



IES INDOOR REPORT

PHOTOMETRIC FILENAME : FLX-19.2-1-2835-24-IP20-27K ALU-016R-DFR_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-19.2-1-2835-24-IP20-27K
[LUMINAIRE] ALU-016R-DFR
[LAMPCAT] 1
[LAMP] 2835 120LED CRI90 PCB 10MM
[BALLAST] DC24V

CHARACTERISTICS

Lumens Per Lamp	1349.9 (1 lamp)
Total Lamp Lumens	1349.9
Luminaire Lumens	1350
Total Luminaire Efficiency	100 %
Luminaire Efficacy Rating (LER)	65
Total Luminaire Watts	20.7
Ballast Factor	1.00
CIE Type	Semi-Direct
Spacing Criterion (0-180)	1.30
Spacing Criterion (90-270)	2.16
Spacing Criterion (Diagonal)	1.44
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	7070	13442	16952
55	6502	15604	20829
65	6017	19165	27069
75	5444	26234	37533
85	6239	60722	99512

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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	301.396	301.396	301.396	301.396	301.396	301.396	301.396	301.396	301.396	301.396
5	310.020	321.150	327.420	331.140	325.630	318.340	307.840	283.840	263.230	257.540
10	306.500	334.080	352.510	360.450	351.300	332.420	301.890	260.860	226.880	216.640
15	299.840	343.740	374.210	386.500	373.380	342.980	292.540	234.750	188.350	174.140
20	289.790	349.500	392.450	409.540	391.940	349.500	280.380	207.040	150.850	134.340
25	276.930	351.230	407.300	429.570	406.980	352.320	265.470	179.330	117.950	101.180
30	262.850	349.180	419.650	447.550	419.390	351.550	247.170	151.360	89.790	74.880
35	243.970	346.240	428.670	462.400	428.610	346.940	226.180	125.120	67.580	55.740
40	222.140	337.410	434.430	473.090	434.690	338.820	203.390	101.760	51.390	42.180
45	200.060	324.540	436.160	479.680	436.740	326.980	178.430	80.770	38.910	32.130
50	175.300	308.350	433.600	481.280	434.620	312.000	153.470	62.910	29.500	24.770
55	149.250	289.730	426.560	478.080	427.900	294.400	127.360	47.870	22.460	19.260
60	125.180	271.100	415.360	470.210	416.960	273.540	103.360	34.880	16.830	14.980
65	101.760	247.420	400.830	457.790	402.560	250.620	81.920	24.320	12.540	11.650
70	78.340	222.980	381.250	433.660	380.930	229.250	58.300	16.190	9.150	9.090
75	56.380	197.310	346.110	388.740	343.680	203.900	38.910	10.240	6.780	7.100
80	38.080	173.250	294.340	369.470	297.540	179.140	22.140	6.660	5.310	6.020
85	21.760	149.700	273.860	347.070	272.700	154.690	11.330	4.930	4.800	5.380
90	10.560	125.250	262.910	315.520	261.500	131.520	4.030	4.420	4.480	5.060
95	6.340	91.140	188.100	283.200	185.730	94.590	2.940	4.350	4.670	5.310
100	4.290	61.570	171.970	246.590	173.180	65.150	2.050	4.350	4.860	5.570
105	3.390	49.540	150.780	204.350	151.740	52.860	2.110	4.290	5.060	5.820
110	2.880	35.330	120.260	160.260	121.150	38.780	2.300	4.220	5.310	6.020
115	2.880	22.400	86.460	114.880	87.230	25.340	2.500	4.290	5.440	6.140
120	3.010	12.100	58.430	77.060	59.010	14.980	2.690	4.420	5.500	6.270
125	3.140	5.570	37.820	50.880	39.420	7.940	2.880	4.540	5.570	6.340
130	3.390	2.370	24.960	33.090	25.340	3.460	3.070	4.670	5.630	6.400
135	3.520	2.370	13.950	21.060	15.490	2.300	3.260	4.800	5.630	6.340
140	3.650	2.560	7.420	12.800	8.830	2.500	3.460	4.860	5.630	6.340
145	3.840	2.750	3.460	6.660	4.100	2.690	3.650	4.860	5.630	6.210
150	4.030	2.940	3.070	2.750	3.070	2.940	3.840	4.930	5.500	6.080
155	4.160	3.200	3.330	2.620	3.260	3.200	3.970	4.930	5.380	5.820
160	4.290	3.460	3.520	2.940	3.520	3.460	4.100	4.860	5.250	5.630
165	4.420	3.710	3.780	3.260	3.710	3.710	4.220	4.800	5.060	5.440
170	4.540	3.900	4.030	3.650	4.030	3.970	4.350	4.740	4.860	5.120
175	4.610	4.160	4.290	4.030	4.290	4.220	4.480	4.610	4.610	4.800
180	4.486	4.486	4.486	4.486	4.486	4.486	4.486	4.486	4.486	4.486

