



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : CB-4-L23-830U-L23-830D-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-L23-830D-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	4598
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	104
Total Luminaire Watts	44.1
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	3427	5214	9099
55	2338	3965	7907
65	1410	2729	6700
75	601	1277	5182
85	520	520	3197

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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>	985.857	985.857	985.857	985.857	985.857	985.857	985.857	985.857	985.857
<b>5</b>	929.310	929.881	947.588	969.864	983.001	998.423	1016.701	1027.553	1014.987
<b>10</b>	851.630	861.911	897.324	938.449	970.435	998.994	1025.268	1041.261	1031.551
<b>15</b>	768.808	783.088	835.636	897.324	942.447	986.999	1022.412	1042.404	1033.265
<b>20</b>	665.425	693.413	754.529	841.919	901.893	965.294	1009.275	1033.836	1021.841
<b>25</b>	561.470	587.744	665.425	775.091	853.343	924.741	978.432	1001.279	990.426
<b>30</b>	458.658	487.217	575.178	704.836	795.654	875.048	932.737	955.584	947.588
<b>35</b>	360.986	398.113	489.501	622.586	724.828	807.649	875.048	892.183	884.187
<b>40</b>	279.878	320.432	400.397	536.909	648.861	732.253	804.793	813.932	807.077
<b>45</b>	213.621	249.035	325.001	454.659	567.182	643.149	714.546	725.399	722.543
<b>50</b>	166.785	191.345	260.458	378.121	480.934	552.902	622.586	635.723	628.298
<b>55</b>	118.234	141.081	200.484	304.439	399.826	470.081	524.915	546.048	531.769
<b>60</b>	82.250	96.529	151.934	235.897	323.859	381.548	426.100	455.231	441.522
<b>65</b>	52.549	61.116	101.670	176.495	249.606	299.870	338.139	363.842	354.132
<b>70</b>	30.273	36.556	59.403	116.521	179.922	229.614	262.172	277.594	274.738
<b>75</b>	13.708	16.564	29.130	65.115	118.234	164.500	190.203	202.769	202.198
<b>80</b>	1.714	3.427	10.281	26.274	65.686	101.099	126.231	134.227	133.085
<b>85</b>	3.998	3.427	3.998	4.569	24.561	51.977	69.113	75.967	80.536
<b>90</b>	3.427	3.998	4.569	6.283	8.568	12.566	23.990	30.273	35.984
<b>95</b>	9.710	13.137	30.273	45.123	50.264	43.410	44.552	38.840	36.556
<b>100</b>	70.826	57.689	103.384	101.670	91.960	75.396	75.967	65.686	61.687
<b>105</b>	174.210	149.078	187.347	167.927	146.222	113.094	106.239	93.102	87.391
<b>110</b>	273.595	252.462	285.590	241.038	206.196	159.930	144.509	126.231	118.805
<b>115</b>	375.265	343.279	377.550	324.430	264.456	213.050	186.776	163.358	155.932
<b>120</b>	482.076	441.522	457.515	402.111	323.859	265.028	229.614	202.769	188.489
<b>125</b>	583.746	553.474	548.904	479.791	386.689	325.001	274.738	245.036	227.901
<b>130</b>	668.852	651.145	635.723	550.618	458.658	390.116	325.573	294.158	270.168
<b>135</b>	754.529	745.390	711.119	627.156	535.767	455.231	375.837	342.137	315.863
<b>140</b>	833.352	828.782	787.086	701.409	611.163	521.487	432.383	398.113	366.698
<b>145</b>	893.897	889.327	843.633	768.237	671.708	591.171	495.213	451.803	430.670
<b>150</b>	936.164	931.024	885.329	815.645	728.255	654.001	562.612	511.777	487.788
<b>155</b>	962.438	952.157	916.173	853.343	779.090	717.402	634.010	581.461	558.614
<b>160</b>	969.864	959.583	932.166	877.904	826.498	771.093	701.409	652.288	631.725
<b>165</b>	964.152	953.300	932.737	892.755	852.201	812.218	759.098	720.829	700.838
<b>170</b>	940.734	934.451	920.171	897.895	874.477	848.774	809.362	777.947	763.097
<b>175</b>	898.466	895.610	898.466	889.899	885.900	873.906	848.774	829.354	817.359
<b>180</b>	873.906	873.906	873.906	873.906	873.906	873.906	873.906	873.906	873.906

