IES LM-79-08, LM-80 and TM-30, TM-21

* Available on 85+ CRI only

WD: Wide
Candlepower Distribution (Candelas)



MD: Medium
Candlepower Distribution (Candelas)



THERMAL MANAGEMENT SYSTEM

Passive cooling Diecast Aluminum Heat Sink, LED light engine and driver are replaceable, upgradeable, and can be accessed from below the ceiling. The consistency in the quality of light is delivered with precision performance by the use of a unique locking mechanism that aligns the reflector with the light engine.

MOUNTING FRAME & BRACKET

16-gauge steel construction with C-channel mounting brackets standard. The mounting bracket adjusts up to 28" horizontally and 2-3/4" vertically. After achieving required length, integral locking screws lock brackets securely into place. Die-formed construction of the mounting frame provides maximum heat dissipation and rust protection.

DRIVER ELECTRICAL INFORMATION

The LED driver is rated for 50 to 60Hz at 120V/277V, also available in 347V input, produces less than 20%THD, has a power factor between 90% and 100%, and is thermally protected for additional safety. Junction box and Driver can be accessed from below the ceiling and above the ceiling. Junction Box is Listed for through branch circuit wiring.

DIMMING & DRIVER INFORMATION

DIM10 - 0-10V dimming on either MVOLT 120, 277 or 347V. Dimmable down to 1% of initial lumens, standard.

LUTH - Lutron LDE1 Hi-Lume Eco System. 1% dimming with Soft in Fade to Black dimming technology.

ELDO10.1 - EldoLED SoloDrive 0-10V. Dimming down to 0.1%.

DIMTR - Triac & Electronic low voltage dimming. Available in 120V, and up to 4000 lumens only.

LUT2W - Lutron LTEA2W Hi-Lume 1%. 2-wire LED Driver Forward Phase Control, 1% dimming in 120V only. Available on all luminaires up to 40 watts.

UP TO 2" CEILING THICKNESS

Telescopic housing collar can be adjusted to accommodate 0.5" to 2" thick ceilings.

LENS

Available in different distributions and finishes. Trim lens type options include clear polycarbonate, frosted polycarbonate, and tempered glass. See ordering table for options.

LED DYNAMIC PLATFORM OPTIONS



Tunable White with Smart White Technology utilizing the Lumenetix Platform allows you to color tune the luminaire via various controls. Create the perfect environment for the desired use of the space, while maintaining a CRI of 90+ across the tunable range of 8000 to 1650K. (Click here for more details)



Dims to Warm with Smart Dimming Technology. At 100% full brightness the luminaire is at 3000K. When dimmed to 1%, the light transitions to 1800K, creating a warm ambiance within the space. (Click here for more details)

SEALED TRIM RING

The IP65-rated trim ring is constructed of 304 stainless steel in flat white finish. The sealed and vandal-resistant bottom lens and bottom trim ring is retained with (4) Torx T20 screws to the housing, holding the trim securely to the housing. Option for trim to be painted with antimicrobial white polyester powdercoat. Stainless steel trims are satin polished.

GASKETS

An NSF-certified one-piece silicone extruded gasket is installed between the trim ring and housing collar to completely seal the trim ring from below the ceiling.

WARRANTY

Five-year carefree warranty for parts and components. (Labor not included)

LISTINGS

UL Certified for US and Canada
ISO 5 Class 100 Cleanroom Compliant
IP65 Rated from Roomside Only
NSF 2 Splash Zone/Non-Food Zone
Wet Location Listed
MIL-STD-461F compliant for EMI

