



IES INDOOR REPORT

PHOTOMETRIC FILENAME : BFL110-F28T5D.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TESTLAB]
 [ISSUE DATE] 15February2012
 [TEST] BFL110-F28T5d
 [TEST DATE] Wed Feb 15 10:58:45 2012
 [MANUFAC] Bartco Lighting
 [LUMINAIRE] BFL110-F28T5
 [LAMP] Fluor. 28W 4' Silhouette T5
 [LAMPCAT] F28/T5
 [OTHER] OPTIONS:

CHARACTERISTICS

Lumens Per Lamp	2900 (1 lamp)
Total Lamp Lumens	2900
Luminaire Lumens	1632
Total Luminaire Efficiency	56 %
Luminaire Efficacy Rating (LER)	53
Total Luminaire Watts	31
Ballast Factor	1.00
CIE Type	Indirect
Spacing Criterion (0-180)	N.A.
Spacing Criterion (90-270)	N.A.
Spacing Criterion (Diagonal)	N.A.
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	3.88 ft
Luminous Width (90-270)	0.31 ft
Luminous Height	0.17 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	0	0	0
55	0	0	0
65	0	0	0
75	0	0	0
85	0	0	0

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CANDELA TABULATION

	<u>0</u>	<u>10</u>	<u>20</u>	<u>30</u>	<u>40</u>	<u>50</u>	<u>60</u>	<u>70</u>	<u>80</u>	<u>90</u>
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	4.19	6.45	7.40	6.52	7.16	8.35	8.22	7.52	7.23	7.51
95	30.22	62.42	60.56	65.77	70.05	68.14	71.66	70.02	67.78	65.39
100	64.70	119.19	136.10	139.01	140.17	143.18	138.67	137.01	145.23	140.98
105	112.26	173.51	204.72	224.70	230.35	225.11	221.57	227.00	223.01	219.08
110	154.19	219.73	256.55	278.65	307.73	307.81	301.37	306.10	303.70	303.60
115	207.91	282.63	309.05	341.24	368.55	379.09	384.34	393.49	393.61	391.29
120	246.37	331.04	366.46	389.69	415.16	433.73	437.78	454.75	456.01	454.22
125	304.40	366.99	416.22	430.60	449.78	467.09	492.19	503.68	501.42	507.50
130	341.81	420.07	466.24	477.98	497.98	507.67	520.15	529.21	542.22	546.80
135	391.56	454.85	505.44	514.61	525.86	534.40	561.54	558.92	566.68	582.02
140	411.56	482.86	550.92	570.78	562.10	570.54	598.08	594.06	604.03	578.39
145	463.18	529.32	554.41	599.20	608.20	609.05	630.92	616.63	614.91	630.29
150	484.90	531.59	587.98	621.93	643.55	643.83	657.68	662.94	642.08	645.19
155	525.54	554.81	598.80	637.50	659.47	680.99	687.44	700.34	692.39	699.27
160	526.65	576.06	596.68	637.18	667.24	660.73	684.34	692.12	686.72	696.77
165	569.22	576.76	614.18	619.73	648.55	681.51	673.57	673.99	714.51	701.19
170	592.02	596.50	640.04	627.24	607.97	637.91	668.49	679.15	665.31	661.04
175	599.53	600.83	605.72	610.62	622.80	633.89	627.31	652.81	676.34	648.22
180	583.60	583.60	583.60	583.60	583.60	583.60	583.60	583.60	583.60	583.60

Vert. Horizontal Angles

	<u>100</u>	<u>110</u>	<u>120</u>	<u>130</u>	<u>140</u>	<u>150</u>	<u>160</u>	<u>170</u>	<u>180</u>	<u>190</u>
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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CANDELA TABULATION - (Cont.)

