



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : CL-4-L120-840-FAF12125-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from BALLABS TEST NO. 18716.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 1-SEP-2020

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO. 64836

[LUMINAIRE] 4' CORNER MOUNT LUMINAIRE

[MORE] WITH ACRYLIC LENS

[LUMCAT] CL-4-L120/840-FAF12125-DIM-UNV

[LAMPCAT] HLM 80 CRI, 4000K CCT

[\_SEARCH\_SOURCE] LED

[\_SEARCH\_APPLICATION] INDOOR, COMMERCIAL, EDUCATIONAL, OFFICE

[\_SEARCH\_MOUNTING] SURFACE

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	12036
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	113
Total Luminaire Watts	106.3
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	2.72
Spacing Criterion (90-270)	1.14
Spacing Criterion (Diagonal)	1.66
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	0.48 ft
Luminous Width (90-270)	3.77 ft
Luminous Height	0.48 ft



### LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	24404	20104	9238
55	23650	19069	7780
65	23062	17795	6617
75	20631	15316	5560
85	18713	13101	3848

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CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>
<b>0</b>	2346.731	2346.731	2346.731	2346.731	2346.731	2346.731	2346.731	2346.731	2346.731
<b>5</b>	2909.533	2841.119	2709.454	2490.013	2295.097	2191.831	2035.640	1920.756	1880.741
<b>10</b>	3450.391	3323.890	3030.871	2622.969	2220.229	1920.756	1650.973	1484.456	1421.205
<b>15</b>	4060.954	3893.146	3462.009	2857.900	2248.628	1794.255	1449.603	1265.014	1196.600
<b>20</b>	4525.653	4272.651	3658.215	2772.705	1955.609	1386.352	1035.246	850.658	793.861
<b>25</b>	4963.245	4716.696	3979.632	2932.768	1949.155	1276.632	903.582	724.156	672.523
<b>30</b>	5302.734	4986.480	4157.767	2904.370	1754.239	1035.246	695.758	529.241	465.990
<b>35</b>	5475.705	5164.615	4244.252	2875.971	1632.901	908.745	580.874	396.285	327.871
<b>40</b>	5630.605	5297.570	4290.722	2766.251	1431.532	702.212	396.285	201.370	121.338
<b>45</b>	5797.122	5429.235	4290.722	2604.897	1236.616	564.093	247.840	63.251	40.016
<b>50</b>	5717.090	5331.132	4164.221	2438.380	1070.099	449.209	98.103	46.470	0.000
<b>55</b>	5532.502	5141.380	3927.999	2196.994	885.510	322.708	40.016	0.000	0.000
<b>60</b>	5291.116	4876.759	3663.378	1978.844	742.228	189.752	0.000	0.000	0.000
<b>65</b>	5147.834	4710.242	3421.993	1747.785	597.655	58.087	0.000	0.000	0.000
<b>70</b>	4790.274	4353.973	3082.504	1506.400	489.225	0.000	0.000	0.000	0.000
<b>75</b>	4244.252	3824.732	2646.203	1253.397	356.269	0.000	0.000	0.000	0.000
<b>80</b>	3847.967	3427.156	2288.643	1018.466	247.840	0.000	0.000	0.000	0.000
<b>85</b>	3405.212	2990.855	1938.828	828.713	138.119	0.000	0.000	0.000	0.000
<b>90</b>	2639.749	2300.261	1461.221	609.272	0.000	0.000	0.000	0.000	0.000
<b>95</b>	2237.010	1903.976	1173.365	425.974	0.000	0.000	0.000	0.000	0.000
<b>100</b>	1714.224	1437.986	880.347	281.401	0.000	0.000	0.000	0.000	0.000
<b>105</b>	1293.413	1093.334	644.125	143.282	0.000	0.000	0.000	0.000	0.000
<b>110</b>	1000.394	845.494	477.607	0.000	0.000	0.000	0.000	0.000	0.000
<b>115</b>	747.391	632.507	322.708	0.000	0.000	0.000	0.000	0.000	0.000
<b>120</b>	557.639	459.536	166.517	0.000	0.000	0.000	0.000	0.000	0.000
<b>125</b>	374.341	276.238	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>130</b>	212.987	121.338	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>135</b>	28.398	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>140</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>145</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>150</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>155</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>160</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>165</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>170</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>175</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>180</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	901.60	N.A.	7.50
0-30	2003.41	N.A.	16.60
0-40	3461.2	N.A.	28.80
0-60	6844.01	N.A.	56.90
0-80	9818.93	N.A.	81.60
0-90	10834.39	N.A.	90.00
10-90	10610.13	N.A.	88.10
20-40	2559.6	N.A.	21.30
20-50	4231.01	N.A.	35.20
40-70	4998.82	N.A.	41.50
60-80	2974.92	N.A.	24.70
70-80	1358.91	N.A.	11.30
80-90	1015.46	N.A.	8.40
90-110	969.66	N.A.	8.10
90-120	1137.3	N.A.	9.40
90-130	1195.63	N.A.	9.90
90-150	1202.07	N.A.	10.00
90-180	1202.07	N.A.	10.00
110-180	232.41	N.A.	1.90
0-180	12036.46	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	224.26
10-20	677.34
20-30	1101.81
30-40	1457.79
40-50	1671.42
50-60	1711.4
60-70	1616.01
70-80	1358.91
80-90	1015.46
90-100	627.35
100-110	342.31
110-120	167.65
120-130	58.32
130-140	6.44
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

