



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 39-4-L52-940-A-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN from BALLABS TEST NO. 19011.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 08-04-2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836
 [LUMINAIRE] 4' SURFACE MOUNT LED LUMINAIRE
 [MORE] WITH FROSTED ACRYLIC RIBBED LENS
 [LUMCAT] 39-4-L52-940-A-DIM-UNV
 [LAMPCAT]HLM 90 CRI, 4000K CCT
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] INDOOR, ARCHITECTURAL, COMMERCIAL, DIRECT, LINEAR
 [_SEARCH_MOUNTING]SURFACE, SUSPENDED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4477
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	120
Total Luminaire Watts	37.2
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.18
Spacing Criterion (90-270)	1.18
Spacing Criterion (Diagonal)	1.30
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	4.01 ft
Luminous Width (90-270)	0.79 ft
Luminous Height	0.18 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4438	4015	3967
55	3703	3300	3317
65	3063	2701	2881
75	2234	2142	2486
85	1317	1784	2316

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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	1711.159	1711.159	1711.159	1711.159	1711.159
5	1720.660	1719.797	1718.933	1718.933	1719.797
10	1682.654	1681.790	1681.790	1682.654	1684.382
15	1623.053	1624.780	1627.372	1629.099	1630.827
20	1573.817	1574.681	1579.863	1580.727	1580.727
25	1441.658	1445.113	1449.432	1452.023	1452.023
30	1331.957	1336.276	1342.322	1345.778	1346.641
35	1239.532	1246.442	1255.944	1260.263	1262.854
40	1087.506	1096.144	1109.100	1116.875	1120.330
45	966.576	978.669	995.945	1008.038	1012.356
50	807.639	819.732	843.055	861.194	868.104
55	665.979	680.663	709.168	730.762	740.264
60	531.228	546.776	577.009	608.969	621.925
65	418.072	434.484	473.354	517.407	531.228
70	304.052	323.920	374.883	422.391	441.394
75	198.671	222.857	279.003	329.966	348.106
80	116.611	147.707	209.036	260.863	279.003
85	50.963	84.651	145.116	194.352	211.627
90	0.000	37.143	86.379	126.113	141.661
95	0.000	15.548	55.282	90.697	104.518
100	0.000	0.000	33.688	61.329	70.830
105	0.000	0.000	21.595	40.598	49.236
110	0.000	0.000	0.000	27.641	33.688
115	0.000	0.000	0.000	20.731	25.050
120	0.000	0.000	0.000	17.276	19.003
125	0.000	0.000	0.000	0.000	0.000
130	0.000	0.000	0.000	0.000	0.000
135	0.000	0.000	0.000	0.000	0.000
140	0.000	0.000	0.000	0.000	0.000
145	0.000	0.000	0.000	0.000	0.000
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	623.18	N.A.	13.90
0-30	1293.59	N.A.	28.90
0-40	2069.37	N.A.	46.20
0-60	3461.46	N.A.	77.30
0-80	4230.43	N.A.	94.50
0-90	4383.51	N.A.	97.90
10-90	4220.8	N.A.	94.30
20-40	1446.19	N.A.	32.30
20-50	2205.42	N.A.	49.30
40-70	1862.74	N.A.	41.60
60-80	768.97	N.A.	17.20
70-80	298.32	N.A.	6.70
80-90	153.08	N.A.	3.40
90-110	83.07	N.A.	1.90
90-120	91.64	N.A.	2.00
90-130	93.18	N.A.	2.10
90-150	93.18	N.A.	2.10
90-180	93.18	N.A.	2.10
110-180	10.12	N.A.	0.20
0-180	4476.69	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	162.71
10-20	460.47
20-30	670.41
30-40	775.78
40-50	759.23
50-60	632.86
60-70	470.65
70-80	298.32
80-90	153.08
90-100	59.95
100-110	23.11
110-120	8.57
120-130	1.55
130-140	0.00
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	119	119	119	119	116	116	116	116	110	110	110	105	105	105	100	100	100	98
1	108	103	99	95	105	101	97	93	96	93	90	92	89	86	88	86	83	81
2	98	90	83	77	95	88	82	76	84	79	74	80	76	72	77	74	70	68
3	90	79	71	65	87	78	70	64	74	68	63	71	66	61	69	64	60	58
4	82	71	62	55	80	69	61	55	66	59	54	64	58	53	61	56	52	50
5	76	63	54	48	74	62	54	48	60	52	47	58	51	46	55	50	45	43
6	70	57	48	42	68	56	48	42	54	47	41	52	46	41	50	45	40	38
7	65	52	43	37	64	51	43	37	49	42	37	48	41	36	46	40	36	34
8	61	48	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30
9	57	44	36	30	55	43	35	30	42	35	30	41	34	30	39	34	29	27
10	53	40	33	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25