65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	7.62	8.00	7.30	8.47	8.12	8.04	6.65	4.72	3.72	1.72
95	70.45	69.08	71.60	65.59	68.91	62.05	56.44	60.08	30.14	10.28
100	141.37	137.44	143.33	138.25	145.00	138.86	134.89	123.06	64.92	24.12
105	224.35	216.91	219.52	231.64	226.83	219.94	205.16	173.13	111.07	51.00
110	302.31	305.55	302.88	312.26	307.73	282.59	257.99	224.27	159.64	94.87
115	392.78	382.37	388.39	374.23	370.51	346.12	307.88	280.71	203.03	134.71
120	458.46	448.31	445.20	429.45	403.21	385.75	359.77	327.16	255.80	182.39
125	510.83	499.32	477.93	463.13	458.77	428.07	419.22	371.38	300.65	232.20
130	534.63	528.52	521.25	507.11	492.69	483.71	465.37	408.17	341.36	277.77
135	550.89	557.10	556.42	544.76	528.11	516.11	509.27	457.96	389.88	330.15
140	611.33	593.91	588.62	578.22	572.40	567.21	538.41	485.79	431.27	378.87
145	622.32	624.24	629.71	608.68	612.89	601.23	567.14	518.28	458.30	410.91
150	656.05	655.92	659.02	643.44	646.35	628.07	589.47	528.85	487.26	456.46
155	687.13	685.70	676.37	671.20	659.75	635.19	582.64	545.42	521.05	500.48
160	707.47	699.32	697.82	667.55	669.24	613.92	587.31	567.83	557.29	506.90
165	694.48	693.63	680.80	647.14	634.28	634.17	596.67	581.00	594.27	547.96
170	646.37	648.57	654.33	640.69	644.92	592.27	574.67	609.41	579.63	561.23
175	643.70	628.65	603.85	613.60	602.57	611.55	617.89	608.35	587.27	558.30
180	583.60	583.60	583.60	583.60	583.60	583.60	583.60	583.60	583.60	583.60

**Vert.
Angles**

Horizontal Angles

	<u>200</u>	<u>210</u>	<u>220</u>	<u>230</u>	<u>240</u>	<u>250</u>	<u>260</u>	<u>270</u>	<u>280</u>	<u>290</u>
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	1.44	0.60	1.23	1.46	2.00	1.10	1.67	2.56	1.68	1.79
95	8.31	10.60	10.85	10.07	10.31	10.15	9.12	10.90	9.16	10.30
100	16.11	17.19	18.13	21.77	23.72	21.16	20.49	23.16	24.68	23.04
105	28.70	22.42	24.96	27.21	27.96	31.36	31.20	32.01	32.86	27.97
110	51.47	36.40	30.17	32.36	34.55	35.94	36.39	35.95	36.24	37.39
115	81.10	59.14	44.32	38.54	38.60	36.94	41.80	37.90	38.47	40.26
120	114.61	86.25	72.27	57.80	49.93	46.69	48.88	47.75	46.74	49.22
125	158.74	120.34	96.68	79.66	70.52	66.82	61.44	64.35	63.48	71.22
130	200.92	148.47	124.91	104.10	97.76	86.88	89.30	85.18	86.52	90.29
135	258.46	194.51	157.25	130.72	119.45	114.55	114.23	112.59	118.47	112.35

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CANDELA TABULATION - (Cont.)

140	307.05	256.23	199.16	174.59	151.69	147.26	138.47	132.99	132.33	144.36
145	360.01	303.56	252.98	221.34	189.28	172.58	173.73	173.56	174.24	188.72
150	426.12	365.32	329.48	287.28	272.90	253.98	253.73	249.61	245.27	249.96
155	445.60	427.43	400.23	360.83	342.76	338.96	321.17	323.98	336.43	322.29
160	490.52	470.86	454.72	416.97	410.41	404.37	383.46	393.15	403.32	407.05
165	532.92	521.43	490.77	474.46	480.31	471.17	460.71	447.64	448.98	470.40
170	549.87	563.60	568.03	520.49	504.43	536.75	499.85	487.37	516.98	528.81
175	609.99	596.26	563.98	566.28	593.04	587.58	538.00	538.63	546.22	549.50
180	583.60	583.60	583.60	583.60	583.60	583.60	583.60	583.60	583.60	583.60

