



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 96-4-L62-940-HIAFR-(L49)-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST]GEN FROM BALLABS TEST NO. 20008.0  
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
 [ISSUE DATE] 02-24-2021  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836  
 [LUMINAIRE] 2-56 LED 22"ARRAYS 4 VAPORTITE LUMINAIRE  
 [MORE] WHITE FLAT REFLECTOR w/HIAFR LENS  
 [MORE] EVERLINE LED DRIVER #D15CC55UNVTW-C @ 1029mA  
 [LUMCAT] 96-4-L62-940-HIAFR-(L49)-DIM-UNV  
 [LAMPCAT] HLM 90 CRI 4000K CCT

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4172
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	120
Total Luminaire Watts	34.9
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.24
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.32
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	4.25 ft
Luminous Width (90-270)	0.50 ft
Luminous Height	0.17 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	6117	5063	4832
55	5108	4184	4114
65	3910	3446	3746
75	2554	2868	3381
85	987	2353	2821

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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	1503.061	1503.061	1503.061	1503.061	1503.061
5	1525.108	1495.280	1490.093	1484.257	1480.366
10	1502.413	1473.233	1457.023	1443.406	1434.328
15	1464.804	1429.789	1406.445	1386.992	1374.672
20	1409.039	1368.188	1342.251	1303.993	1287.782
25	1339.657	1291.025	1259.900	1214.510	1209.322
30	1253.416	1201.541	1170.417	1148.370	1155.503
35	1154.206	1101.035	1080.285	1088.066	1104.925
40	1032.301	980.427	993.395	995.989	1012.200
45	888.349	853.983	894.185	890.943	900.670
50	746.343	732.078	772.280	783.304	785.249
55	611.470	618.602	652.969	682.797	688.633
60	483.081	508.369	545.330	601.743	610.173
65	354.043	389.058	450.659	520.041	536.900
70	243.810	281.419	368.957	440.933	465.573
75	149.787	191.935	291.145	367.660	388.410
80	73.921	123.850	222.412	296.333	306.707
85	24.640	77.163	162.756	229.544	234.083
90	9.726	49.929	119.960	171.186	176.373
95	9.078	34.367	97.265	134.225	140.709
100	7.781	21.398	73.921	104.397	111.530
105	5.187	12.320	54.468	81.054	89.483
110	3.242	4.539	38.906	62.898	70.030
115	2.594	1.297	25.289	46.687	55.117
120	1.297	0.648	15.562	33.718	39.554
125	0.000	0.000	5.187	20.750	27.234
130	0.000	0.000	0.000	9.726	15.562
135	0.000	0.000	0.000	3.242	5.836
140	0.000	0.000	0.000	2.594	2.594
145	0.000	0.000	0.000	1.297	1.297
150	0.000	0.000	0.000	0.000	0.000
155	0.000	0.000	0.000	0.000	0.000
160	0.000	0.000	0.000	0.000	0.000
165	0.000	0.000	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	538.56	N.A.	12.90
0-30	1120.25	N.A.	26.90
0-40	1806.13	N.A.	43.30
0-60	3072.55	N.A.	73.60
0-80	3820.2	N.A.	91.60
0-90	3988.16	N.A.	95.60
10-90	3846.69	N.A.	92.20
20-40	1267.58	N.A.	30.40
20-50	1948.69	N.A.	46.70
40-70	1715.77	N.A.	41.10
60-80	747.65	N.A.	17.90
70-80	298.29	N.A.	7.10
80-90	167.97	N.A.	4.00
90-110	146.31	N.A.	3.50
90-120	172.31	N.A.	4.10
90-130	181.76	N.A.	4.40
90-150	183.74	N.A.	4.40
90-180	183.74	N.A.	4.40
110-180	37.43	N.A.	0.90
0-180	4171.9	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	141.48
10-20	397.08
20-30	581.70
30-40	685.88
40-50	681.11
50-60	585.30
60-70	449.35
70-80	298.29
80-90	167.97
90-100	93.81
100-110	52.50
110-120	26.00
120-130	9.45
130-140	1.66
140-150	0.32
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	118	118	118	118	115	115	115	115	109	109	109	103	103	103	98	98	98	96
1	107	102	97	93	104	99	95	91	94	91	88	89	87	84	85	83	81	78
2	97	89	82	76	94	86	80	75	82	77	72	78	74	70	75	71	68	65
3	89	78	70	63	86	76	68	62	72	66	61	69	64	59	66	61	57	55
4	81	69	60	54	79	68	59	53	65	57	52	62	56	51	59	54	49	47
5	75	62	53	46	72	61	52	46	58	51	45	56	49	44	53	48	43	41
6	69	56	47	41	67	55	46	40	52	45	39	50	44	39	48	43	38	36
7	64	51	42	36	62	50	41	36	48	40	35	46	39	34	44	38	34	32
8	60	46	38	32	58	45	37	32	44	37	31	42	36	31	41	35	30	29
9	56	43	34	29	54	42	34	29	40	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	37	31	26	36	30	25	35	29	25	23

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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	15.7	17.2	16.1	17.6	18.0	17.4	18.9	17.8	19.3	19.7
	3H	16.8	18.2	17.2	18.6	19.1	19.7	21.1	20.1	21.5	22.0
	4H	17.1	18.4	17.5	18.8	19.3	20.8	22.1	21.2	22.5	23.0
	6H	17.2	18.5	17.7	18.9	19.4	21.8	23.1	22.3	23.5	24.0
	8H	17.2	18.4	17.7	18.9	19.4	22.3	23.5	22.8	24.0	24.5
	12H	17.2	18.4	17.7	18.8	19.4	22.8	24.0	23.3	24.4	25.0

