



IES INDOOR REPORT

PHOTOMETRIC FILENAME : FLX-14.4-10MM-3528-24-IP20-27K ALU-016R-DCL_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-DCL
[LAMPCAT] 1
[LAMP] 3528 180LED CRI90 PCB 10MM
[BALLAST] DC24V

CHARACTERISTICS

Lumens Per Lamp	999.4 (1 lamp)
Total Lamp Lumens	999.4
Luminaire Lumens	999
Total Luminaire Efficiency	100 %
Luminaire Efficacy Rating (LER)	70
Total Luminaire Watts	14.2
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.36
Spacing Criterion (90-270)	2.04
Spacing Criterion (Diagonal)	1.36
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	6674	11030	12985
55	6413	12651	15364
65	5922	15514	19519
75	4925	20707	26843
85	4679	45884	67199

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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	255.305	255.305	255.305	255.305	255.305	255.305	255.305	255.305	255.305	255.305
5	262.980	268.100	269.700	271.940	268.480	266.690	259.260	240.260	228.350	228.290
10	260.610	274.370	284.290	289.410	282.370	272.450	255.740	226.880	210.940	208.450
15	256.640	277.570	301.630	310.080	299.460	277.440	248.190	214.270	187.070	177.860
20	251.140	284.420	318.080	331.260	316.350	282.690	239.620	197.890	161.280	146.430
25	242.820	287.940	330.690	344.770	330.300	284.480	229.820	177.220	118.020	46.210
30	232.640	290.820	337.660	354.050	337.730	287.360	215.740	153.340	30.140	28.420
35	220.290	291.330	342.080	359.490	341.700	288.830	201.470	126.530	23.940	8.640
40	205.310	286.530	343.620	367.740	341.310	283.070	183.940	87.550	6.850	6.980
45	188.860	278.400	345.790	367.420	342.720	273.340	165.060	26.240	5.380	4.350
50	169.470	266.300	339.970	359.740	336.380	262.980	142.980	15.420	3.070	3.200
55	147.200	252.220	328.510	352.640	325.060	248.130	120.260	11.650	2.690	2.880
60	125.310	240.770	317.950	347.260	315.460	235.260	96.510	6.210	2.560	2.750
65	100.160	218.370	306.370	330.110	304.450	214.140	72.000	4.420	2.560	2.750
70	73.790	193.410	281.790	304.380	280.700	188.480	47.940	3.840	2.620	2.820
75	51.010	175.810	253.120	278.020	251.070	170.880	27.900	3.460	2.690	3.010
80	30.780	141.820	215.100	254.780	214.210	137.470	13.250	3.200	2.820	3.140
85	16.320	125.310	194.750	234.370	188.160	119.230	5.250	3.010	2.940	3.260
90	8.960	99.460	180.100	204.990	176.510	94.210	1.790	2.940	3.070	3.460
95	4.030	64.380	130.110	197.310	128.830	59.970	1.980	2.880	3.260	3.650
100	3.010	16.770	142.460	183.620	137.150	12.480	1.730	3.010	3.460	3.900
105	3.070	9.280	36.860	118.460	34.240	6.660	1.790	3.140	3.710	4.220
110	3.010	5.890	14.910	21.440	14.140	4.860	1.980	3.260	3.970	4.420
115	2.620	2.940	15.550	17.470	15.230	2.560	2.110	3.460	4.160	4.610
120	2.500	1.980	6.980	8.830	6.460	2.050	2.240	3.580	4.290	4.670
125	2.690	1.600	3.520	5.180	3.460	1.730	2.430	3.710	4.350	4.800
130	3.390	1.660	2.880	2.240	2.820	1.730	2.560	3.840	4.420	4.860
135	3.460	2.110	2.300	1.860	2.430	1.860	2.750	3.970	4.480	4.930
140	3.580	2.300	2.180	1.730	2.240	2.050	2.880	4.030	4.480	4.930
145	3.710	2.430	2.180	1.730	2.240	2.240	3.010	4.100	4.480	4.860
150	3.780	2.620	2.370	1.860	2.370	2.430	3.140	4.100	4.480	4.800
155	3.900	2.750	2.560	2.110	2.560	2.690	3.260	4.100	4.420	4.740
160	3.970	2.940	2.750	2.370	2.750	2.880	3.390	4.030	4.290	4.610
165	4.030	3.140	2.940	2.620	3.010	3.070	3.520	4.030	4.220	4.480
170	4.030	3.330	3.260	2.940	3.260	3.330	3.650	3.970	4.030	4.290
175	4.030	3.520	3.520	3.330	3.520	3.520	3.780	3.840	3.780	4.030
180	3.761	3.761	3.761	3.761	3.761	3.761	3.761	3.761	3.761	3.761

