



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L52-927-AF-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM BALLABS TEST NO. 20802.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 2023-07-24
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] 2x4' RECESSED LED LUMINAIRE
 [LUMINAIRE] WHITE REFLECTOR w/FROSTED CENTER LENS
 [LUMINAIRE] 0-10V DIMMING DRIVER
 [LUMCAT] LT-24-L52-927-AF-DIM-UNV
 [LAMPCAT] 22 INCH LED ARRAYS
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] Indoor, Classroom, Office, Direct
 [_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4161
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	112
Total Luminaire Watts	37.2
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.36
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.93 ft
Luminous Width (90-270)	1.91 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	1719	1911	2056
55	1564	1854	2073
65	1336	1842	2170
75	985	1935	2428
85	377	1554	1428

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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	1445.645	1445.645	1445.645	1445.645	1445.645
5	1459.505	1442.180	1433.171	1429.705	1429.705
10	1432.477	1414.459	1409.608	1410.301	1408.222
15	1389.510	1377.036	1374.957	1379.808	1382.580
20	1333.375	1322.287	1327.138	1340.305	1343.078
25	1259.915	1250.213	1267.538	1286.250	1290.408
30	1175.366	1173.287	1196.850	1221.799	1231.501
35	1076.264	1084.580	1119.231	1151.110	1162.892
40	971.618	986.864	1040.227	1076.957	1090.817
45	846.180	872.515	940.432	1001.417	1011.813
50	741.534	774.106	840.636	900.236	917.562
55	624.413	656.985	740.148	803.906	827.469
60	509.372	545.409	634.116	711.041	733.218
65	392.944	442.841	541.944	616.790	638.274
70	284.139	340.274	442.841	522.539	539.865
75	177.414	246.023	348.590	419.972	437.297
80	85.242	159.395	252.953	286.218	276.516
85	22.870	79.005	94.251	83.856	86.628
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	525.61	N.A.	12.60
0-30	1110.89	N.A.	26.70
0-40	1811.28	N.A.	43.50
0-60	3189.23	N.A.	76.60
0-80	4059.19	N.A.	97.50
0-90	4161.47	N.A.	100.00
10-90	4025.01	N.A.	96.70
20-40	1285.67	N.A.	30.90
20-50	2008.42	N.A.	48.30
40-70	1902.04	N.A.	45.70
60-80	869.97	N.A.	20.90
70-80	345.88	N.A.	8.30
80-90	102.27	N.A.	2.50
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	4161.47	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	136.46
10-20	389.15
20-30	585.29
30-40	700.38
40-50	722.75
50-60	655.20
60-70	524.08
70-80	345.88
80-90	102.27
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
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	111	111	111	106	106	106	102	102	102	100
1	108	103	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	83
2	98	90	82	77	95	88	81	76	84	79	74	81	76	72	78	74	71	68
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	59	57
4	82	69	60	53	79	68	60	53	65	58	52	63	57	52	61	55	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	62	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	38	30	26	37	30	25	36	30	25	24