Example: **HL6-IP-VR-LED-2000L-DIM10-MVOLT-MD-40K-90-HL6-IP-6501-HPC-CL-WH**

SERIES	LUMENS	DRIVER	VOLTAGE	CCT	EMERGENCY	TRIM TYPE	TRIM LENS TYPE
HL6-IP-VR-LED	☐ 1000L	☐ DIM10	☐ 120	☐ 22K	☐ EMG-LED-10W	☐ HL6-IP-6501	☐ HPC-CL- Clear High Impact polycarbonate lens
	☐ 2000L	☐ DIMTR ^{2,1}	☐ 277	☐ 27K	☐ EMG-LED-20W		☐ HPC-FR- Frosted High Impact polycarbonate lens
	☐ 3000L	☐ LUTH ²	☐ MVOLT	☐ 30K	Typical lumen output of the luminaire is up to 1000L with EMG-LED-10W option & 2000L with EMG-LED-20W option in emergency mode. Contact the factory for details.		☐ TGL- Tempered Glass Lens
	☐ 4000L ¹	☐ LUT2W ^{2,1}	☐ 347	☐ 35K			
	☐ 5000L ¹	☐ ELDO10-.1 ²	☐ 40K (DIM10 only)	☐ 40K			
	☐ 6000L ¹			☐ 50K ³			
			OPTICS	CRI			
			☐ MD	☐ 90+	TRIM COLOR ☐ CL - Clear ☐ SHZ - Satin Haze ☐ WH - White	TRIM RING COLOR ☐ WH - White ☐ SS - Stainless Steel ☐ WH-AN - White Antimicrobial	
			☐ WD	☐ 98+ ⁴ ☐ 85+(50K only)			

Note: All trim rings material are type 304 stainless steel.

¹ 4000, 5000, 6000L not available for LUT2W, DIMTR ² LUTH, ELDO10-.1 are available in 120V and 277V

^{2,1} DIMTR, LUT2W are available in 120V only

³ 50K series are available with 85+ CRI only ⁴ 98+ CRI is available in 27K, 30K and 40K only

HL6-IP-LED-2000L-DIM10-MVOLT-MD-40K-90-HL-6501-HPC-CL-WH

INPUT WATTS: **25.7**

LUMENS: **1906**

CRI: **90**

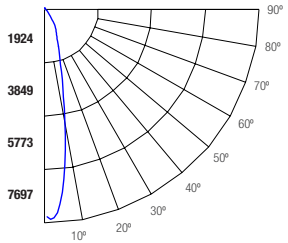
EFFICACY: **74**

CCT: **4000K**

TEST NO.: **EL05082054**

SPACING CRITERIA: **0.40**

Candle Power Distribution (Candelas)



Cone of Light			
2	1843 fc	0.7 ft	0.7 ft
4	461 fc	1.3 ft	1.3 ft
6	205 fc	2.0 ft	2.0 ft
8	115 fc	2.6 ft	2.7 ft
10	73.7 fc	3.3 ft	3.4 ft
12	51.2 fc	4.0 ft	4.0 ft
BEAM DIA. MEASURED AT 50% OF NADIR F.C.			

Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	1085.96	57	57
0-30	1561.69	81.9	81.9
0-40	1813.35	95.1	95.1
0-60	1884.06	98.8	98.8
0-80	1902.48	99.8	99.8
0-90	1904.73	99.9	99.9

Luminance (Average candela/M²)

Angle in Degrees	Average 0°	Average 45°	Average 90°
45	712	594	594
55	362	325	323
65	270	247	238
75	224	198	185
85	269	208	140

Lumens Per Zone

Zone	Lumens
0-10	487.55
10-20	598.41
20-30	475.74
30-40	251.65
40-50	50
50-60	20.72
60-70	12.02
70-80	6.4
80-90	2.25

Candela Tabulation

0	0
0	7371.38
5	5933.14
15	2055
25	1035.33
35	394.49
45	52.94
55	21.83
65	11.98
75	6.09
85	2.47
90	0.02

Coefficients of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

ROOM CAVITY RATIO	RC	RW	80%				70%				50%				30%				10%				0%			
			70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%	0%	0%	0%
0	119	119	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100	100	100	100
1	114	112	109	107	107	112	112	109	107	106	105	104	102	102	101	99	98	97	97	97	97	97	95	95	95	95
2	109	105	101	99	107	107	103	100	97	100	98	95	97	95	93	95	93	95	93	95	93	91	90	90	90	90
3	105	99	95	91	103	103	98	94	91	95	92	89	93	90	88	91	89	87	89	87	85	87	85	85	85	85
4	101	94	89	86	99	93	89	85	85	91	87	84	89	86	83	87	84	82	81	87	84	82	81	81	81	81
5	97	89	84	81	95	89	84	80	80	87	83	80	85	82	79	87	84	81	78	77	74	71	70	70	70	70
6	93	85	80	76	91	84	80	76	76	83	79	76	82	78	75	80	77	75	73	75	71	68	67	67	67	67
7	89	81	76	73	88	81	76	73	73	80	75	72	78	75	72	77	74	71	70	72	68	66	65	65	65	65
8	86	78	73	69	85	77	73	69	69	76	72	69	75	72	69	75	71	68	67	72	68	66	65	65	65	65
9	83	75	70	66	82	74	70	66	66	73	69	66	73	69	66	73	69	66	65	72	68	66	65	65	65	65
10	80	72	67	64	79	72	67	64	64	71	66	64	70	66	63	69	66	63	62	69	66	63	62	62	62	62

