



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : CB-4-L23-830U-L40-830D-AF125-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] GEN FROM BALLABS TEST NO. 19020.0  
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
 [ISSUEDATE] 30 JUNE 2022  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836  
 [LUMINAIRE] 4' WALL MOUNT DIRECT INDIRECT LED LUMINAIRE  
 [MORE] WITH FLAT FROSTED ACRYLIC LENSES TOP & BTM  
 [LUMCAT] CBxx-4-L23-830U-L40-830D-AF125-DIM-UNV  
 [LAMPCAT] HLM 80 CRI 3000K CCT  
 [SEARCH\_SOURCETYPE]LED  
 [SEARCH\_APPLICATION]INDOOR,HEALTHCARE,DIRECT-INDIRECT  
 [SEARCH\_MOUNTING]WALL

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	6360
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	105
Total Luminaire Watts	60.5
Ballast Factor	1.00
CIE Type	General Diffuse
Spacing Criterion (0-180)	N.A.
Spacing Criterion (90-270)	N.A.
Spacing Criterion (Diagonal)	N.A.
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.25 ft
Luminous Width (90-270)	3.79 ft
Luminous Height	0.00 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4740	7212	12586
55	3234	5484	10938
65	1951	3775	9267
75	831	1766	7168
85	720	720	4422

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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>	1363.647	1363.647	1363.647	1363.647	1363.647	1363.647	1363.647	1363.647	1363.647
<b>5</b>	1285.431	1286.221	1310.713	1341.525	1359.697	1381.029	1406.311	1421.322	1403.940
<b>10</b>	1177.983	1192.204	1241.188	1298.072	1342.316	1381.819	1418.162	1440.283	1426.852
<b>15</b>	1063.424	1083.175	1155.861	1241.188	1303.603	1365.227	1414.211	1441.863	1429.222
<b>20</b>	920.422	959.135	1043.672	1164.552	1247.508	1335.205	1396.040	1430.012	1413.421
<b>25</b>	776.631	812.974	920.422	1072.114	1180.353	1279.111	1353.376	1384.979	1369.968
<b>30</b>	634.420	673.923	795.593	974.937	1100.557	1210.375	1290.171	1321.774	1310.713
<b>35</b>	499.319	550.673	677.083	861.168	1002.589	1117.148	1210.375	1234.077	1223.016
<b>40</b>	387.130	443.225	553.834	742.658	897.511	1012.860	1113.198	1125.839	1116.358
<b>45</b>	295.483	344.467	449.545	628.889	784.532	889.610	988.368	1003.379	999.429
<b>50</b>	230.698	264.671	360.268	523.021	665.232	764.780	861.168	879.339	869.068
<b>55</b>	163.543	195.145	277.312	421.103	553.043	650.221	726.067	755.299	735.548
<b>60</b>	113.769	133.520	210.157	326.296	447.965	527.762	589.386	629.680	610.718
<b>65</b>	72.686	84.537	140.631	244.129	345.257	414.783	467.717	503.270	489.839
<b>70</b>	41.873	50.564	82.166	161.173	248.870	317.605	362.639	383.970	380.020
<b>75</b>	18.961	22.912	40.293	90.067	163.543	227.538	263.091	280.472	279.682
<b>80</b>	2.370	4.740	14.221	36.343	90.857	139.841	174.604	185.665	184.084
<b>85</b>	5.530	4.740	5.530	6.320	33.973	71.896	95.598	105.078	111.399
<b>90</b>	4.740	5.530	6.320	8.691	11.851	17.381	33.183	41.873	49.774
<b>95</b>	13.431	18.171	41.873	62.415	69.525	60.045	61.625	53.724	50.564
<b>100</b>	97.968	79.796	143.001	140.631	127.200	104.288	105.078	90.857	85.327
<b>105</b>	240.969	206.206	259.140	232.278	202.256	156.432	146.952	128.780	120.880
<b>110</b>	378.440	349.207	395.031	333.406	285.212	221.217	199.886	174.604	164.333
<b>115</b>	519.071	474.827	522.231	448.755	365.799	294.693	258.350	225.958	215.687
<b>120</b>	666.812	610.718	632.840	556.204	447.965	366.589	317.605	280.472	260.721
<b>125</b>	807.443	765.570	759.250	663.652	534.872	449.545	380.020	338.937	315.235
<b>130</b>	925.163	900.671	879.339	761.620	634.420	539.612	450.335	406.882	373.699
<b>135</b>	1043.672	1031.031	983.627	867.488	741.078	629.680	519.861	473.247	436.904
<b>140</b>	1152.701	1146.380	1088.706	970.196	845.366	721.327	598.077	550.673	507.220
<b>145</b>	1236.447	1230.127	1166.922	1062.634	929.113	817.714	684.984	624.939	595.707
<b>150</b>	1294.912	1287.801	1224.596	1128.209	1007.329	904.621	778.211	707.896	674.713
<b>155</b>	1331.255	1317.034	1267.260	1180.353	1077.645	992.318	876.969	804.283	772.681
<b>160</b>	1341.525	1327.304	1289.381	1214.325	1143.220	1066.584	970.196	902.251	873.809
<b>165</b>	1333.625	1318.614	1290.171	1234.867	1178.773	1123.468	1049.993	997.058	969.406
<b>170</b>	1301.232	1292.542	1272.790	1241.978	1209.585	1174.032	1119.518	1076.065	1055.523
<b>175</b>	1242.768	1238.817	1242.768	1230.917	1225.386	1208.795	1174.032	1147.170	1130.579
<b>180</b>	1208.795	1208.795	1208.795	1208.795	1208.795	1208.795	1208.795	1208.795	1208.795

