US3140/LEDN20S

recessed luminaire • linear

application : Office, Healthcare, Education, Horeca, Retail, Leisure

housing: lacquered sheet steel

light source : LED LP • 4000 K

optics : Softlight • closed lamp shielding • wide-angle

UGR classification : <=22

luminous flux: 2350 lm

luminous efficacy : 112 lm/W

LLMF: 98% @ 50khrs (Tq=25°C)

Product information

Mechanical properties

dimensions : 1195 mm x 295 mm x 95 mm

cut-out size : 1180 mm x 280 mm

ceiling modulation : M300

colour: specular white

type : individual luminaire

IP: IP20

IK: IK03

Electrical properties

driver: not dimmable

power : 21 W

voltage : 220-240V

frequency : 50-60Hz AC

photobiological safety : EN 62471: RISK GROUP 0 UNLIMITED

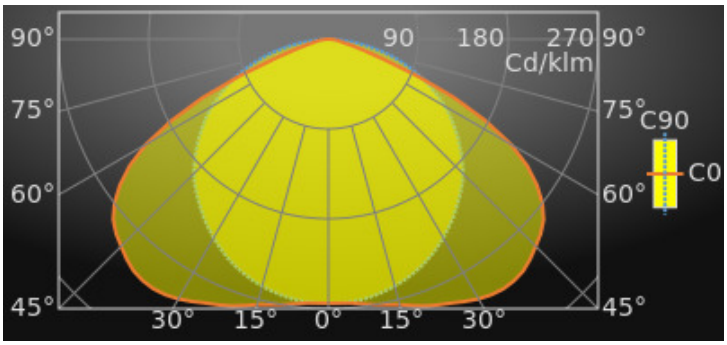
Luminance

luminous flux : 2350 lm

luminous efficacy : 112 lm/W

UGR classification <=22

luminous area : 0.32 m²



Average Luminances (Cd/m²) for 2350lm

Gamma	C0	C30	C45	C60	C90
45°	3018	2885	2697	2387	1960
50°	3181	3015	2837	2541	1954
55°	3233	3148	2975	2694	1956
60°	3070	3156	3073	2816	1958
65°	2397	2810	3014	2908	1933
70°	1229	1804	2515	2865	1905
75°	661	833	1274	2315	1836
80°	458	504	613	971	1696
85°	408	411	424	446	1300

Classifications

CIE: 416 / 781 / 969 / 1000 / 1000

CIE FLUXCODE : 0.42 / 0.78 / 0.97 / 1.00 / 1.00

BZ: BZ10/1.25/BZ4/1.5/BZ10/2.5/BZ5

CAE: CAE 1/75°/CAE 2

DIN: A40 (Nach Arbeitsblatt 7)

DIN_U: Phi u = 1.00

DIN_SU: Phi su = 0.52

UTE: 1.00 E + 0.00 T

ETAP

Luminous intensities in cd

Lifetime Data (Tq=25.0°C)

Time(khrs)	LLMF(%)	Cx(%)
10	100	2
20	99	4
30	99	6
40	99	8
50	99	10
60	98	12

Intensity for 2350lm

Gamma	C0	C45	C90
0°	621.7	621.7	621.7
5°	623.9	623.1	620.8
10°	634.7	624.3	613.9
15°	647.1	624.6	602.0
20°	668.7	624.5	586.1
25°	685.9	631.6	565.6
30°	706.3	631.6	540.2
35°	717.8	631.0	511.5
40°	712.6	627.8	480.7
45°	689.5	616.3	447.8
50°	660.7	589.2	405.8
55°	599.2	551.4	362.5
60°	496.0	496.5	316.3
65°	327.4	411.6	263.9
70°	135.8	277.9	210.5
75°	55.3	106.5	153.5
80°	25.7	34.4	95.1
85°	11.5	11.9	36.6
90°	0.0	0.0	0.0

UGR classification

Corrected Glare Ratings for a Total Lamp Flux of 2350lm (S = 0.25H)