Vert. Horizontal Angles

	<u>300</u>	<u>330</u>	<u>360</u>
0	301.396	301.396	301.396
5	260.290	278.400	310.020
10	223.680	254.460	306.500
15	185.020	227.520	299.840
20	147.650	198.980	289.790
25	114.940	171.070	276.930
30	87.300	144.190	262.850
35	65.600	117.950	243.970
40	49.790	95.170	222.140
45	37.760	74.940	200.060
50	28.670	57.920	175.300
55	21.950	43.840	149.250
60	16.510	32.060	125.180
65	12.350	22.530	101.760
70	8.960	15.300	78.340
75	6.780	9.980	56.380
80	5.380	6.780	38.080

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85	4.990	5.310	21.760
90	4.670	4.860	10.560
95	4.930	4.990	6.340
100	5.120	4.930	4.290
105	5.380	4.800	3.390
110	5.500	4.610	2.880
115	5.630	4.610	2.880
120	5.700	4.670	3.010
125	5.760	4.800	3.140
130	5.820	4.860	3.390
135	5.820	4.930	3.520
140	5.820	4.990	3.650
145	5.760	4.990	3.840
150	5.630	5.060	4.030
155	5.500	4.990	4.160
160	5.380	4.930	4.290
165	5.120	4.860	4.420
170	4.930	4.800	4.540
175	4.610	4.670	4.610
180	4.486	4.486	4.486

IES INDOOR REPORT**PHOTOMETRIC FILENAME : FLX-19.2-1-2835-24-IP20-27K ALU-016R-DFR_IESNA95.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	108.87	8.10	8.10
0-30	231.06	17.10	17.10
0-40	383.44	28.40	28.40
0-60	729.30	54.00	54.00
0-80	1039.08	77.00	77.00
0-90	1153.88	85.50	85.50
10-90	1125.53	83.40	83.40
20-40	274.57	20.30	20.30
20-50	445.08	33.00	33.00
40-70	512.95	38.00	38.00
60-80	309.78	22.90	22.90
70-80	142.69	10.60	10.60
80-90	114.81	8.50	8.50
90-110	138.67	10.30	10.30
90-120	169.71	12.60	12.60
90-130	183.36	13.60	13.60
90-150	192.38	14.30	14.30
90-180	195.98	14.50	14.50
110-180	57.31	4.20	4.20
0-180	1349.87	100.00	100.00

Total Luminaire Efficiency = 100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	28.36
10-20	80.52
20-30	122.19
30-40	152.38
40-50	170.52
50-60	175.34
60-70	167.09
70-80	142.69
80-90	114.81
90-100	82.70
100-110	55.97
110-120	31.04
120-130	13.65
130-140	6.02
140-150	3.00
150-160	1.95
160-170	1.23
170-180	0.42

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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	116	116	116	116	111	111	111	111	103	103	103	96	96	96	89	89	89	85
1	102	96	90	85	97	92	87	82	85	81	77	78	75	72	72	70	67	64
2	91	81	73	66	87	78	71	64	72	66	61	67	61	57	61	57	54	50
3	82	70	61	54	78	68	59	52	62	55	49	58	52	47	53	48	44	41
4	75	62	52	45	71	59	50	43	55	47	41	51	44	39	47	41	37	34
5	69	55	45	38	65	53	44	37	49	41	35	45	39	33	42	36	32	29
6	63	49	39	32	60	47	38	32	44	36	30	41	34	29	38	32	27	25
7	58	44	35	28	56	43	34	28	40	32	27	37	30	25	34	29	24	22
8	54	40	31	25	52	39	30	25	36	29	24	34	27	22	32	26	21	19
9	51	37	28	22	48	35	27	22	33	26	21	31	25	20	29	23	19	17
10	47	34	26	20	45	33	25	20	31	24	19	29	23	18	27	21	17	16

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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	17.7	19.1	18.2	19.7	20.4	24.4	25.8	25.0	26.4	27.1
	3H	19.5	20.9	20.1	21.5	22.2	27.8	29.1	28.3	29.7	30.4
	4H	20.3	21.5	20.9	22.1	22.8	29.3	30.6	29.9	31.2	31.9
	6H	20.9	22.1	21.5	22.7	23.4	31.1	32.3	31.7	32.9	33.6
	8H	21.1	22.3	21.8	22.9	23.7	32.1	33.2	32.7	33.9	34.6
	12H	21.4	22.4	22.0	23.1	23.8	33.2	34.3	33.8	34.9	35.7