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : CB-4-L23-830U-L40-830D-AF125-DIM-UNV\_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	489.23	N.A.	7.70
0-30	1011.47	N.A.	15.90
0-40	1598.51	N.A.	25.10
0-60	2604.23	N.A.	40.90
0-80	3079.72	N.A.	48.40
0-90	3136.06	N.A.	49.30
10-90	3007.55	N.A.	47.30
20-40	1109.28	N.A.	17.40
20-50	1663.6	N.A.	26.20
40-70	1315.27	N.A.	20.70
60-80	475.49	N.A.	7.50
70-80	165.94	N.A.	2.60
80-90	56.34	N.A.	0.90
90-110	264.83	N.A.	4.20
90-120	630.63	N.A.	9.90
90-130	1128.48	N.A.	17.70
90-150	2286.68	N.A.	36.00
90-180	3223.95	N.A.	50.70
110-180	2959.13	N.A.	46.50
0-180	6360.02	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	128.51
10-20	360.71
20-30	522.24
30-40	587.04
40-50	554.32
50-60	451.40
60-70	309.55
70-80	165.94
80-90	56.34
90-100	62.41
100-110	202.41
110-120	365.80
120-130	497.86
130-140	577.90
140-150	580.30
150-160	493.05
160-170	329.41
170-180	114.82

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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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	55	55	55	49
1	98	94	90	86	90	86	83	80	73	71	69	61	59	58	49	48	47	42
2	89	82	76	71	82	76	71	66	64	61	57	54	51	49	44	42	40	36
3	82	72	65	59	75	67	61	56	57	52	48	48	44	41	39	37	35	31
4	75	64	56	51	69	60	53	48	51	46	42	43	39	36	35	32	30	26
5	69	57	49	44	63	53	46	41	46	40	36	38	34	31	32	29	26	23
6	63	52	44	38	58	48	41	36	41	36	32	35	31	27	29	26	23	20
7	59	47	39	33	54	43	36	31	37	32	28	32	28	24	26	23	21	18
8	55	42	35	30	50	40	33	28	34	29	25	29	25	22	24	21	19	16
9	51	39	31	26	47	36	30	25	31	26	22	27	23	20	23	19	17	15
10	48	36	28	24	44	33	27	23	29	24	20	25	21	18	21	18	16	14

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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