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UGR TABLE - CORRECTED

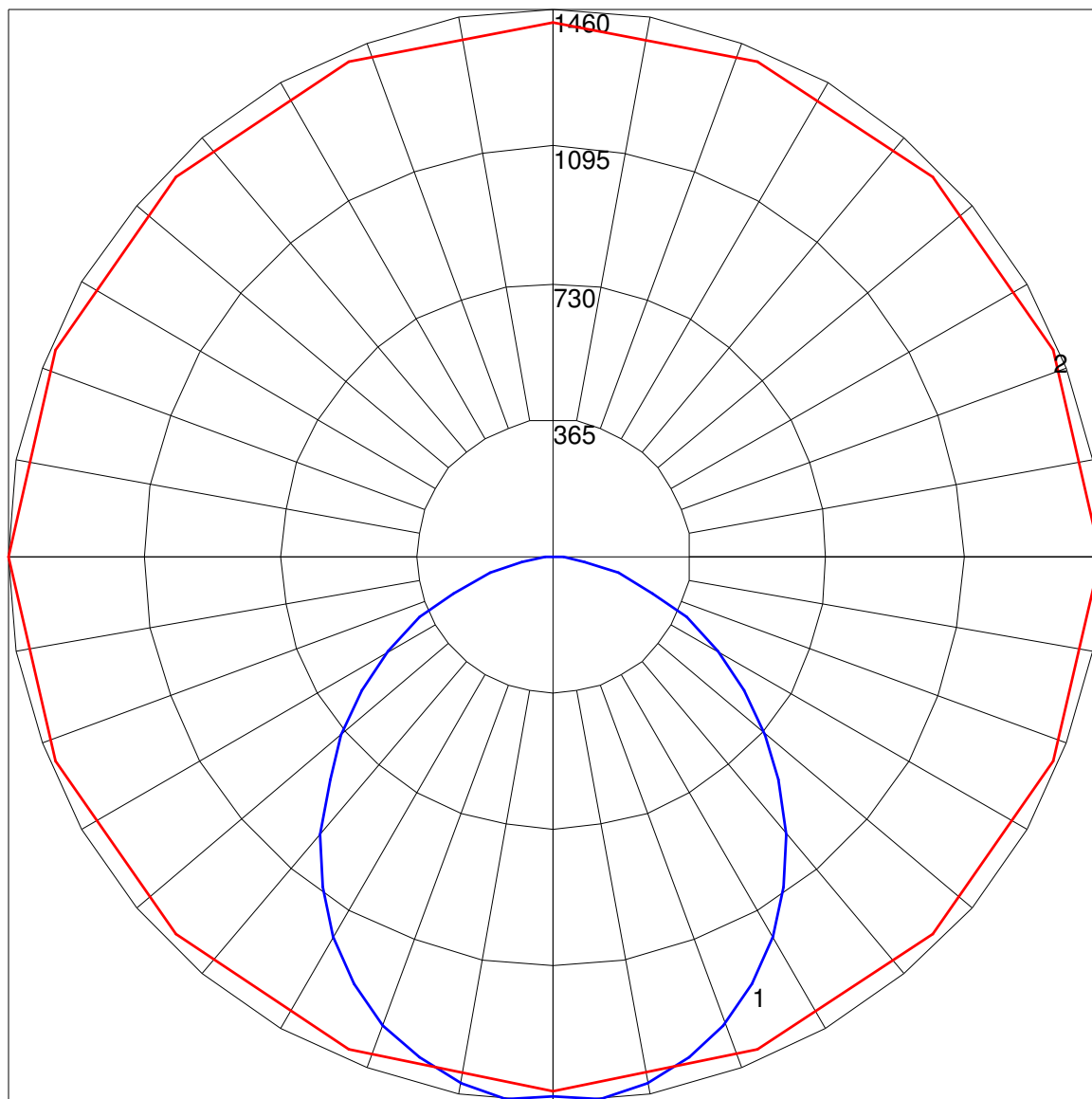
Reflectances

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	13.3	15.0	13.7	15.3	15.6	15.0	16.7	15.4	17.0	17.3
	3H	14.9	16.4	15.3	16.7	17.1	17.4	18.9	17.8	19.2	19.6
	4H	15.4	16.8	15.8	17.2	17.6	18.4	19.9	18.8	20.2	20.6
	6H	15.7	17.1	16.1	17.4	17.8	19.3	20.6	19.7	21.0	21.4
	8H	15.8	17.1	16.2	17.5	17.9	19.5	20.8	19.9	21.2	21.6
	12H	15.8	17.1	16.3	17.4	17.9	19.6	20.9	20.1	21.2	21.7
4H	2H	14.3	15.7	14.7	16.0	16.4	15.6	17.0	16.0	17.4	17.7
	3H	16.1	17.3	16.5	17.7	18.1	18.2	19.4	18.6	19.8	20.2
	4H	16.8	17.9	17.2	18.3	18.8	19.5	20.6	19.9	21.0	21.4
	6H	17.3	18.2	17.7	18.7	19.1	20.5	21.5	21.0	21.9	22.3
	8H	17.4	18.3	17.9	18.7	19.2	20.8	21.7	21.3	22.1	22.6
	12H	17.5	18.3	17.9	18.7	19.2	21.0	21.8	21.4	22.2	22.7
8H	4H	17.6	18.5	18.0	18.9	19.4	19.8	20.7	20.3	21.1	21.6
	6H	18.2	19.0	18.7	19.5	19.9	21.0	21.7	21.5	22.2	22.7
	8H	18.5	19.1	19.0	19.6	20.1	21.4	22.1	21.9	22.6	23.1
	12H	18.6	19.2	19.1	19.7	20.2	21.6	22.2	22.1	22.7	23.3
12H	4H	17.7	18.5	18.2	19.0	19.5	19.8	20.6	20.3	21.1	21.6
	6H	18.5	19.2	19.0	19.6	20.2	21.1	21.7	21.6	22.2	22.7
	8H	18.8	19.4	19.3	19.9	20.4	21.5	22.1	22.0	22.6	23.2

Maximum UGR = 23.3

POLAR GRAPH



Maximum Candela = 1459.505 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.)