



**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : 97-4-L79-840-FR-DRV-UNV\_.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
[TEST] GEN from BALLABS TEST NO. 19304.0  
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
[ISSUEDATE] 05-04-2022  
[MANUFAC] WILLIAMS INDOOR  
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO  
[LUMINAIRE] 4 LED 22" ARRAYS 4' SUSPENDED ENCLOSED/GASKETED  
[MORE] LUMINAIRE WHITE FLAT REFL w/HIGHLY SPEC CENTER REFL & FROSTED  
[MORE] ACRYLIC DROP LENS  
[LUMCAT] 97-4-L79-840-FR-DIM-UNV

**CHARACTERISTICS**

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	7761
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	135
Total Luminaire Watts	57.3
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.32
Spacing Criterion (90-270)	1.86
Spacing Criterion (Diagonal)	1.90
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	4.25 ft
Luminous Width (90-270)	0.46 ft
Luminous Height	0.27 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	6465	7038	8145
55	6028	8690	10757
65	5263	10985	12953
75	4290	10506	9818
85	3230	5830	4556

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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>
0	1250.537	1250.537	1250.537	1250.537	1250.537
5	1270.931	1289.693	1293.772	1235.038	1179.568
10	1259.511	1279.904	1300.298	1248.906	1195.882
15	1236.670	1262.774	1301.929	1266.037	1214.645
20	1199.145	1239.117	1302.745	1279.088	1231.775
25	1155.095	1213.013	1301.114	1294.588	1257.063
30	1099.624	1180.383	1294.588	1318.244	1293.772
35	1040.075	1137.149	1290.509	1361.479	1359.847
40	963.395	1075.968	1291.325	1432.449	1478.130
45	880.189	1010.708	1318.244	1568.678	1659.226
50	784.747	942.186	1389.214	1759.562	1856.636
55	682.779	878.558	1499.340	1962.683	2060.572
60	568.574	821.455	1608.649	2142.963	2240.852
65	457.633	779.037	1675.541	2173.145	2248.194
70	349.955	732.539	1608.649	1974.919	1989.602
75	248.802	652.596	1343.532	1540.943	1475.683
80	156.623	525.340	925.871	978.894	945.449
85	88.100	376.059	579.179	585.705	557.970
90	56.286	259.407	371.980	367.085	332.824
95	41.603	173.754	254.512	242.276	227.593
100	35.077	118.283	185.990	175.385	168.859
105	29.367	82.390	150.097	145.203	139.492
110	22.025	53.839	120.730	127.256	121.546
115	17.946	36.709	94.626	111.757	108.494
120	12.236	24.472	71.786	96.258	93.811
125	8.973	14.683	52.208	77.496	76.680
130	7.342	8.973	35.893	56.286	58.734
135	0.000	0.000	24.472	41.603	44.050
140	0.000	0.000	15.499	30.183	31.814
145	0.000	0.000	9.789	21.209	22.841
150	0.000	0.000	0.000	13.868	15.499
155	0.000	0.000	0.000	7.342	8.157
160	0.000	0.000	0.000	0.000	7.342
165	0.000	4.079	0.000	0.000	0.000
170	0.000	0.000	0.000	0.000	0.000
175	0.000	0.000	0.000	0.000	0.000
180	0.000	0.000	0.000	0.000	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	478.28	N.A.	6.20
0-30	1058.35	N.A.	13.60
0-40	1843.23	N.A.	23.70
0-60	4129.44	N.A.	53.20
0-80	6721.72	N.A.	86.60
0-90	7260.12	N.A.	93.50
10-90	7139.76	N.A.	92.00
20-40	1364.95	N.A.	17.60
20-50	2370.95	N.A.	30.50
40-70	3738.84	N.A.	48.20
60-80	2592.29	N.A.	33.40
70-80	1139.66	N.A.	14.70
80-90	538.39	N.A.	6.90
90-110	355.41	N.A.	4.60
90-120	431.99	N.A.	5.60
90-130	474.47	N.A.	6.10
90-150	499.33	N.A.	6.40
90-180	500.99	N.A.	6.50
110-180	145.57	N.A.	1.90
0-180	7761.1	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	120.36
10-20	357.92
20-30	580.07
30-40	784.88
40-50	1006.00
50-60	1280.21
60-70	1452.63
70-80	1139.66
80-90	538.39
90-100	230.98
100-110	124.43
110-120	76.58
120-130	42.48
130-140	18.16
140-150	6.70
150-160	1.44
160-170	0.22
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	118	118	118	118	114	114	114	114	108	108	108	102	102	102	96	96	96	94
1	103	96	90	85	99	93	88	83	88	83	79	83	79	76	78	75	72	69
2	91	80	72	64	87	78	70	63	73	66	60	69	63	58	64	60	56	53
3	81	68	58	50	78	66	57	49	62	54	47	58	51	46	55	49	44	41
4	73	59	48	40	70	57	47	40	54	45	38	50	43	37	47	41	36	33
5	67	52	41	33	64	50	40	33	47	38	32	44	37	31	42	35	30	27
6	61	46	36	28	58	44	35	28	42	33	27	39	32	26	37	30	25	23
7	56	41	31	24	54	40	30	24	38	29	23	35	28	23	33	27	22	20
8	52	37	28	21	50	36	27	21	34	26	20	32	25	20	31	24	19	17
9	48	34	25	19	47	33	24	18	31	23	18	30	22	17	28	22	17	15
10	45	31	22	17	44	30	22	16	29	21	16	27	20	16	26	20	15	13

