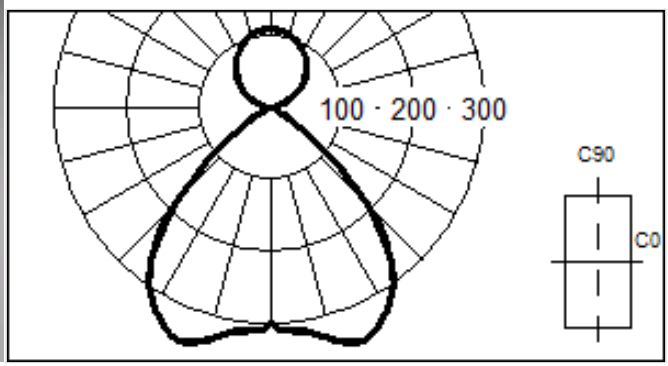
Budynek Urzędu Miasta Stołecznego Warszawy



65/65 | UGR ≤ 16 | 65° 3000 | IP 20

R721/LEDW2445SX2

suspended luminaire - lens - rectangular - grey
lacquered sheet steel housing
design: EER design
individual luminaire

Mechanical characteristics

dimensions: (LxWxH) 1500 mm x 150 mm x 50 mm
weight: 5.7 kg

Optic

lens - LED+LENS
Luminous area: 0.1176 m²

Lamp

lamp type: LED HP
colour temperature: 3000K / warm white

Electrical equipment

S: driver fixed output
voltage: 220-240V
frequency: 50-60Hz
power consumption: 48.9 W
power factor >= 0.9
photobiological safety: EN 62471: risk group 1 unlimited

Luminance

luminous flux luminaire: 4550 lm
luminous efficacy luminaire: 93 lm/W

Classifications

UTE: 0.71 B + 0.29 T	
F'1 = 493	F''1 = 493
F'2 = 188	F''2 = 188
F'3 = 21	F''3 = 21

CIE: 489 / 681 / 702 / 706 / 1000
CIE_FLUXCODE: 0.69 / 0.97 /

Luminous intensities in cd/klm

gamma	C 0	C 45	C 90	gamma	C 0	C 45	C 90
0°	294	294	294	90°	0	0	0
5°	307	308	309	95°	3	2	1
10°	315	315	317	100°	3	8	8
15°	331	329	332	105°	13	17	16
20°	344	342	345	110°	24	26	25
25°	341	341	341	115°	34	35	35
30°	322	325	322	120°	43	45	44
35°	298	301	298	125°	52	54	54
40°	254	264	257	130°	60	63	63
45°	189	205	195	135°	69	72	72
50°	119	132	123	140°	77	79	79
55°	63	74	65	145°	84	86	87
60°	28	32	29	150°	90	92	92
65°	15	16	15	155°	95	97	97
70°	9	10	9	160°	100	101	101
75°	5	6	6	165°	104	105	104
80°	3	3	3	170°	106	107	107
85°	1	1	1	175°	108	108	108
90°	0	0	0	180°	108	108	108