RC - Ceiling Cavity Reflectance

RW - Wall Reflectance

HL6-IP-LED-3000L-DIM10-MVOLT-MD-40K-90-HL-6501-HPC-CL-WH

INPUT WATTS: **39.05**

LUMENS: **3211**

CRI: **90**

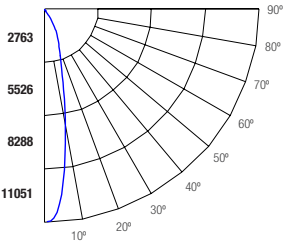
EFFICACY: **82**

CCT: **4000K**

TEST NO.: **EL05082054**

SPACING CRITERIA: **0.44**

Candle Power Distribution (Candelas)



Cone of Light			
2	2745 fc	0.8 ft	0.8 ft
4	686 fc	1.6 ft	1.5 ft
6	305 fc	2.3 ft	2.3 ft
8	172 fc	3.1 ft	3.0 ft
10	110 fc	3.9 ft	3.8 ft
12	76.2 fc	4.7 ft	4.6 ft
BEAM DIA. MEASURED AT 50% OF NADIR F.C.			

Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	1807.63	56.3	56.3
0-30	2626.26	81.8	81.8
0-40	3052.95	95.1	95.1
0-60	3174.14	98.8	98.8
0-80	3205.33	99.8	99.8
0-90	3209.14	99.9	99.9

Luminance (Average candela/M²)

Angle in Degrees	Average 0°	Average 45°	Average 90°
45	1660	1681	1244
55	736	708	611
65	519	497	453
75	430	417	374
85	549	517	454

Lumens Per Zone

Zone	Lumens
0-10	771.88
10-20	1035.75
20-30	818.63
30-40	426.69
40-50	86.03
50-60	35.16
60-70	20.36
70-80	10.83
80-90	3.82

Candela Tabulation

0	0
0	10978
5	10019
15	1956.2
25	812.32
35	123.42
45	44.383
55	23.076
65	11.711
75	5.029
85	0.031
90	0.02

Coefficients of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

ROOM CAVITY RATIO	RC	RW	80%				70%				50%				30%				10%				0%			
			70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%	0%	0%	0%
0	119	119	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100	100	100	100
1	114	112	109	107	107	112	112	109	107	106	105	104	102	102	101	99	98	97	96	95	98	97	96	95	95	95
2	109	105	101	98	107	107	103	100	97	100	98	95	97	95	93	95	93	95	93	94	93	91	90	90	90	90
3	105	99	95	91	103	103	98	94	90	95	92	89	93	90	88	91	88	86	85	91	88	86	85	85	85	85
4	100	94	89	85	99	93	88	85	85	91	87	84	89	85	83	87	84	82	81	87	84	82	81	81	81	81
5	96	89	84	80	95	88	83	80	80	86	82	79	85	81	79	83	80	78	77	77	74	71	70	70	70	70
6	93	85	80	76	91	84	79	76	76	83	78	75	81	78	75	80	77	74	73	75	71	68	67	67	67	67
7	89	81	76	72	88	80	76	72	72	79	75	72	78	74	71	77	74	71	70	72	68	66	65	65	65	65
8	86	77	72	69	85	77	72	69	69	76	72	68	75	71	68	74	71	68	67	72	68	66	65	65	65	65
9	83	74	69	66	82	74	69	66	66	73	69	66	73	69	66	73	69	66	65	71	68	66	65	65	65	65
10	80	71	66	63	79	71	66	63	63	70	66	63	70	66	63	69	66	63	62	69	66	63	62	62	62	62