Vert. Horizontal Angles

	<u>300</u>	<u>330</u>	<u>360</u>
0	255.305	255.305	255.305
5	229.380	240.260	262.980
10	212.030	226.110	260.610
15	186.940	214.270	256.640
20	160.830	198.460	251.140
25	116.160	177.600	242.820
30	29.380	153.280	232.640
35	24.830	124.160	220.290
40	6.780	77.250	205.310
45	5.310	23.420	188.860
50	3.010	15.940	169.470
55	2.560	9.410	147.200
60	2.430	6.140	125.310
65	2.430	4.220	100.160
70	2.500	3.710	73.790
75	2.620	3.390	51.010
80	2.750	3.070	30.780

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85	2.940	2.880	16.320
90	3.140	2.820	8.960
95	3.260	2.940	4.030
100	3.520	3.140	3.010
105	3.780	3.260	3.070
110	3.970	3.460	3.010
115	4.160	3.580	2.620
120	4.350	3.710	2.500
125	4.420	3.840	2.690
130	4.480	3.900	3.390
135	4.540	4.030	3.460
140	4.610	4.100	3.580
145	4.610	4.160	3.710
150	4.540	4.160	3.780
155	4.480	4.160	3.900
160	4.350	4.100	3.970
165	4.290	4.100	4.030
170	4.030	3.970	4.030
175	3.840	3.840	4.030
180	3.761	3.761	3.761

IES INDOOR REPORT**PHOTOMETRIC FILENAME : FLX-14.4-10MM-3528-24-IP20-27K ALU-016R-DCL_IESNA95.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	93.62	9.40	9.40
0-30	196.51	19.70	19.70
0-40	318.72	31.90	31.90
0-60	585.20	58.60	58.60
0-80	820.35	82.10	82.10
0-90	902.18	90.30	90.30
10-90	878.10	87.90	87.90
20-40	225.11	22.50	22.50
20-50	356.69	35.70	35.70
40-70	394.73	39.50	39.50
60-80	235.15	23.50	23.50
70-80	106.89	10.70	10.70
80-90	81.82	8.20	8.20
90-110	80.27	8.00	8.00
90-120	86.36	8.60	8.60
90-130	89.61	9.00	9.00
90-150	94.20	9.40	9.40
90-180	97.18	9.70	9.70
110-180	16.92	1.70	1.70
0-180	999.36	100.00	100.00

Total Luminaire Efficiency = 100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	24.07
10-20	69.54
20-30	102.89
30-40	122.21
40-50	131.59
50-60	134.89
60-70	128.26
70-80	106.89
80-90	81.82
90-100	56.87
100-110	23.40
110-120	6.09
120-130	3.26
130-140	2.51
140-150	2.08
150-160	1.60
160-170	1.02
170-180	0.35

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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

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	0
0	117	117	117	117	113	113	113	113	106	106	106	99	99	99	93	93	93	90
1	103	97	91	86	99	94	89	84	87	83	80	82	78	75	77	74	71	68
2	92	83	75	68	89	80	72	66	75	68	63	70	65	60	65	61	57	54
3	84	72	62	55	80	69	61	54	65	58	52	61	55	49	57	52	47	45
4	76	63	53	46	73	61	52	45	57	49	43	54	47	42	50	45	40	37
5	70	56	46	39	67	54	45	38	51	43	37	48	41	36	45	39	34	32
6	64	50	41	34	62	49	40	33	46	38	32	43	36	31	41	35	30	28
7	60	45	36	30	57	44	35	29	42	34	28	39	32	27	37	31	26	24
8	55	41	32	26	53	40	32	26	38	30	25	36	29	24	34	28	24	22
9	52	38	29	24	50	37	29	23	35	28	23	33	27	22	31	26	21	19
10	48	35	27	21	47	34	26	21	32	25	20	31	24	20	29	23	19	17

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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	18.1	19.7	18.6	20.2	20.7	23.7	25.2	24.2	25.7	26.3
	3H	20.0	21.4	20.5	21.9	22.5	26.8	28.2	27.4	28.8	29.4
	4H	20.7	22.1	21.3	22.6	23.2	28.4	29.7	28.9	30.3	30.9
	6H	21.3	22.6	21.9	23.1	23.7	30.0	31.3	30.6	31.8	32.5
	8H	21.5	22.7	22.1	23.3	23.9	30.9	32.2	31.5	32.7	33.3
	12H	21.7	22.8	22.2	23.4	24.1	32.0	33.2	32.6	33.7	34.4