Corrected glare indices referring to a total lamp flux of 4550lm

Rho Ceiling	70% | 70% | 50% | 50% | 30%	70% | 70% | 50% | 50% | 30%
Rho Walls	50% | 30% | 50% | 30% | 30%	50% | 30% | 50% | 30% | 30%
Rho Floor	20% | 20% | 20% | 20% | 20%	20% | 20% | 20% | 20% | 20%
Dimensions X | Y	Viewing direction at right angles to lamp axis	Viewing direction parallel angles to lamp axis
2H 2H	16.0 | 16.8 | 16.7 | 17.4 | 17.9	16.1 | 16.9 | 16.8 | 17.5 | 18.0
3H	15.9 | 16.5 | 16.6 | 17.2 | 17.8	16.0 | 16.6 | 16.7 | 17.3 | 17.9
4H	15.8 | 16.4 | 16.5 | 17.1 | 17.7	15.9 | 16.5 | 16.6 | 17.2 | 17.8
6H	15.7 | 16.3 | 16.5 | 16.9 | 17.6	15.8 | 16.3 | 16.6 | 17.0 | 17.7
8H	15.7 | 16.2 | 16.4 | 16.9 | 17.5	15.8 | 16.3 | 16.5 | 17.0 | 17.6
12H	15.6 | 16.1 | 16.4 | 16.8 | 17.5	15.7 | 16.2 | 16.5 | 16.9 | 17.6
4H 2H	15.8 | 16.4 | 16.5 | 17.1 | 17.7	15.9 | 16.5 | 16.6 | 17.2 | 17.8
3H	15.8 | 16.2 | 16.5 | 16.9 | 17.6	15.9 | 16.3 | 16.6 | 17.0 | 17.7
4H	15.7 | 16.1 | 16.5 | 16.8 | 17.5	15.8 | 16.1 | 16.6 | 16.9 | 17.6
6H	15.6 | 15.9 | 16.4 | 16.7 | 17.4	15.7 | 16.0 | 16.5 | 16.8 | 17.5
8H	15.6 | 15.8 | 16.4 | 16.6 | 17.4	15.7 | 15.9 | 16.5 | 16.7 | 17.4
12H	15.5 | 15.7 | 16.3 | 16.5 | 17.3	15.6 | 15.8 | 16.4 | 16.6 | 17.4
8H 4H	15.5 | 15.8 | 16.4 | 16.6 | 17.3	15.6 | 15.9 | 16.4 | 16.7 | 17.4
6H	15.5 | 15.7 | 16.3 | 16.5 | 17.3	15.6 | 15.8 | 16.4 | 16.6 | 17.3
8H	15.4 | 15.6 | 16.3 | 16.4 | 17.2	15.5 | 15.7 | 16.4 | 16.5 | 17.3
12H	15.4 | 15.5 | 16.3 | 16.3 | 17.2	15.5 | 15.6 | 16.3 | 16.4 | 17.3
12H 4H	15.5 | 15.7 | 16.3 | 16.5 | 17.3	15.6 | 15.8 | 16.4 | 16.6 | 17.3
6H	15.4 | 15.6 | 16.3 | 16.4 | 17.2	15.5 | 15.6 | 16.4 | 16.5 | 17.3
8H	15.4 | 15.5 | 16.3 | 16.3 | 17.2	15.5 | 15.6 | 16.3 | 16.4 | 17.3
S = 1.0H	+1.3 / -2.7	+1.3 / -2.8
1.5H	+2.8 / -6.1	+2.8 / -6.1
2.0H	+4.6 / -7.4	+4.6 / -7.5

Average luminances in cd/m²/4550lm

gamma	C 0	C 30	C 45	C 60	C 90
45°	10317	10827	11197	10656	10666
50°	7170	7495	7952	7604	7408
55°	4229	4496	4966	4598	4417
60°	2147	2281	2441	2318	2225
65°	1355	1399	1503	1426	1377
70°	1001	1062	1112	1042	1023
75°	781	825	868	828	839

Average luminances in cd/m²/1000lm

gamma	C 0	C 30	C 45	C 60	C 90
45°	2268	2380	2461	2342	2344
50°	1576	1647	1748	1671	1628
55°	929	988	1091	1011	971
60°	472	501	537	510	489
65°	298	307	330	313	303
70°	220	233	244	229	225
75°	172	181	191	182	184

Utilisation factors according to IES in %

Rho Ceiling	80%	80%	80%	50%	50%	50%	30%	30%	30%	0%
Rho Walls	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%
Rho Floor	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
R.C.R. = 1	101	99	98	86	85	84	77	76	75	63
2	91	87	85	78	75	73	70	68	67	56
3	82	77	73	70	67	64	64	61	59	50
4	74	68	64	64	60	56	58	54	52	44
5	67	60	56	58	53	50	53	49	46	39
6	60	54	49	53	48	44	48	44	41	35
7	55	48	43	48	43	39	44	40	37	32
8	50	43	39	44	39	35	41	36	33	29
9	46	39	35	41	36	32	38	33	30	26
10	43	36	31	38	33	29	35	30	27	24

Utilisation factors according to LiTG in %

Rho Ceiling	80%	80%	80%	80%	50%	50%	50%	50%	30%	0%
Rho Walls	50%	30%	50%	30%	50%	30%	50%	30%	30%	0%
Rho Floor	30%	30%	10%	10%	30%	30%	10%	10%	10%	0%
k=0.60	49	41	46	39	45	38	43	37	36	30
0.80	60	52	57	50	54	48	52	46	44	37
1.00	69	60	64	57	61	55	58	53	50	43
1.25	78	70	71	65	69	63	65	60	57	49
1.50	84	76	76	70	73	68	69	65	61	53
2.00	92	84	82	77	79	74	73	70	65	57
2.50	97	91	86	82	83	79	77	74	69	60
3.00	102	96	89	86	86	83	80	77	72	62
4.00	106	101	92	89	89	86	82	79	74	64
5.00	109	105	94	91	91	89	83	82	75	65

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ETAP
EXCELLENT LIGHTING, SAVING ENERGY

F'4 = 3	F''4 = 3
F'5 = 294	F''5 = 294

0.99 / 0.71 / 1.00
BZ: BZ2
CAE: sym
DIN: B53 (Nach Arbeitsblatt 7 und 8)
DIN_U: Phi u = 0.71
DIN_SU: Phi su = 0.69
SO: Phi so = 0.71
UTE: B