RC - Ceiling Cavity Reflectance

RW - Wall Reflectance

HL6-IP-LED-4000L-DIM10-MVOLT-MD-40K-90-HL-6501-HPC-CL-WH

INPUT WATTS: **44.3**

LUMENS: **4043**

CRI: **90**

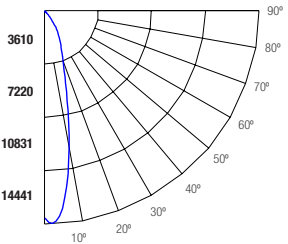
EFFICACY: **91**

CCT: **4000K**

TEST NO.: **EL05082054**

SPACING CRITERIA: **0.42**

Candle Power Distribution (Candelas)



Cone of Light			
2	3523 fc	0.7 ft	0.8 ft
4	881 fc	1.5 ft	1.5 ft
6	391 fc	2.2 ft	2.3 ft
8	220 fc	3.0 ft	3.0 ft
10	141 fc	3.7 ft	3.8 ft
12	97.9 fc	4.5 ft	4.6 ft
BEAM DIA. MEASURED AT 50% OF NADIR F.C.			

Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	2289.69	56.6	56.6
0-30	3311.53	81.9	81.9
0-40	3843	95	95
0-60	3996.53	98.8	98.8
0-80	4036.15	99.8	99.8
0-90	4040.96	99.9	99.9

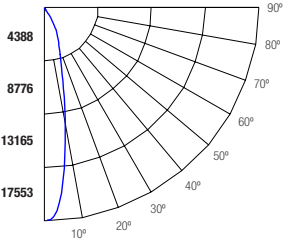
Luminance (Average candela/M²)

Angle in Degrees	Average 0°	Average 45°	Average 90°
45	1627	1331	1359
55	797	714	713
65	590	542	523
75	492	439	408
85	593	496	387

HL6-IP-LED-5000L-DIM10-MVOLT-MD-40K-90-HL-6501-HPC-CL-WH

INPUT WATTS: **56.6** LUMENS: **4913** CRI: **90** EFFICACY: **87** CCT: **4000K** TEST NO.: **EL05082054**
SPACING CRITERIA: **0.42**

Candle Power Distribution (Candelas)



Cone of Light			
2	4279 fc	0.7 ft	0.8 ft
4	1070 fc	1.5 ft	1.5 ft
6	475 fc	2.2 ft	2.3 ft
8	267 fc	3.0 ft	3.0 ft
10	171 fc	3.7 ft	3.8 ft
12	119 fc	4.5 ft	4.6 ft
(FT) Distance to Plane	(FC) Initial Footcandle at Nadir	(FT) Beam Vert. Spread	(FT) Beam Horiz. Spread

BEAM DIA. MEASURED AT 50% OF NADIR F.C.

Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	2781.36	56.6	56.6
0-30	4022.8	81.9	81.9
0-40	4669.54	95	95
0-60	4856.29	98.8	98.8
0-80	4904.44	99.8	99.8
0-90	4910.28	99.9	99.9

Luminance (Average candela/M²)

Angle in Degrees	Average 0°	Average 45°	Average 90°
45	1930	1636	1641
55	967	865	863
65	715	656	636
75	593	533	494
85	720	592	447

Lumens Per Zone

Zone	Lumens
0-10	1200.91
10-20	1580.45
20-30	1241.45
30-40	646.74
40-50	132.57
50-60	54.19
60-70	31.44
70-80	16.71
80-90	5.84

Candela Tabulation

0	0
0	17115.68
5	14791.15
15	5693.47
25	2757.36
35	1086.87
45	143.56
55	58.34
65	31.77
75	16.15
85	6.6
90	0.03

