



IES INDOOR REPORT

PHOTOMETRIC FILENAME : FLX-14.4-10MM-3528-24-IP20-27K ALU-016R-DOP_IESNA95.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-1995
[TEST] 01
[TESTLAB] LED-123 LAB
[TESTDATE] 12-15-2020
[ISSUEDATE] XX-XXX-1995
[NEARFIELD]
[LAMPPOSITION] 0,0
[OTHER] LED123
[MANUFAC] LED123
[LUMCAT] FLX-14.4-10MM-3528-24-IP20-27K
[LUMINAIRE] ALU-016R-DOP
[LAMPCAT] 1
[LAMP] 3528 180LED CRI90 PCB 10MM
[BALLAST] DC24V

CHARACTERISTICS

Lumens Per Lamp	826.9 (1 lamp)
Total Lamp Lumens	826.9
Luminaire Lumens	827
Total Luminaire Efficiency	100 %
Luminaire Efficacy Rating (LER)	58
Total Luminaire Watts	14.2
Ballast Factor	1.00
CIE Type	Semi-Direct
Spacing Criterion (0-180)	1.30
Spacing Criterion (90-270)	2.04
Spacing Criterion (Diagonal)	1.48
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.00 m
Luminous Width (90-270)	0.04 m
Luminous Height	0.00 m



LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4293	7212	8884
55	4205	8443	10900
65	4102	10513	14256
75	3986	14688	20101
85	4550	34756	53783

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CANDELA TABULATION

	<u>0</u>	<u>30</u>	<u>60</u>	<u>90</u>	<u>120</u>	<u>150</u>	<u>180</u>	<u>210</u>	<u>240</u>	<u>270</u>
0	174.813	174.813	174.813	174.813	174.813	174.813	174.813	174.813	174.813	174.813
5	178.430	182.980	185.090	187.200	184.700	181.950	177.150	167.810	159.680	158.140
10	176.450	188.030	195.970	200.130	195.900	187.460	173.950	158.400	146.050	143.170
15	172.610	191.550	205.760	212.290	205.950	191.420	168.900	147.520	131.520	127.740
20	167.100	193.280	214.020	222.980	214.460	193.790	162.500	135.620	116.930	112.510
25	160.130	193.280	220.420	231.870	221.180	195.070	154.430	123.260	102.850	98.050
30	152.830	191.620	225.280	239.420	226.300	193.980	145.340	110.080	88.700	83.970
35	143.300	189.060	228.350	245.250	229.820	191.100	134.850	96.640	75.140	70.850
40	133.120	185.020	229.700	249.220	232.060	187.200	123.580	83.460	62.780	59.200
45	121.470	178.750	229.380	251.390	232.640	182.210	111.620	70.140	51.140	48.260
50	110.080	171.650	227.390	251.710	231.100	175.040	98.940	57.280	40.770	38.660
55	96.510	163.970	223.620	250.180	227.580	167.170	85.380	45.310	31.870	30.590
60	83.010	153.920	218.240	246.660	222.400	158.590	71.300	34.180	24.130	23.550
65	69.380	144.130	211.460	241.090	215.740	147.900	57.280	24.580	17.860	17.790
70	55.490	132.610	201.980	229.500	205.890	137.470	43.520	16.830	12.540	13.180
75	41.280	119.740	184.510	208.190	188.610	125.180	29.630	10.820	8.640	9.220
80	27.900	107.260	159.360	197.700	164.420	112.060	16.830	6.910	5.890	6.850
85	15.870	93.380	149.060	187.580	151.940	99.010	7.230	4.740	4.740	5.310
90	7.420	79.620	146.690	174.530	149.250	85.060	2.050	3.780	3.780	4.290
95	4.290	57.790	114.240	160.380	118.080	59.580	1.980	3.200	3.140	3.580
100	3.260	41.980	104.830	146.300	108.800	45.890	1.470	3.140	3.070	3.390
105	2.690	37.120	99.010	130.820	102.270	39.810	1.410	2.940	3.140	3.460
110	2.240	29.310	88.580	114.820	91.260	31.870	1.540	2.750	3.200	3.520
115	2.110	21.250	75.780	98.620	77.250	23.620	1.660	2.690	3.200	3.580
120	2.050	13.380	61.500	80.960	62.020	16.380	1.790	2.750	3.200	3.580
125	2.180	7.300	46.460	64.190	48.510	10.240	1.920	2.820	3.140	3.650
130	2.430	2.940	34.880	48.450	35.780	5.060	2.050	2.940	3.200	3.650
135	2.560	1.860	21.570	34.560	24.450	2.180	2.240	2.940	3.200	3.650
140	2.620	1.860	12.220	22.850	15.230	1.790	2.370	3.010	3.260	3.580
145	2.690	1.980	5.250	12.670	7.170	1.920	2.560	3.010	3.260	3.520
150	2.880	2.110	2.560	4.100	2.880	2.050	2.690	3.070	3.200	3.460
155	3.010	2.240	2.560	1.920	2.500	2.180	2.820	3.070	3.200	3.390
160	3.070	2.370	2.620	2.110	2.560	2.300	2.940	3.070	3.140	3.260
165	3.140	2.500	2.750	2.240	2.620	2.430	3.070	3.010	3.070	3.140
170	3.140	2.620	2.820	2.430	2.750	2.500	3.140	3.010	2.940	3.070
175	3.200	2.750	2.940	2.620	2.880	2.620	3.200	2.940	2.880	2.940
180	2.910	2.910	2.910	2.910	2.910	2.910	2.910	2.910	2.910	2.910