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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	117	117	117	117	113	113	113	113	106	106	106	99	99	99	93	93	93	90
1	103	96	91	86	99	93	88	83	87	83	79	81	78	74	76	73	70	67
2	92	82	73	66	88	79	71	65	74	67	62	69	63	59	64	60	56	53
3	83	70	61	53	79	68	59	52	63	56	50	59	53	48	55	50	46	43
4	75	62	52	44	72	60	50	43	56	48	41	52	45	40	49	43	38	35
5	69	54	45	37	66	53	43	36	49	41	35	46	39	34	43	37	32	30
6	63	49	39	32	60	47	38	31	44	36	30	41	34	29	39	33	28	26
7	58	44	34	28	56	42	34	27	40	32	26	38	31	25	35	29	25	22
8	54	40	31	24	52	39	30	24	36	29	23	34	27	22	32	26	22	20
9	50	36	28	22	48	35	27	21	33	26	21	31	25	20	30	24	19	17
10	47	33	25	19	45	32	24	19	31	24	19	29	23	18	28	22	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	27.1	28.6	27.6	29.1	29.7	16.3	17.9	16.8	18.4	19.0
	3H	30.1	31.6	30.6	32.1	32.7	17.5	18.9	18.0	19.5	20.0
	4H	31.5	32.9	32.1	33.4	34.0	17.9	19.2	18.4	19.8	20.4
	6H	33.0	34.3	33.5	34.8	35.4	18.1	19.4	18.7	19.9	20.6
	8H	33.7	34.9	34.3	35.5	36.1	18.2	19.4	18.7	20.0	20.6
	12H	34.4	35.6	35.0	36.2	36.8	18.2	19.4	18.8	20.0	20.6

