



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L52-930-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-L52-930-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	4266
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	115
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	1762	1959	2107
55	1603	1900	2125
65	1369	1888	2224
75	1009	1983	2488
85	386	1593	1464

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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	1481.786	1481.786	1481.786	1481.786	1481.786
5	1495.993	1478.234	1469.000	1465.448	1465.448
10	1468.290	1449.821	1444.848	1445.558	1443.427
15	1424.248	1411.462	1409.331	1414.303	1417.145
20	1366.710	1355.344	1360.317	1373.813	1376.655
25	1291.413	1281.468	1299.227	1318.406	1322.668
30	1204.750	1202.619	1226.771	1252.344	1262.289
35	1103.171	1111.695	1147.212	1179.888	1191.964
40	995.908	1011.536	1066.233	1103.881	1118.088
45	867.335	894.328	963.942	1026.453	1037.108
50	760.072	793.459	861.652	922.742	940.501
55	640.024	673.410	758.652	824.004	848.156
60	522.106	559.044	649.969	728.817	751.548
65	402.767	453.912	555.492	632.210	654.231
70	291.243	348.781	453.912	535.602	553.361
75	181.849	252.174	357.305	430.471	448.230
80	87.373	163.380	259.277	293.374	283.429
85	23.441	80.980	96.607	85.952	88.794
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	538.75	N.A.	12.60
0-30	1138.67	N.A.	26.70
0-40	1856.56	N.A.	43.50
0-60	3268.96	N.A.	76.60
0-80	4160.68	N.A.	97.50
0-90	4265.51	N.A.	100.00
10-90	4125.64	N.A.	96.70
20-40	1317.81	N.A.	30.90
20-50	2058.63	N.A.	48.30
40-70	1949.59	N.A.	45.70
60-80	891.72	N.A.	20.90
70-80	354.53	N.A.	8.30
80-90	104.83	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	4265.51	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	139.87
10-20	398.88
20-30	599.92
30-40	717.89
40-50	740.82
50-60	671.58
60-70	537.19
70-80	354.53
80-90	104.83
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	70	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

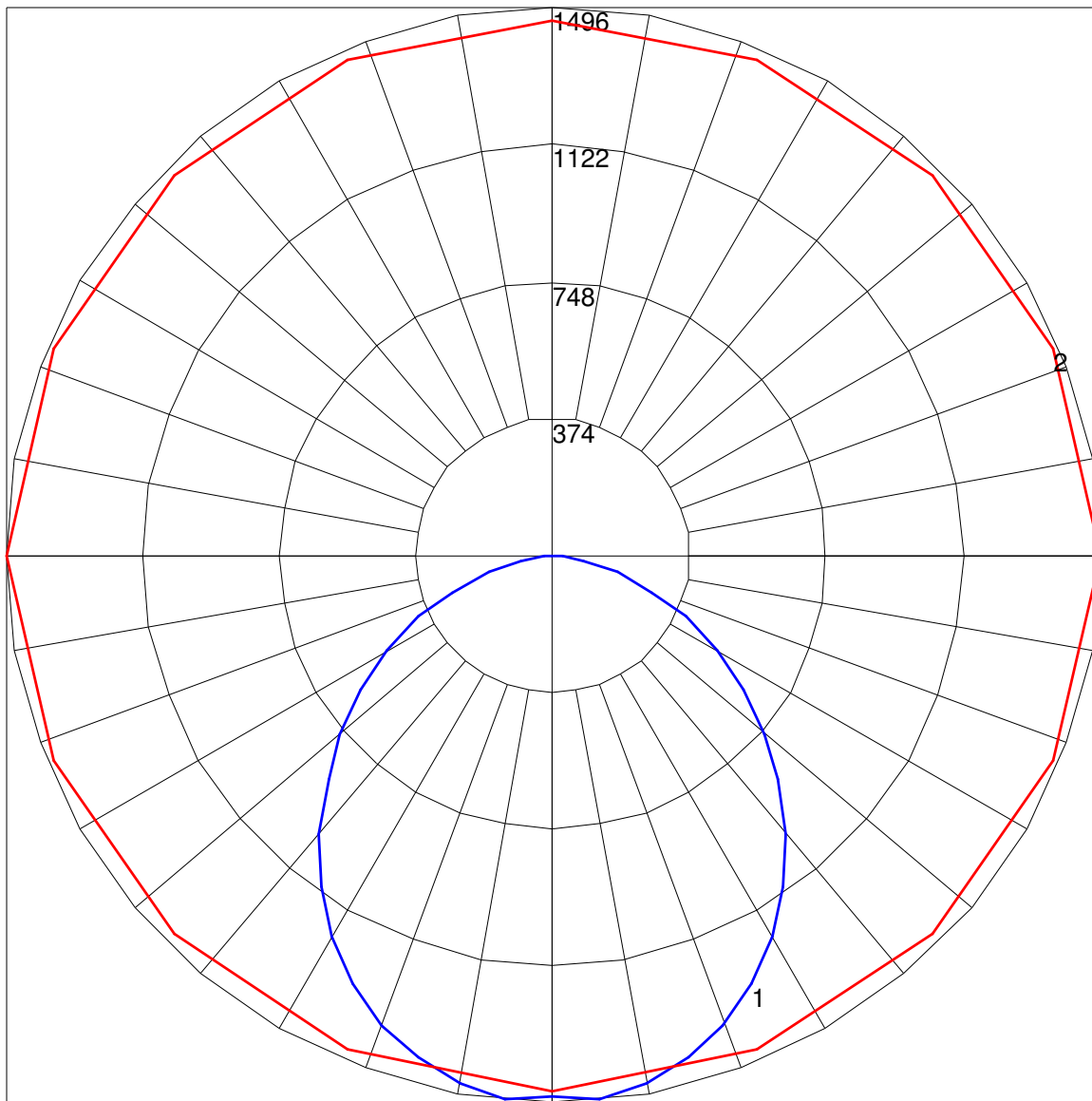
Reflectances

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 = 1495.993 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.)