Vert. Angles Horizontal Angles

	<u>300</u>	<u>330</u>	<u>360</u>
0	174.813	174.813	174.813
5	158.340	165.380	178.430
10	144.580	155.650	176.450
15	130.110	144.510	172.610
20	115.580	132.480	167.100
25	101.500	120.060	160.130
30	87.490	107.580	152.830
35	73.980	94.140	143.300
40	61.700	81.150	133.120
45	50.240	68.030	121.470
50	40.060	55.170	110.080
55	31.360	43.460	96.510
60	23.740	32.770	83.010
65	17.540	23.550	69.380
70	12.220	16.320	55.490
75	8.450	10.690	41.280
80	5.760	6.980	27.900

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85	4.740	4.990	15.870
90	3.780	4.100	7.420
95	3.200	3.650	4.290
100	3.140	3.390	3.260
105	3.200	3.200	2.690
110	3.200	3.010	2.240
115	3.260	2.880	2.110
120	3.260	2.880	2.050
125	3.260	2.880	2.180
130	3.260	2.940	2.430
135	3.260	3.010	2.560
140	3.260	3.010	2.620
145	3.260	3.010	2.690
150	3.200	3.010	2.880
155	3.140	3.010	3.010
160	3.070	3.010	3.070
165	3.010	2.940	3.140
170	2.940	2.880	3.140
175	2.820	2.880	3.200
180	2.910	2.910	2.910

IES INDOOR REPORT**PHOTOMETRIC FILENAME : FLX-14.4-10MM-3528-24-IP20-27K ALU-016R-DOP_IESNA95.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	64.34	7.80	7.80
0-30	138.26	16.70	16.70
0-40	230.87	27.90	27.90
0-60	437.87	53.00	53.00
0-80	619.30	74.90	74.90
0-90	686.10	83.00	83.00
10-90	669.56	81.00	81.00
20-40	166.52	20.10	20.10
20-50	269.27	32.60	32.60
40-70	305.07	36.90	36.90
60-80	181.43	21.90	21.90
70-80	83.36	10.10	10.10
80-90	66.80	8.10	8.10
90-110	87.54	10.60	10.60
90-120	113.67	13.70	13.70
90-130	128.58	15.50	15.50
90-150	138.42	16.70	16.70
90-180	140.79	17.00	17.00
110-180	53.25	6.40	6.40
0-180	826.90	100.00	100.00