Vert. Angles **Horizontal Angles**

	<u>300</u>	<u>310</u>	<u>320</u>	<u>330</u>	<u>340</u>	<u>350</u>	<u>360</u>
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
65	0.00	0.00	0.00	0.00	0.00	0.00	0.00
70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	1.32	1.24	1.16	0.66	1.65	2.18	4.19
95	9.96	11.71	11.61	9.30	9.35	10.49	30.22
100	24.21	20.95	18.86	17.56	14.98	26.40	64.70
105	29.24	27.56	23.35	24.51	29.07	53.25	112.26
110	32.04	31.28	29.12	36.22	54.00	91.42	154.19
115	38.36	40.93	44.68	57.74	85.96	135.35	207.91
120	52.48	59.57	67.46	87.13	112.10	183.57	246.37
125	73.36	84.04	97.16	114.56	161.48	224.19	304.40
130	93.02	104.86	118.67	154.66	203.61	287.07	341.81
135	120.28	138.40	158.18	195.86	258.02	327.81	391.56
140	154.48	169.75	194.87	249.14	308.62	376.95	411.56
145	194.22	228.92	256.46	310.22	363.95	421.03	463.18
150	269.89	291.17	326.65	361.19	400.48	457.83	484.90
155	332.00	370.32	398.04	415.60	462.65	490.49	525.54
160	398.49	437.50	445.54	484.88	513.91	524.66	526.65
165	472.77	471.09	491.01	498.05	519.38	553.51	569.22
170	524.91	518.76	534.90	564.08	564.54	578.00	592.02
175	555.75	604.11	619.61	546.98	605.83	588.68	599.53
180	583.60	583.60	583.60	583.60	583.60	583.60	583.60

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	0.00	0.00	0.00
0-30	0.00	0.00	0.00
0-40	0.00	0.00	0.00
0-60	0.00	0.00	0.00
0-80	0.00	0.00	0.00
0-90	1.21	0.00	0.10
10-90	1.21	0.00	0.10
20-40	0.00	0.00	0.00
20-50	0.00	0.00	0.00
40-70	0.00	0.00	0.00
60-80	0.00	0.00	0.00
70-80	0.00	0.00	0.00
80-90	1.21	0.00	0.10
90-110	172.08	5.90	10.50
90-120	376.93	13.00	23.10
90-130	630.44	21.70	38.60
90-150	1175.37	40.50	72.00
90-180	1630.69	56.20	99.90
110-180	1458.6	50.30	89.40
0-180	1631.89	56.30	100.00

Total Luminaire Efficiency = 56.30%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	0.00
10-20	0.00
20-30	0.00
30-40	0.00
40-50	0.00
50-60	0.00
60-70	0.00
70-80	0.00
80-90	1.21
90-100	43.14
100-110	128.94
110-120	204.85
120-130	253.50
130-140	274.36
140-150	270.57
150-160	237.82
160-170	160.97
170-180	56.52