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UGR TABLE - CORRECTED

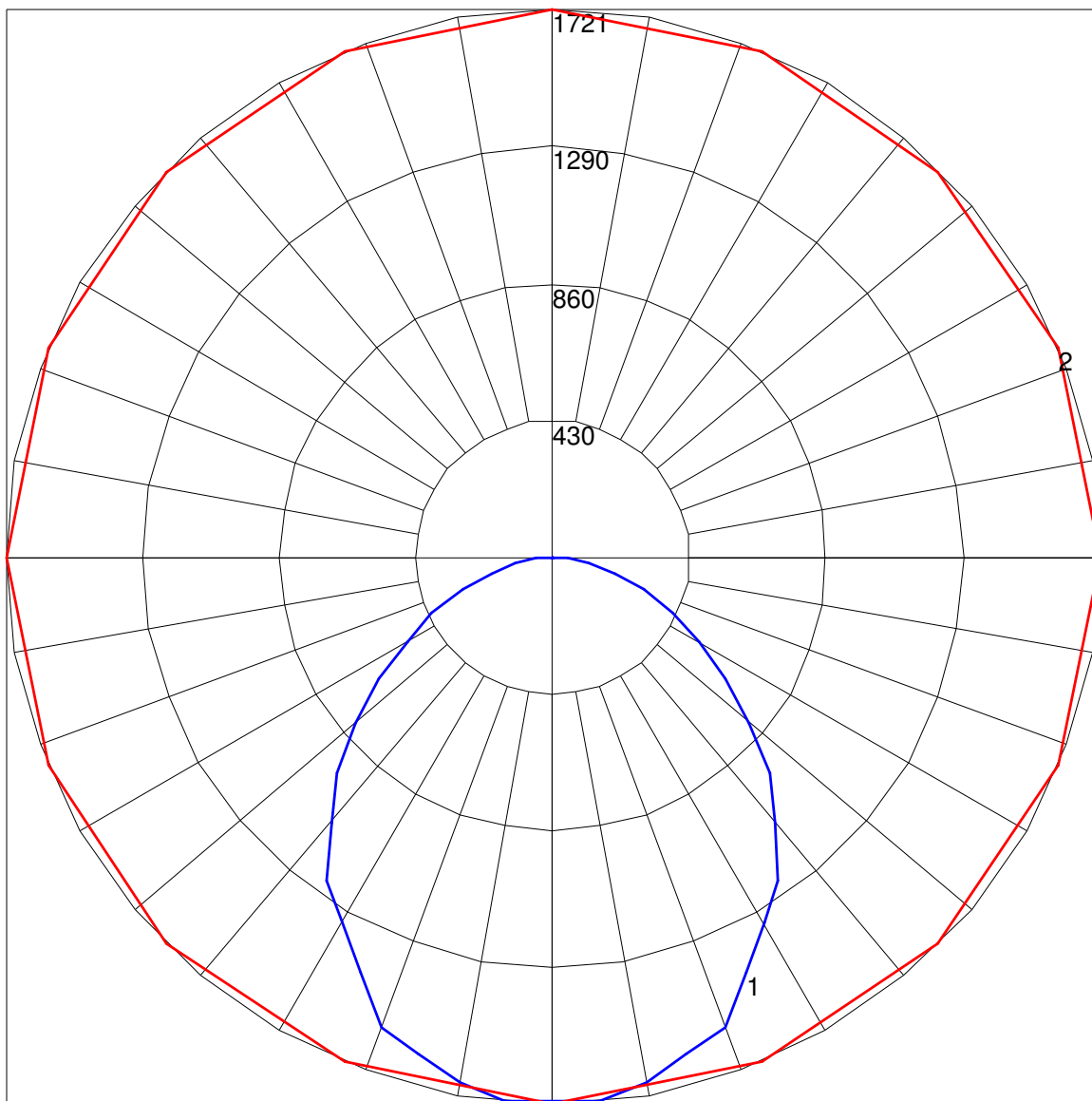
Reflectances

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	15.1	16.6	15.5	17.0	17.4	16.2	17.8	16.6	18.2	18.5
	3H	16.4	17.9	16.8	18.2	18.6	18.3	19.7	18.7	20.1	20.5
	4H	16.8	18.2	17.3	18.6	19.0	19.2	20.5	19.6	20.9	21.3
	6H	17.1	18.4	17.5	18.8	19.2	20.1	21.3	20.5	21.7	22.2
	8H	17.2	18.4	17.6	18.8	19.2	20.5	21.7	21.0	22.1	22.6
	12H	17.2	18.3	17.7	18.8	19.2	20.9	22.1	21.4	22.5	23.0
4H	2H	15.7	17.1	16.2	17.5	17.9	16.7	18.0	17.1	18.4	18.8
	3H	17.3	18.4	17.8	18.9	19.3	18.9	20.1	19.4	20.5	20.9
	4H	17.8	18.9	18.3	19.3	19.8	20.0	21.0	20.5	21.5	21.9
	6H	18.2	19.1	18.7	19.6	20.1	21.1	22.0	21.5	22.4	22.9
	8H	18.3	19.2	18.8	19.6	20.1	21.6	22.4	22.1	22.9	23.4
	12H	18.4	19.1	18.9	19.6	20.2	22.1	22.9	22.7	23.4	23.9
8H	4H	18.3	19.1	18.8	19.6	20.1	20.2	21.0	20.7	21.5	22.0
	6H	18.8	19.5	19.3	20.0	20.5	21.4	22.1	21.9	22.6	23.2
	8H	18.9	19.6	19.5	20.1	20.7	22.0	22.7	22.6	23.2	23.8
	12H	19.1	19.6	19.6	20.2	20.8	22.8	23.3	23.3	23.9	24.5
12H	4H	18.4	19.1	18.9	19.7	20.2	20.2	20.9	20.7	21.5	22.0
	6H	18.9	19.6	19.5	20.1	20.7	21.4	22.1	22.0	22.6	23.2
	8H	19.2	19.8	19.7	20.3	20.9	22.1	22.7	22.7	23.2	23.8

Maximum UGR = 24.5

POLAR GRAPH



Maximum Candela = 1720.66 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.)