Total Luminaire Efficiency = 100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	16.55
10-20	47.79
20-30	73.92
30-40	92.60
40-50	102.75
50-60	104.26
60-70	98.07
70-80	83.36
80-90	66.80
90-100	50.01
100-110	37.54
110-120	26.12
120-130	14.91
130-140	7.05
140-150	2.79
150-160	1.30
160-170	0.80
170-180	0.27

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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

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	115	115	115	115	110	110	110	110	102	102	102	94	94	94	86	86	86	83
1	101	95	90	85	97	91	86	82	84	80	76	77	74	71	71	68	66	62
2	91	81	73	66	87	78	71	64	71	65	60	65	61	56	60	56	53	49
3	82	70	61	54	78	67	59	52	62	55	49	57	51	46	52	47	43	40
4	75	62	52	45	71	59	50	43	54	47	41	50	44	39	46	41	36	33
5	68	55	45	38	65	52	44	37	48	41	35	45	38	33	41	35	31	28
6	63	49	39	33	60	47	38	32	43	36	30	40	34	29	37	31	27	24
7	58	44	35	28	55	42	34	28	39	32	26	36	30	25	34	28	24	21
8	54	40	31	25	52	39	30	25	36	29	23	33	27	22	31	25	21	19
9	50	37	28	22	48	35	27	22	33	26	21	31	24	20	28	23	19	17
10	47	34	26	20	45	33	25	20	30	24	19	28	22	18	26	21	17	15

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UGR TABLE - CORRECTED

Reflectances

Ceiling Cavity	70	70	50	50	30	70	70	50	50	30
Walls	50	30	50	30	30	50	30	50	30	30
Floor Cavity	20	20	20	20	20	20	20	20	20	20

Room Size UGR Viewed Crosswise

X=2H	Y=2H	15.9	17.3	16.5	17.9	18.6	21.6	23.0	22.2	23.6	24.3
	3H	17.9	19.2	18.5	19.9	20.6	25.0	26.3	25.6	26.9	27.6
	4H	18.8	20.0	19.4	20.7	21.4	26.6	27.8	27.2	28.5	29.2
	6H	19.5	20.7	20.1	21.3	22.1	28.4	29.5	29.0	30.2	30.9
	8H	19.8	20.9	20.5	21.6	22.4	29.4	30.5	30.0	31.2	31.9
	12H	20.1	21.1	20.7	21.8	22.6	30.5	31.6	31.2	32.2	33.0