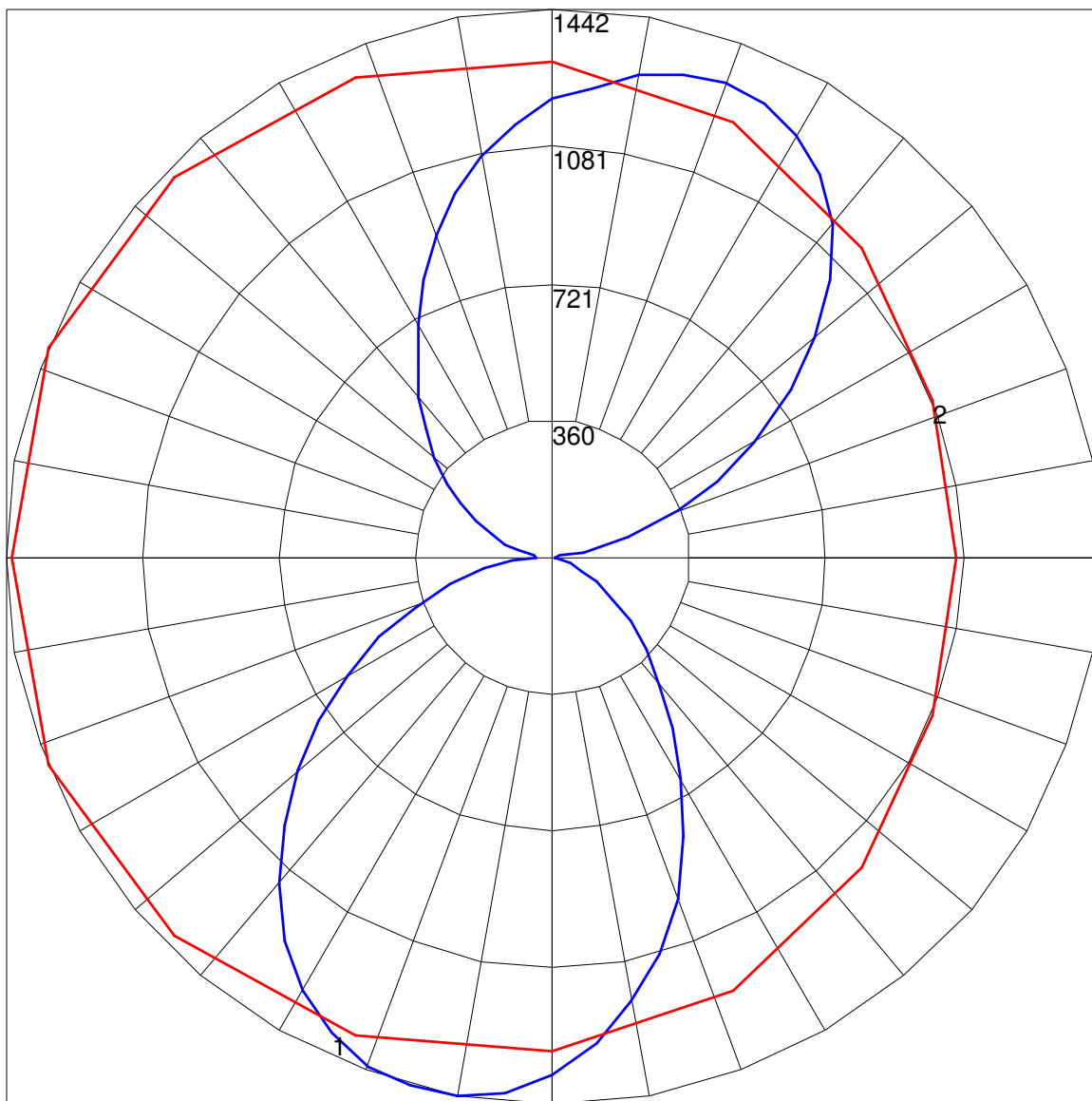
X=2H	Y=2H	8.4	9.2	9.4	10.2	11.5	16.3	17.1	17.2	18.1	19.4
	3H	8.9	9.7	9.9	10.7	12.0	17.7	18.5	18.7	19.4	20.8
	4H	9.0	9.7	10.0	10.7	12.0	18.2	18.9	19.2	19.9	21.2
	6H	8.9	9.6	9.9	10.6	11.9	18.5	19.2	19.5	20.2	21.5
	8H	8.9	9.5	9.9	10.5	11.8	18.6	19.2	19.6	20.2	21.6
	12H	8.8	9.4	9.9	10.4	11.8	18.6	19.2	19.6	20.2	21.6

### UGR Viewed Endwise

4H	2H	9.3	10.0	10.3	11.0	12.3	16.7	17.4	17.7	18.4	19.7
	3H	9.9	10.5	10.9	11.5	12.9	18.4	19.0	19.4	20.0	21.3
	4H	10.0	10.5	11.0	11.5	12.9	19.0	19.6	20.1	20.6	21.9
	6H	9.9	10.4	11.0	11.4	12.8	19.5	19.9	20.5	21.0	22.3
	8H	9.9	10.3	10.9	11.3	12.7	19.6	20.0	20.6	21.1	22.4
	12H	9.8	10.2	10.9	11.3	12.7	19.7	20.0	20.7	21.1	22.5
8H	4H	10.3	10.7	11.3	11.8	13.1	19.3	19.7	20.3	20.8	22.1
	6H	10.3	10.6	11.3	11.7	13.0	19.9	20.3	20.9	21.3	22.7
	8H	10.2	10.5	11.3	11.6	13.0	20.1	20.4	21.2	21.5	22.9
	12H	10.2	10.5	11.2	11.5	12.9	20.2	20.5	21.3	21.6	23.0
12H	4H	10.3	10.7	11.4	11.7	13.1	19.3	19.7	20.4	20.8	22.1
	6H	10.3	10.6	11.3	11.6	13.0	20.0	20.3	21.0	21.3	22.7
	8H	10.2	10.5	11.3	11.6	13.0	20.2	20.5	21.3	21.6	23.0

Maximum UGR = 23.0

POLAR GRAPH



Maximum Candela = 1441.863 Located At Horizontal Angle = 157.5, Vertical Angle = 15  
# 1 - Vertical Plane Through Horizontal Angles (157.5 - 337.5) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (15) (Through Max. Cd.)