UGR Viewed Endwise

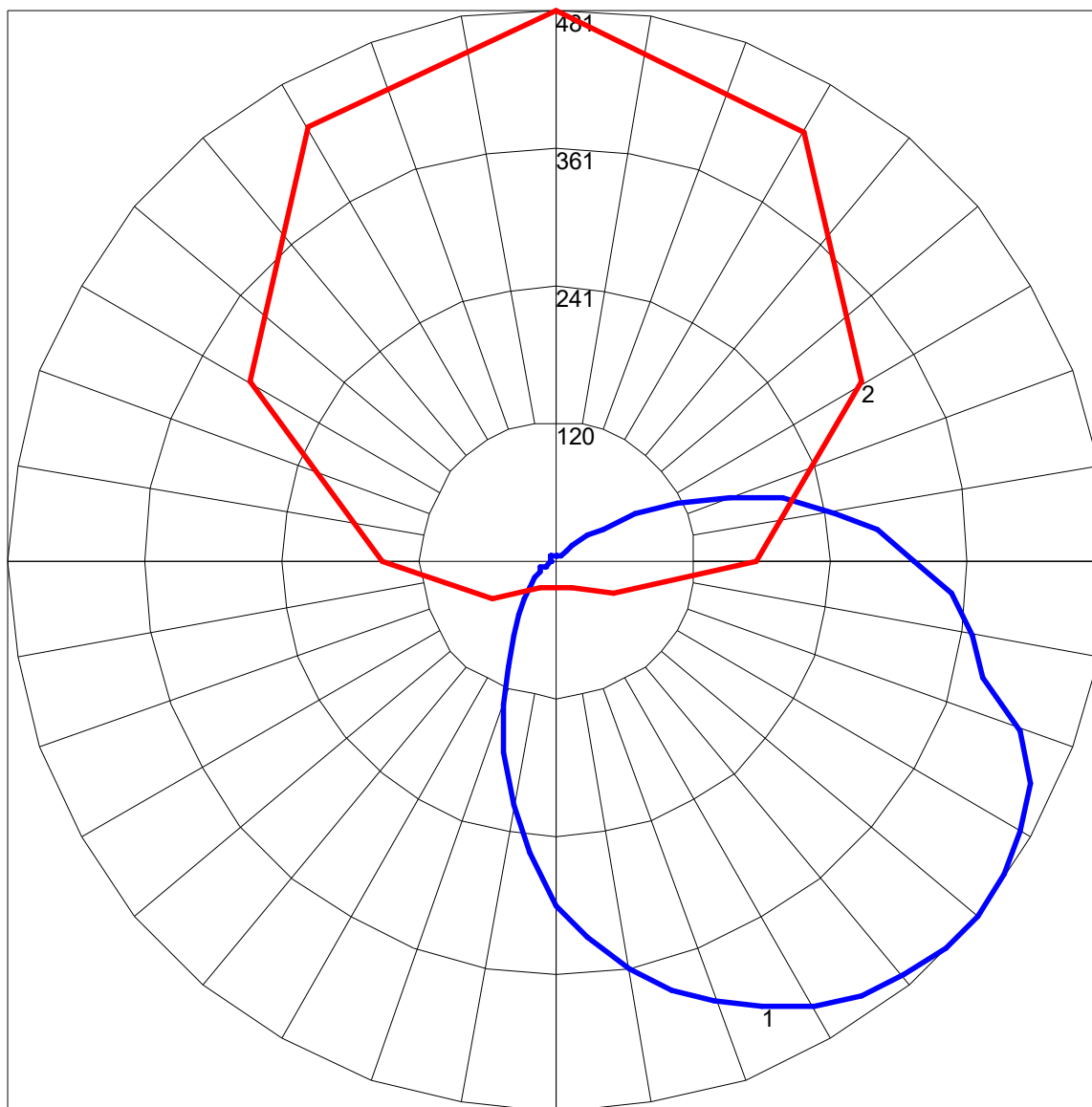
4H	2H	19.6	20.9	20.2	21.5	22.2	24.9	26.2	25.6	26.8	27.5
	3H	21.8	22.9	22.5	23.6	24.3	28.7	29.8	29.3	30.4	31.1
	4H	22.8	23.8	23.4	24.5	25.2	30.5	31.5	31.1	32.1	32.9
	6H	23.6	24.5	24.3	25.2	26.0	32.4	33.3	33.1	34.0	34.8
	8H	24.0	24.8	24.6	25.5	26.3	33.5	34.4	34.2	35.1	35.8
	12H	24.2	25.0	24.9	25.7	26.5	34.8	35.6	35.5	36.3	37.1
8H	4H	24.5	25.3	25.1	26.0	26.8	30.9	31.7	31.5	32.4	33.2
	6H	25.7	26.4	26.4	27.2	27.9	33.1	33.8	33.8	34.5	35.3
	8H	26.3	26.9	27.0	27.6	28.4	34.4	35.1	35.1	35.8	36.6
	12H	26.8	27.4	27.5	28.1	28.9	35.9	36.5	36.6	37.2	38.1
12H	4H	25.0	25.8	25.7	26.5	27.3	30.9	31.7	31.6	32.4	33.2
	6H	26.5	27.1	27.2	27.8	28.7	33.2	33.9	33.9	34.6	35.4
	8H	27.2	27.8	27.9	28.5	29.4	34.6	35.2	35.3	35.9	36.8

Maximum UGR = 38.1

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POLAR GRAPH



Maximum Candela = 481.28 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.)