UGR Viewed Endwise

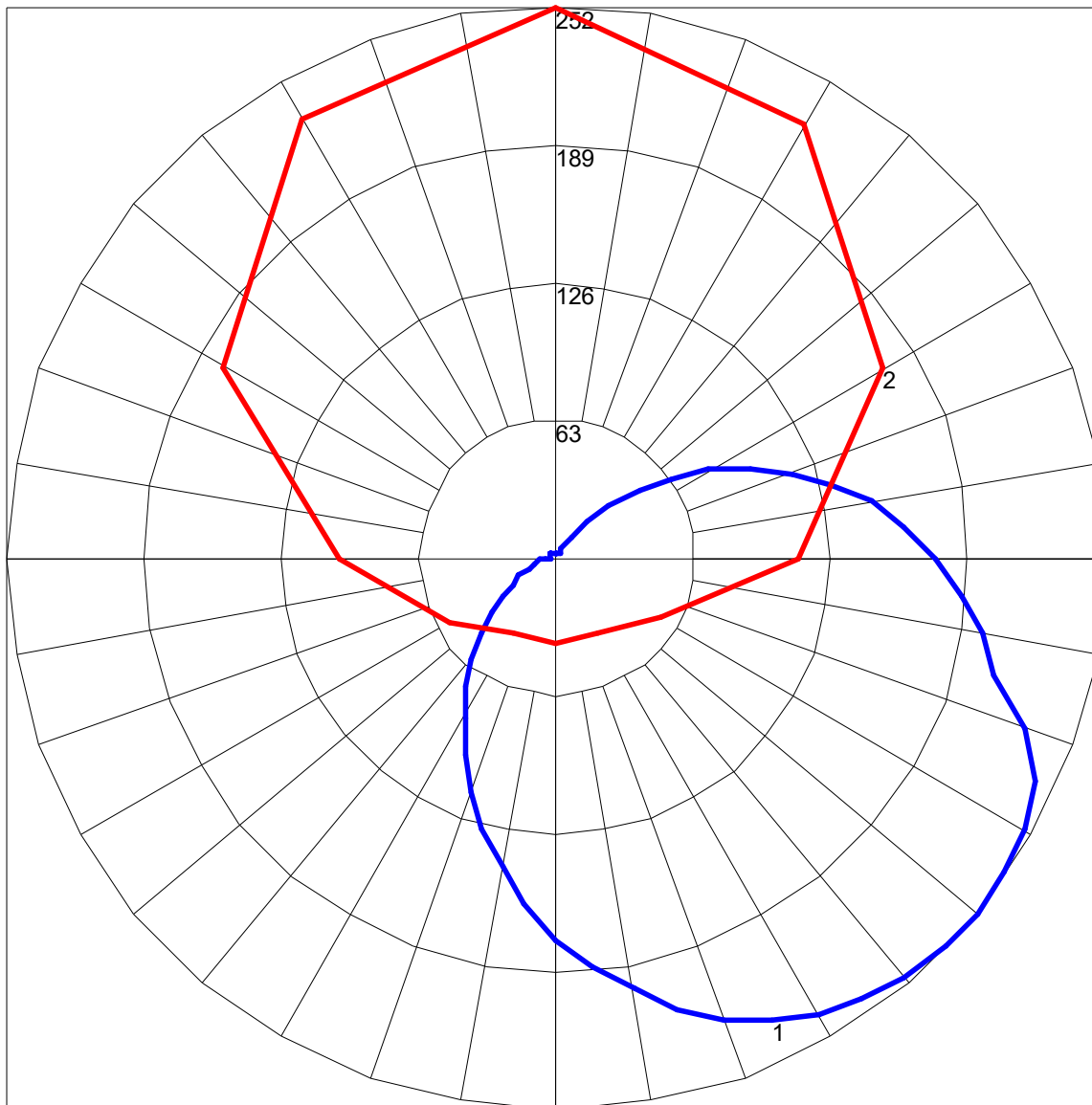
4H	2H	17.5	18.8	18.2	19.4	20.1	22.2	23.5	22.9	24.1	24.8
	3H	19.9	21.0	20.6	21.7	22.5	25.9	27.0	26.6	27.7	28.4
	4H	21.0	22.0	21.7	22.7	23.5	27.8	28.8	28.4	29.4	30.2
	6H	22.0	22.8	22.6	23.5	24.3	29.8	30.6	30.4	31.3	32.1
	8H	22.4	23.2	23.0	23.9	24.7	30.9	31.7	31.5	32.4	33.2
	12H	22.7	23.4	23.4	24.2	25.0	32.2	32.9	32.9	33.6	34.5
8H	4H	22.5	23.3	23.2	24.0	24.8	28.2	29.0	28.9	29.7	30.5
	6H	23.8	24.5	24.5	25.3	26.1	30.4	31.2	31.2	31.9	32.7
	8H	24.5	25.1	25.2	25.9	26.7	31.8	32.4	32.5	33.1	34.0
	12H	25.0	25.6	25.8	26.3	27.2	33.3	33.9	34.1	34.6	35.5
12H	4H	22.9	23.7	23.6	24.4	25.2	28.3	29.0	29.0	29.7	30.6
	6H	24.5	25.1	25.2	25.9	26.7	30.6	31.2	31.3	32.0	32.8
	8H	25.3	25.9	26.1	26.7	27.5	32.0	32.6	32.8	33.3	34.2

Maximum UGR = 35.5

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POLAR GRAPH



Maximum Candela = 251.71 Located At Horizontal Angle = 90, Vertical Angle = 50

1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)

2 - Horizontal Cone Through Vertical Angle (50) (Through Max. Cd.)