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

Zone	Lumens	%Lamp	%Fixt
0-20	353.69	N.A.	7.70
0-30	731.25	N.A.	15.90
0-40	1155.65	N.A.	25.10
0-60	1882.74	N.A.	40.90
0-80	2226.5	N.A.	48.40
0-90	2267.23	N.A.	49.30
10-90	2174.32	N.A.	47.30
20-40	801.96	N.A.	17.40
20-50	1202.71	N.A.	26.20
40-70	950.89	N.A.	20.70
60-80	343.76	N.A.	7.50
70-80	119.96	N.A.	2.60
80-90	40.73	N.A.	0.90
90-110	191.46	N.A.	4.20
90-120	455.91	N.A.	9.90
90-130	815.84	N.A.	17.70
90-150	1653.17	N.A.	36.00
90-180	2330.78	N.A.	50.70
110-180	2139.32	N.A.	46.50
0-180	4598.01	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	92.91
10-20	260.78
20-30	377.56
30-40	424.40
40-50	400.75
50-60	326.34
60-70	223.79
70-80	119.96
80-90	40.73
90-100	45.12
100-110	146.34
110-120	264.46
120-130	359.93
130-140	417.80
140-150	419.53
150-160	356.45
160-170	238.15
170-180	83.01

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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	7.3	8.1	8.3	9.1	10.4	UGR Viewed Endwise			
	3H	7.8	8.6	8.8	9.6	10.9	15.2	16.0	16.1	17.0
	4H	7.9	8.6	8.9	9.6	10.9	16.6	17.4	17.6	18.3
	6H	7.8	8.5	8.8	9.5	10.8	17.1	17.8	18.1	18.8
	8H	7.8	8.4	8.8	9.4	10.7	17.4	18.1	18.4	19.1
	12H	7.7	8.3	8.8	9.3	10.7	17.5	18.1	18.5	19.1