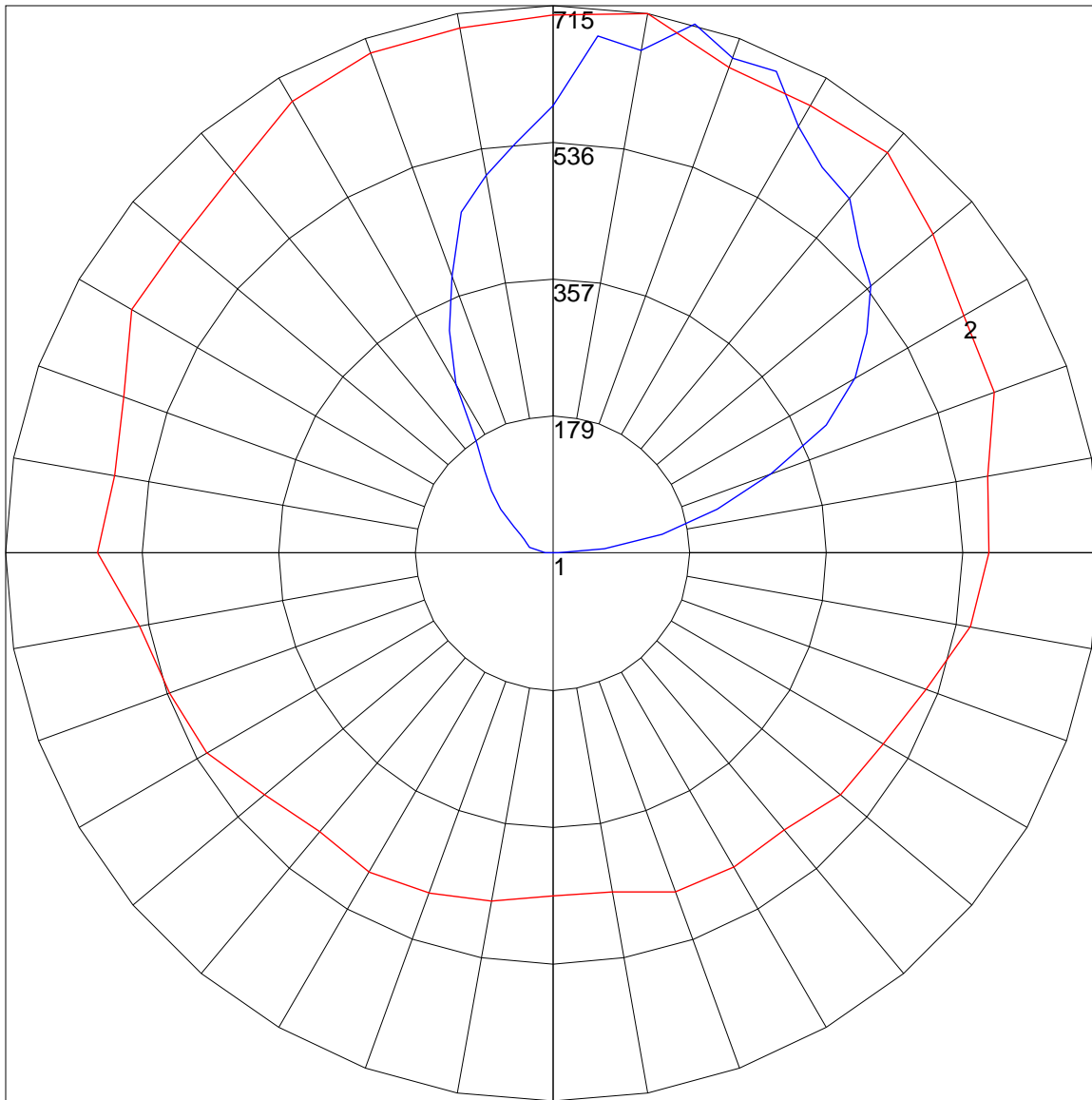
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	54	54	54	54	46	46	46	46	31	31	31	18	18	18	6	6	6	0
1	49	46	44	43	42	40	38	37	27	26	25	16	15	15	5	5	5	0
2	44	41	37	35	38	35	32	30	24	22	21	14	13	12	4	4	4	0
3	40	36	32	29	34	30	27	25	21	19	18	12	11	10	4	4	3	0
4	37	31	27	24	31	27	24	21	18	16	15	11	10	9	3	3	3	0
5	34	28	24	20	29	24	20	18	16	14	13	9	8	7	3	3	2	0
6	31	25	21	18	26	21	18	15	15	12	11	8	7	6	3	2	2	0
7	28	22	18	15	24	19	16	13	13	11	9	8	6	6	2	2	2	0
8	26	20	16	13	22	17	14	11	12	10	8	7	6	5	2	2	2	0
9	24	18	14	12	21	15	12	10	11	9	7	6	5	4	2	2	1	0
10	23	16	13	10	19	14	11	9	10	8	6	6	5	4	2	1	1	0

POLAR GRAPH



Maximum Candela = 714.51 Located At Horizontal Angle = 80, Vertical Angle = 165
1 - Vertical Plane Through Horizontal Angles (80 - 260) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (165) (Through Max. Cd.)