	Room Reflection Factors (%)									
Ceiling	70	70	50	50	30	70	70	50	50	30
Walls	50	30	50	30	30	50	30	50	30	30
Floor	20	20	20	20	20	20	20	20	20	20
Room Dimensions	Viewed Crosswise					Viewed Endwise				
X = 2H Y = 2H	17.3	19.2	17.7	19.5	19.8	15.7	17.5	16.0	17.8	18.1
Y = 3H	18.0	19.7	18.3	20.0	20.3	17.5	19.2	17.8	19.5	19.8
Y = 4H	18.0	19.6	18.3	19.9	20.2	18.2	19.8	18.5	20.1	20.4
Y = 6H	17.9	19.4	18.3	19.8	20.1	18.6	20.1	19.0	20.5	20.8
Y = 8H	17.9	19.4	18.3	19.7	20.0	18.7	20.2	19.1	20.5	20.9
Y = 12H	17.9	19.3	18.3	19.6	20.0	18.8	20.2	19.2	20.5	20.9
X = 4H Y = 2H	18.0	19.6	18.4	19.9	20.2	16.8	18.5	17.2	18.8	19.1
Y = 3H	18.7	20.1	19.1	20.5	20.9	18.8	20.2	19.2	20.6	20.9
Y = 4H	18.8	20.0	19.2	20.4	20.8	19.6	20.9	20.1	21.3	21.6
Y = 6H	18.8	19.9	19.2	20.3	20.7	20.2	21.3	20.7	21.7	22.1
Y = 8H	18.7	19.8	19.2	20.2	20.6	20.4	21.4	20.8	21.8	22.2
Y = 12H	18.7	19.7	19.2	20.1	20.5	20.4	21.4	20.9	21.8	22.3
X = 8H Y = 4H	18.9	20.0	19.4	20.4	20.8	19.7	20.8	20.2	21.2	21.6
Y = 6H	19.0	19.8	19.4	20.3	20.7	20.4	21.2	20.9	21.7	22.1
Y = 8H	19.0	19.7	19.5	20.2	20.7	20.6	21.3	21.1	21.8	22.3
Y = 12H	19.0	19.6	19.5	20.1	20.6	20.7	21.3	21.2	21.8	22.3
X = 12H Y = 4H	18.9	19.9	19.4	20.3	20.7	19.7	20.6	20.2	21.1	21.5
Y = 6H	19.0	19.7	19.5	20.2	20.7	20.4	21.1	20.9	21.6	22.1
Y = 8H	19.0	19.6	19.5	20.1	20.6	20.6	21.2	21.1	21.7	22.2

	UGR Variations with Observer Position for Luminaire Spacings S			
S = 1.0H	+0.1	-0.1	+0.1	-0.1
S = 1.5H	+0.6	-0.7	+0.4	-0.5
S = 2.0H	+1.5	-2.4	+1.0	-1.4

Colour properties

Correlated Colour Temperature : 4000

Ra: 80

Efficiency

Utilisation Factors according to IES (%)

	Room Reflection Factors (%)									
Ceiling	80	80	80	50	50	50	30	30	30	0
Walls	50	30	10	50	30	10	50	30	10	0
Floor	20	20	20	20	20	20	20	20	20	0
RCR = 1	103	100	97	96	94	92	92	90	89	84
2	88	83	78	83	78	75	80	76	73	69
3	76	69	64	72	66	62	69	64	61	57
4	67	59	53	63	57	52	61	55	51	48
5	59	51	45	56	49	44	54	48	43	40
6	53	45	39	50	43	38	49	42	37	35
7	48	39	33	45	38	33	44	37	33	30
8	44	35	29	41	34	29	40	34	29	27
9	40	32	26	38	31	26	37	30	26	24
10	37	29	23	35	28	23	34	28	23	21

Utilisation Factors according to LiTG (%)

	Room Reflection Factors (%)									
Ceiling	80	80	80	50	50	50	50	50	30	0
Walls	50	30	50	30	50	30	50	30	30	0
Floor	30	30	10	10	30	30	10	10	10	0
k = 0.60	44	35	42	34	42	34	40	33	32	26
0.80	56	46	52	44	52	44	50	43	42	35
1.00	65	55	60	52	61	53	58	51	50	43
1.25	75	65	69	61	70	62	66	60	59	52
1.50	82	73	75	68	76	69	72	66	65	58
2.00	92	83	82	76	85	78	79	74	72	66
2.50	99	91	87	82	91	85	84	80	78	73
3.00	104	98	91	87	96	91	88	85	83	78
4.00	110	104	95	91	100	96	92	89	87	82
5.00	114	109	98	95	104	100	94	92	90	86

Available accessories

US01H010/1200 *Mountingframe for plaster-board, wooden,... ceiling*

Dimensional drawing