Coefficients of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

ROOM CAVITY RATIO	RC	80%				70%				50%			30%			10%			0%
	RW	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%
	0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
	1	114	112	109	107	112	109	107	106	105	104	102	102	100	99	98	97	96	95
	2	109	105	101	98	107	103	100	97	100	97	95	97	95	93	94	93	91	90
	3	105	99	95	91	103	98	94	91	95	92	89	93	90	88	91	88	86	85
	4	100	94	89	85	99	93	88	85	91	87	84	89	86	83	87	84	82	81
	5	96	89	84	80	95	88	84	80	87	83	79	85	81	79	84	80	78	77
	6	93	85	80	76	91	84	79	76	83	79	75	81	78	75	80	77	74	73
	7	89	81	76	72	88	81	76	72	79	75	72	78	74	71	77	74	71	70
8	86	78	73	69	85	77	72	69	76	72	69	75	71	68	74	71	68	67	
9	83	74	69	66	82	74	69	66	73	69	66	72	68	66	72	68	65	64	
10	80	72	67	63	79	71	66	63	70	66	63	70	66	63	69	65	63	62	

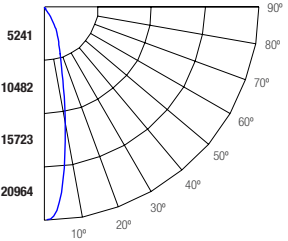
RC - Ceiling Cavity Reflectance

RW - Wall Reflectance

HL6-IP-LED-6000L-DIM10-MVOLT-MD-40K-90-HL-6501-HPC-CL-WH

INPUT WATTS: **67.7** LUMENS: **5861** CRI: **90** EFFICACY: **87** CCT: **4000K** TEST NO.: **EL05082054**
SPACING CRITERIA: **0.42**

Candle Power Distribution (Candelas)



Cone of Light			
2	5101 fc	0.8 ft	0.8 ft
4	1275 fc	1.5 ft	1.5 ft
6	567 fc	2.3 ft	2.3 ft
8	319 fc	3.0 ft	3.0 ft
10	204 fc	3.8 ft	3.8 ft
12	142 fc	4.5 ft	4.6 ft
(FT) Distance to Plane	(FC) Initial Footcandle at Nadir	(FT) Beam Vert. Spread	(FT) Beam Horiz. Spread

BEAM DIA. MEASURED AT 50% OF NADIR F.C.

Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	3319.84	56.6	56.6
0-30	4800.15	81.9	81.9
0-40	5571.81	95.1	95.1
0-60	5794.36	98.8	98.8
0-80	5851.24	99.8	99.8
0-90	5858.18	99.9	99.9

Luminance (Average candela/M²)

Angle in Degrees	Average 0°	Average 45°	Average 90°
45	2311	1917	1961
55	1147	1029	1023
65	846	778	749
75	702	630	583
85	859	711	556

Lumens Per Zone

Zone	Lumens
0-10	1433.43
10-20	1886.41
20-30	1480.31
30-40	771.67
40-50	158.24
50-60	64.3
60-70	37.14
70-80	19.74
80-90	6.94

Candela Tabulation

0	0
0	20405.26
5	17671.27
15	6805.8
25	3295.59
35	1309.77
45	171.85
55	69.22
65	37.58
75	19.11
85	7.87
90	0.03

Coefficients of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

ROOM CAVITY RATIO	RC	80%				70%				50%			30%			10%			0%
	RW	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%
	0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
	1	114	112	109	107	112	109	107	106	105	104	102	102	100	99	98	97	96	95
	2	109	105	101	98	107	103	100	97	100	97	95	97	95	93	94	93	91	90
	3	105	99	95	91	103	98	94	91	95	92	89	93	90	88	91	88	86	85
	4	100	94	89	85	99	93	88	85	91	87	84	89	86	83	87	84	82	81
	5	96	89	84	80	95	88	84	80	87	83	79	85	81	79	84	80	78	77
	6	93	85	80	76	91	84	79	76	83	79	75	81	78	75	80	77	74	73
	7	89	81	76	72	88	81	76	72	79	75	72	78	74	71	77	74	71	70
8	86	78	73	69	85	77	72	69	76	72	69	75	71	68	74	71	68	67	
9	83	74	69	66	82	74	69	66	73	69	66	72	68	66	72	68	65	64	
10	80	72	67	63	79	71	66	63	70	66	63	70	66	63	69	65	63	62	

RC - Ceiling Cavity Reflectance

RW - Wall Reflectance