UGR Viewed Endwise

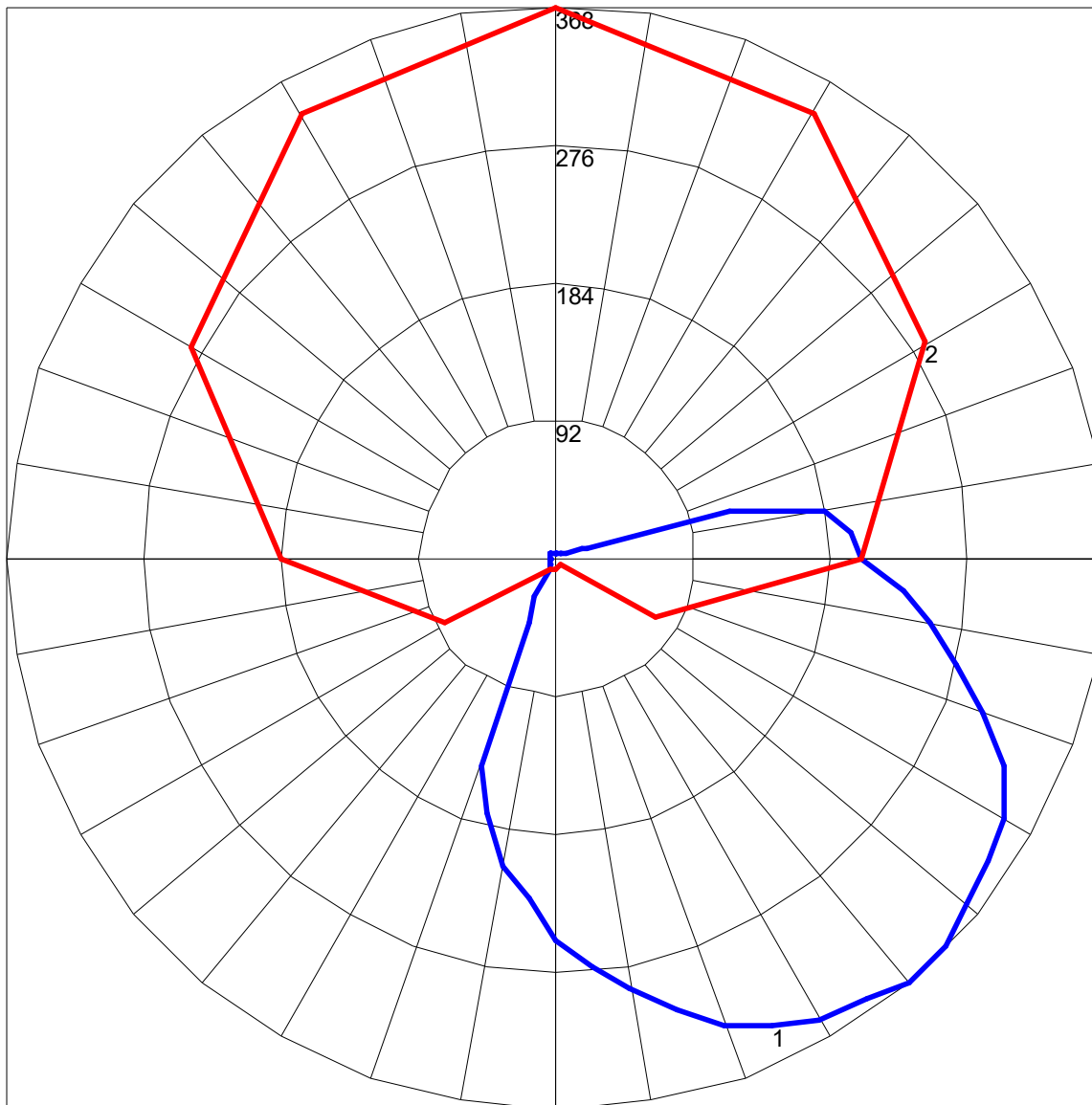
4H	2H	19.8	21.1	20.3	21.7	22.3	24.3	25.7	24.9	26.2	26.8
	3H	22.1	23.3	22.7	23.8	24.5	27.8	29.0	28.4	29.6	30.2
	4H	23.1	24.2	23.7	24.8	25.4	29.6	30.6	30.1	31.2	31.9
	6H	23.9	24.8	24.5	25.4	26.1	31.4	32.4	32.0	33.0	33.6
	8H	24.2	25.1	24.8	25.7	26.4	32.4	33.3	33.0	34.0	34.6
	12H	24.4	25.2	25.0	25.9	26.6	33.6	34.5	34.2	35.1	35.8
8H	4H	24.5	25.4	25.1	26.0	26.7	30.0	30.9	30.6	31.5	32.2
	6H	25.7	26.5	26.3	27.1	27.8	32.1	32.9	32.7	33.5	34.2
	8H	26.2	26.9	26.9	27.6	28.3	33.3	34.0	34.0	34.7	35.4
	12H	26.7	27.4	27.4	28.0	28.8	34.8	35.4	35.4	36.1	36.8
12H	4H	24.9	25.7	25.5	26.4	27.1	30.0	30.9	30.7	31.5	32.2
	6H	26.3	27.0	27.0	27.6	28.4	32.3	33.0	32.9	33.6	34.3
	8H	27.1	27.7	27.7	28.4	29.1	33.6	34.2	34.2	34.9	35.6

Maximum UGR = 36.8

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POLAR GRAPH



Maximum Candela = 367.74 Located At Horizontal Angle = 90, Vertical Angle = 40

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

2 - Horizontal Cone Through Vertical Angle (40) (Through Max. Cd.)