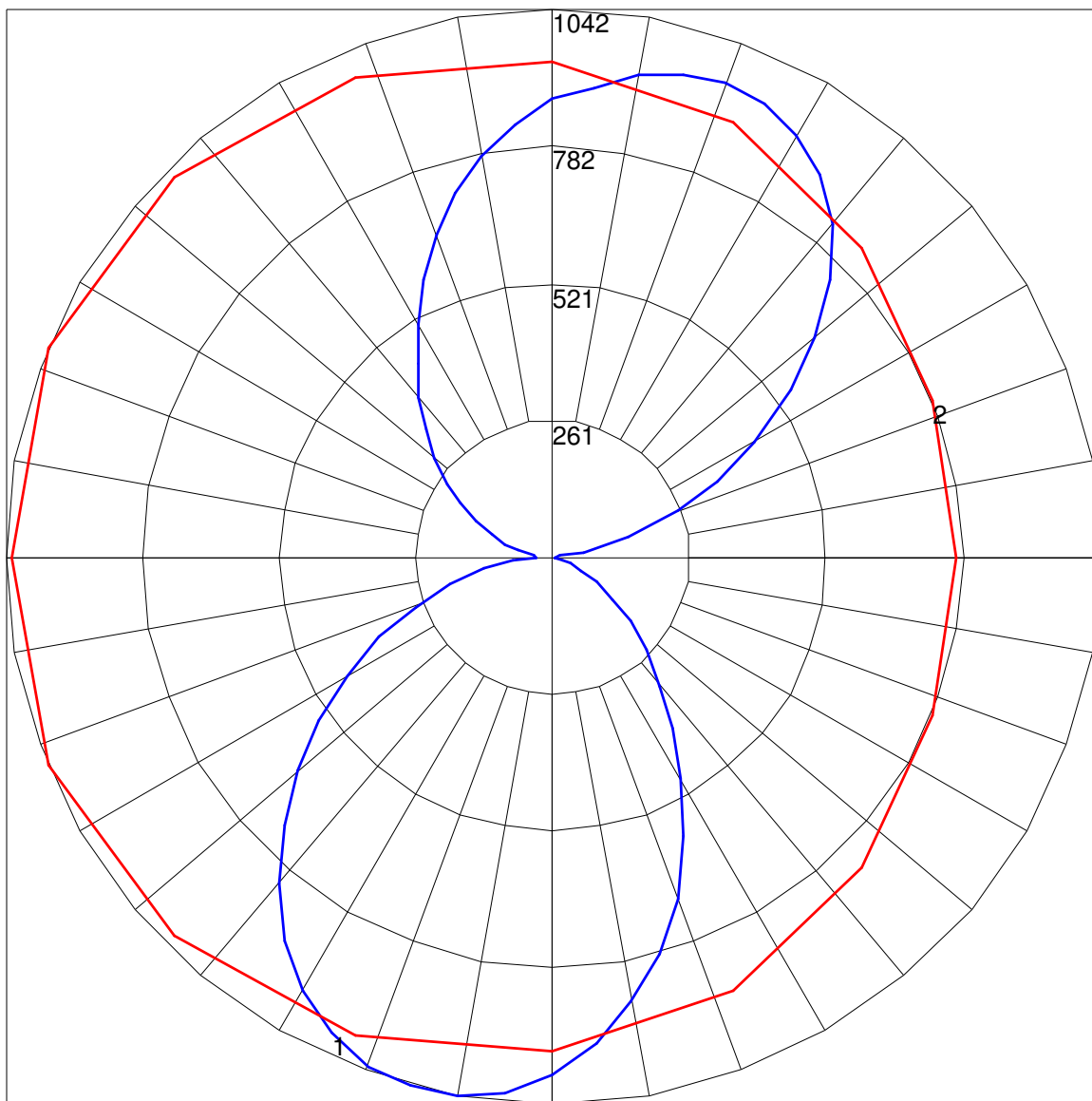
4H	2H	8.2	8.9	9.2	9.9	11.2	15.6	16.3	16.6	17.3
	3H	8.8	9.4	9.8	10.4	11.8	16.6	17.4	17.6	18.3
	4H	8.9	9.4	9.9	10.4	11.8	17.1	17.8	18.1	18.8
	6H	8.8	9.3	9.9	10.3	11.7	17.4	18.1	18.4	19.1
	8H	8.8	9.2	9.8	10.2	11.6	17.5	18.1	18.5	19.1
	12H	8.7	9.1	9.8	10.2	11.6	17.5	18.1	18.5	19.1

8H	4H	9.2	9.6	10.2	10.7	12.0	18.2	18.6	19.2	19.7
	6H	9.1	9.5	10.2	10.6	11.9	18.3	18.9	19.5	20.1
	8H	9.1	9.4	10.2	10.5	11.9	18.4	18.8	19.4	19.9
	12H	9.1	9.4	10.1	10.4	11.8	18.5	18.9	19.5	20.0

12H	4H	9.2	9.6	10.3	10.6	12.0	18.6	18.9	19.6	20.0
	6H	9.2	9.5	10.2	10.5	11.9	18.6	18.9	19.6	20.0
	8H	9.1	9.4	10.2	10.5	11.9	18.6	18.9	19.6	20.0

Maximum UGR = 21.9

POLAR GRAPH



Maximum Candela = 1042.404 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.)