UGR Viewed Endwise

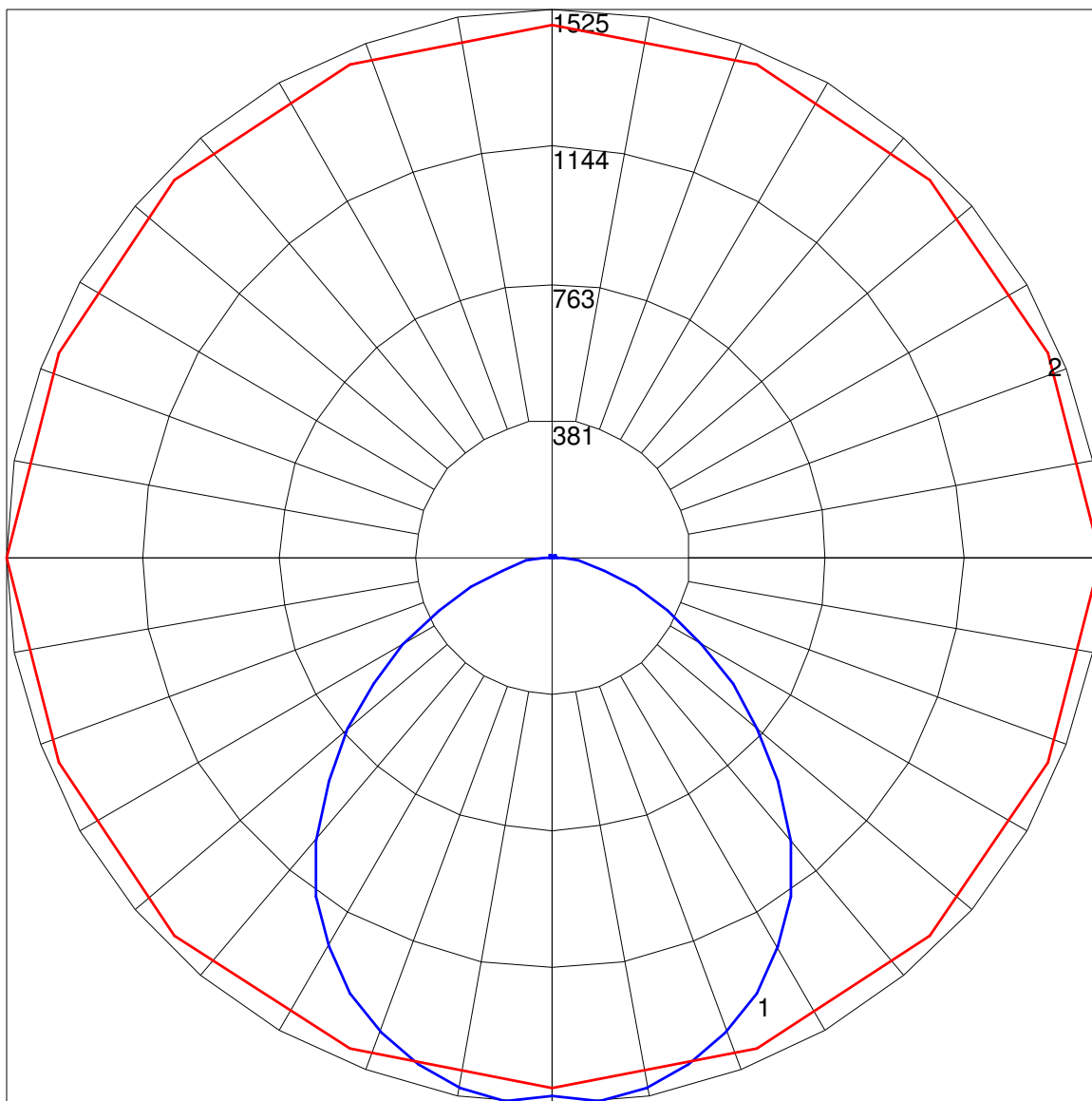
4H	2H	16.4	17.7	16.8	18.1	18.6	17.8	19.1	18.2	19.5	20.0
	3H	17.8	18.9	18.2	19.3	19.8	20.3	21.4	20.8	21.9	22.4
	4H	18.2	19.2	18.7	19.7	20.2	21.6	22.6	22.1	23.1	23.6
	6H	18.4	19.3	18.9	19.8	20.3	22.8	23.7	23.3	24.2	24.8
	8H	18.4	19.3	19.0	19.8	20.4	23.4	24.2	23.9	24.8	25.3
	12H	18.5	19.2	19.0	19.8	20.3	24.0	24.8	24.6	25.3	25.9

8H	4H	18.8	19.6	19.3	20.1	20.7	21.7	22.6	22.3	23.1	23.7
	6H	19.1	19.9	19.7	20.4	21.0	23.1	23.8	23.7	24.4	25.0
	8H	19.2	19.9	19.8	20.5	21.0	23.9	24.5	24.4	25.1	25.7
	12H	19.3	19.9	19.9	20.4	21.1	24.7	25.2	25.2	25.8	26.4

12H	4H	18.9	19.7	19.5	20.2	20.8	21.7	22.5	22.3	23.0	23.6
	6H	19.4	20.0	20.0	20.6	21.2	23.2	23.8	23.7	24.3	25.0
	8H	19.6	20.2	20.1	20.7	21.4	23.9	24.5	24.5	25.1	25.7

Maximum UGR = 26.4

POLAR GRAPH



Maximum Candela = 1525.108 Located At Horizontal Angle = 0, Vertical Angle = 5  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)