UGR Viewed Endwise

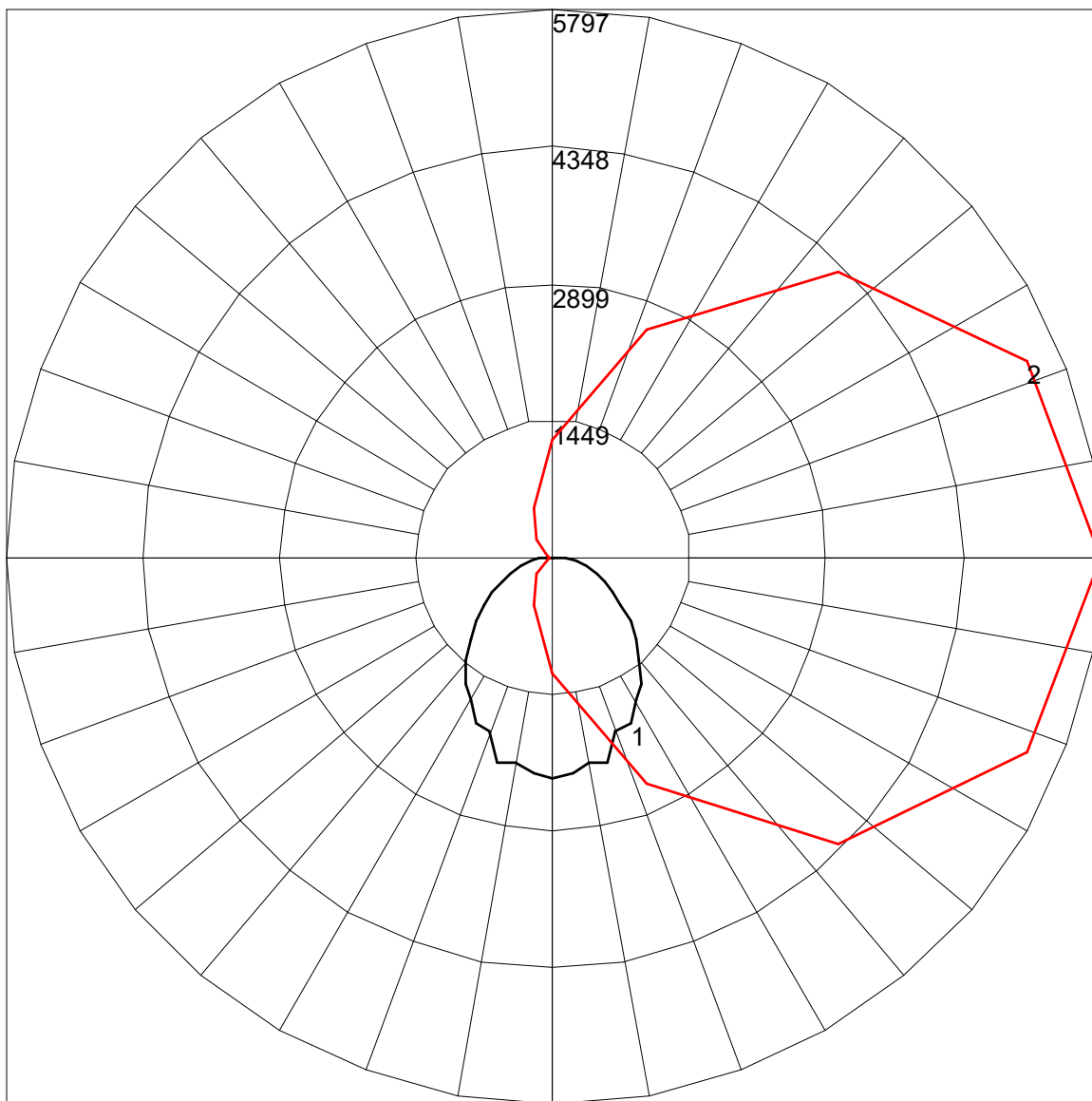
4H	2H	27.3	28.7	27.8	29.2	29.8	19.3	20.7	19.8	21.2	21.8
	3H	30.6	31.8	31.1	32.3	33.0	20.7	21.9	21.2	22.5	23.1
	4H	32.1	33.2	32.7	33.8	34.5	21.1	22.2	21.7	22.8	23.5
	6H	33.8	34.8	34.4	35.4	36.0	21.4	22.4	22.0	23.0	23.7
	8H	34.6	35.5	35.2	36.2	36.8	21.5	22.4	22.1	23.0	23.7
	12H	35.5	36.4	36.1	37.0	37.7	21.6	22.4	22.2	23.0	23.7

8H	4H	32.3	33.2	32.9	33.8	34.5	23.0	23.9	23.6	24.5	25.2
	6H	34.1	34.8	34.7	35.5	36.2	23.6	24.4	24.2	25.0	25.7
	8H	35.0	35.7	35.7	36.4	37.1	23.7	24.5	24.4	25.1	25.8
	12H	36.1	36.7	36.7	37.4	38.1	23.9	24.5	24.5	25.2	25.9

12H	4H	32.2	33.1	32.9	33.7	34.4	23.6	24.4	24.2	25.1	25.7
	6H	34.1	34.8	34.7	35.4	36.2	24.3	25.0	25.0	25.7	26.4
	8H	35.1	35.7	35.7	36.4	37.1	24.6	25.3	25.3	25.9	26.7

Maximum UGR = 38.1

POLAR GRAPH



Maximum Candela = 5797.122 Located At Horizontal Angle = 0, Vertical Angle = 45  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)  
# 2 - Horizontal Cone Through Vertical Angle (45) (Through Max. Cd.)