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**UGR TABLE - CORRECTED**

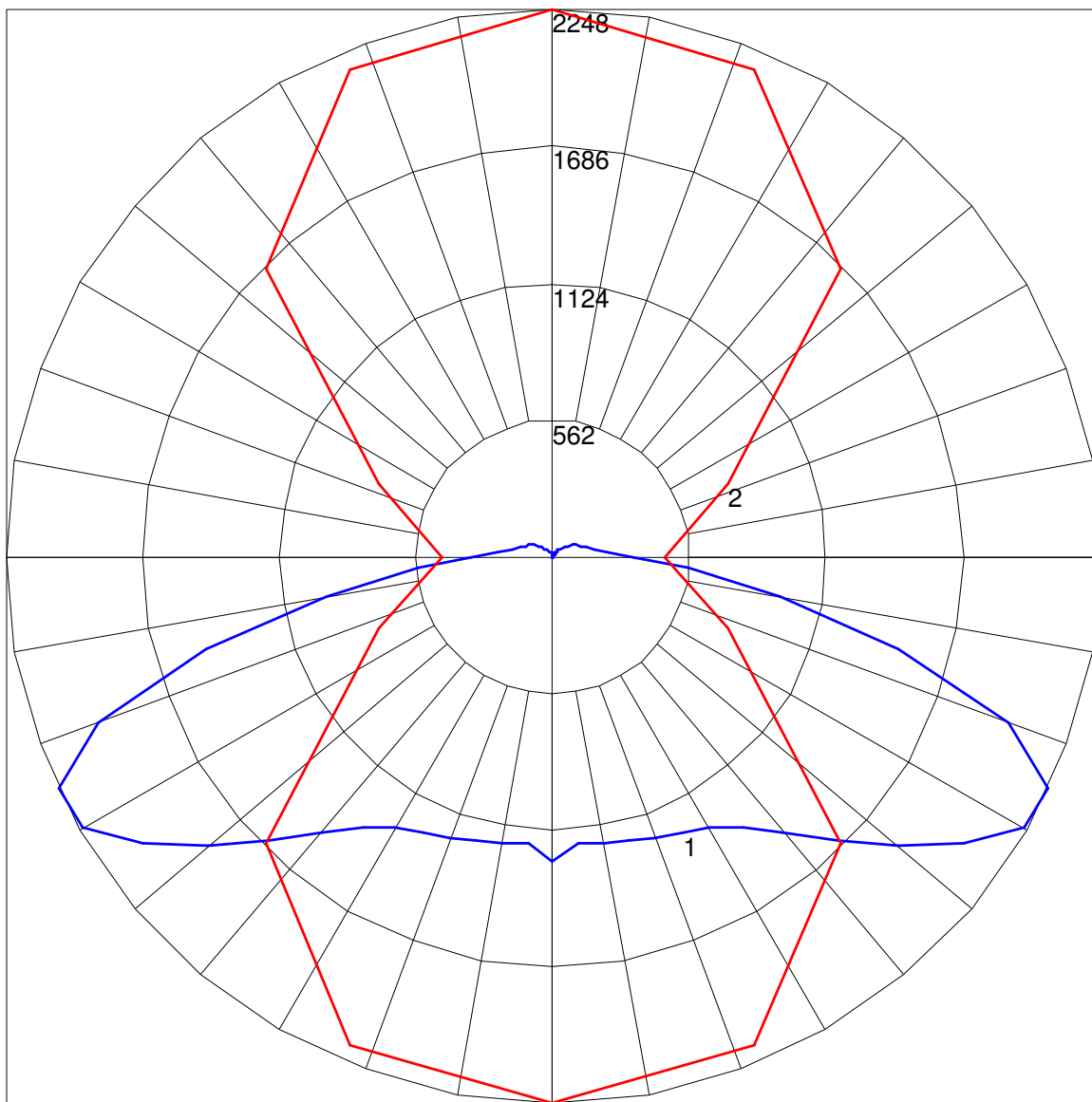
Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	15.2	16.9	15.6	17.3	17.8	22.9	24.6	23.3	25.0	25.5
	3H	16.9	18.5	17.4	18.9	19.4	26.3	27.9	26.7	28.3	28.8
	4H	17.5	19.0	18.0	19.5	20.0	27.4	29.0	27.9	29.4	29.9
	6H	17.8	19.3	18.3	19.8	20.3	28.2	29.7	28.7	30.1	30.7
	8H	17.9	19.3	18.5	19.8	20.4	28.5	29.9	29.0	30.4	30.9
	12H	18.0	19.3	18.5	19.8	20.4	28.8	30.1	29.3	30.6	31.2
4H	2H	18.7	20.3	19.2	20.7	21.2	23.3	24.8	23.8	25.3	25.8
	3H	20.5	21.8	21.0	22.3	22.9	26.9	28.3	27.4	28.8	29.3
	4H	21.1	22.3	21.6	22.8	23.4	28.3	29.5	28.8	30.0	30.6
	6H	21.5	22.6	22.0	23.1	23.7	29.2	30.3	29.7	30.8	31.4
	8H	21.6	22.6	22.1	23.2	23.7	29.5	30.6	30.1	31.1	31.7
	12H	21.7	22.6	22.2	23.2	23.8	29.9	30.8	30.4	31.4	32.0
8H	4H	22.8	23.9	23.4	24.4	25.0	28.4	29.5	29.0	30.0	30.6
	6H	23.5	24.3	24.0	24.9	25.5	29.5	30.4	30.1	31.0	31.6
	8H	23.7	24.5	24.2	25.1	25.7	30.0	30.8	30.5	31.3	32.0
	12H	23.8	24.5	24.4	25.1	25.8	30.4	31.1	30.9	31.7	32.3
12H	4H	23.1	24.1	23.7	24.6	25.2	28.5	29.4	29.0	30.0	30.6
	6H	23.9	24.7	24.5	25.2	25.9	29.6	30.4	30.2	30.9	31.6
	8H	24.2	24.9	24.8	25.5	26.2	30.0	30.7	30.6	31.3	32.0

Maximum UGR = 32.3

POLAR GRAPH



Maximum Candela = 2248.194 Located At Horizontal Angle = 90, Vertical Angle = 65  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (65) (Through Max. Cd.)