



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L52-850-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-L52-850-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	5514
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	148
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	2278	2532	2724
55	2072	2457	2746
65	1770	2441	2875
75	1305	2564	3216
85	500	2059	1892

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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	1915.479	1915.479	1915.479	1915.479	1915.479
5	1933.845	1910.888	1898.951	1894.360	1894.360
10	1898.033	1874.158	1867.730	1868.649	1865.894
15	1841.101	1824.572	1821.818	1828.245	1831.918
20	1766.722	1752.030	1758.458	1775.905	1779.578
25	1669.387	1656.532	1679.488	1704.281	1709.790
30	1557.360	1554.605	1585.826	1618.883	1631.739
35	1426.050	1437.069	1482.981	1525.221	1540.832
40	1287.393	1307.595	1378.300	1426.968	1445.333
45	1121.189	1156.083	1246.072	1326.878	1340.652
50	982.533	1025.691	1113.843	1192.813	1215.769
55	827.348	870.506	980.696	1065.176	1096.396
60	674.917	722.667	840.203	942.129	971.514
65	520.650	586.765	718.075	817.247	845.713
70	376.484	450.863	586.765	692.364	715.320
75	235.073	325.980	461.882	556.462	579.419
80	112.945	211.199	335.163	379.239	366.384
85	30.302	104.681	124.883	111.109	114.782
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	696.43	N.A.	12.60
0-30	1471.93	N.A.	26.70
0-40	2399.94	N.A.	43.50
0-60	4225.73	N.A.	76.60
0-80	5378.43	N.A.	97.50
0-90	5513.95	N.A.	100.00
10-90	5333.14	N.A.	96.70
20-40	1703.51	N.A.	30.90
20-50	2661.15	N.A.	48.30
40-70	2520.2	N.A.	45.70
60-80	1152.71	N.A.	20.90
70-80	458.29	N.A.	8.30
80-90	135.51	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	5513.95	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	180.81
10-20	515.62
20-30	775.50
30-40	928.01
40-50	957.64
50-60	868.14
60-70	694.41
70-80	458.29
80-90	135.51
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

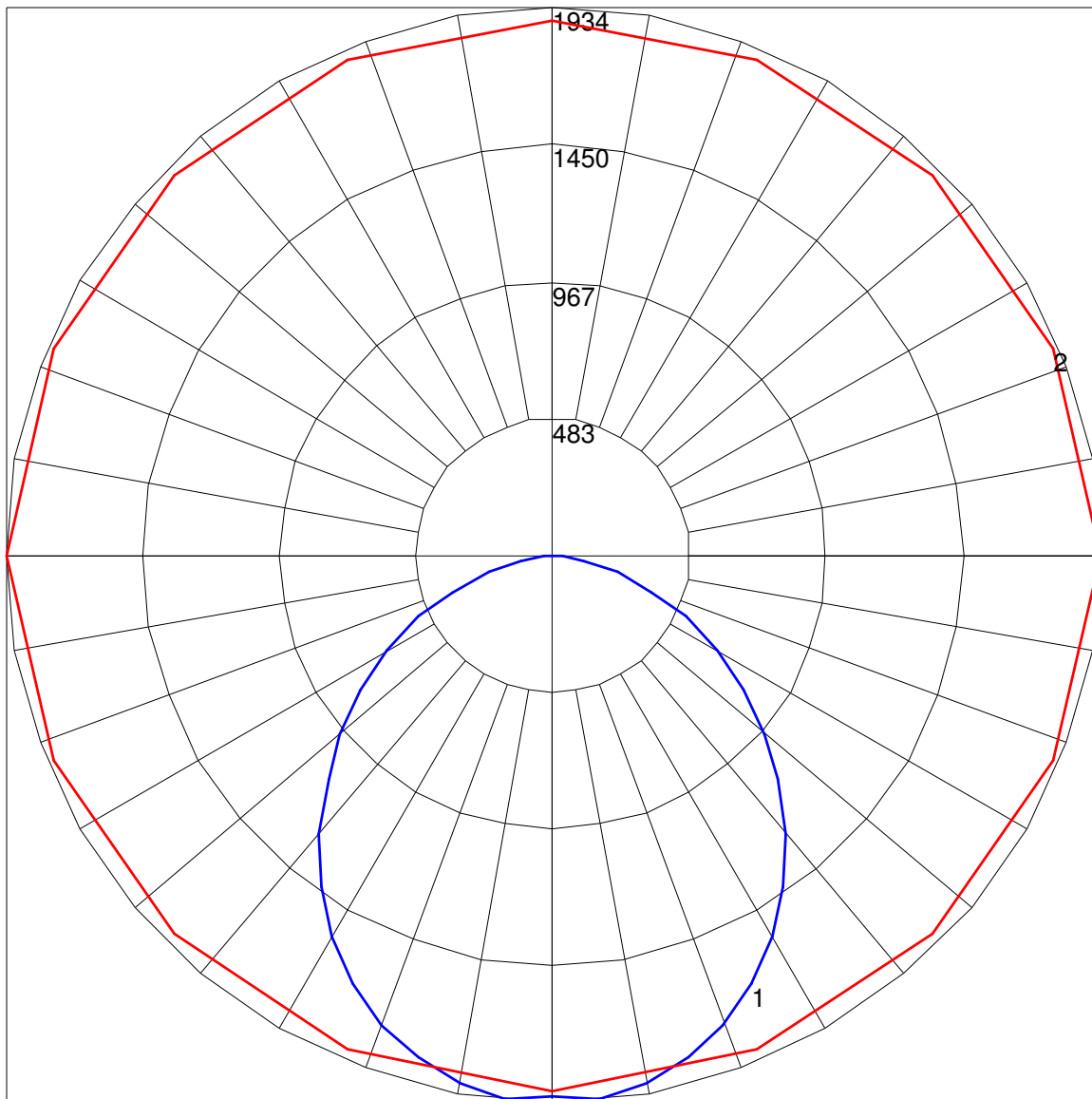
Reflectances

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	14.2	15.9	14.6	16.2	16.5	15.9	17.6	16.3	17.9	18.2
	3H	15.8	17.3	16.2	17.6	18.0	18.3	19.8	18.7	20.1	20.5
	4H	16.3	17.7	16.7	18.1	18.5	19.3	20.8	19.7	21.1	21.5
	6H	16.6	18.0	17.0	18.3	18.7	20.2	21.5	20.6	21.9	22.3
	8H	16.7	18.0	17.1	18.4	18.8	20.4	21.7	20.8	22.1	22.5
	12H	16.7	18.0	17.2	18.3	18.8	20.5	21.8	21.0	22.1	22.6
4H	2H	15.2	16.6	15.6	16.9	17.3	16.5	17.9	16.9	18.3	18.6
	3H	17.0	18.2	17.4	18.6	19.0	19.1	20.3	19.5	20.7	21.1
	4H	17.7	18.8	18.1	19.2	19.7	20.4	21.5	20.8	21.9	22.3
	6H	18.2	19.1	18.6	19.6	20.0	21.4	22.4	21.9	22.8	23.2
	8H	18.3	19.2	18.8	19.6	20.1	21.7	22.6	22.2	23.0	23.5
	12H	18.4	19.2	18.8	19.6	20.1	21.9	22.7	22.3	23.1	23.6
8H	4H	18.5	19.4	18.9	19.8	20.3	20.7	21.6	21.2	22.0	22.5
	6H	19.1	19.9	19.6	20.4	20.8	21.9	22.6	22.4	23.1	23.6
	8H	19.4	20.0	19.9	20.5	21.0	22.3	23.0	22.8	23.5	24.0
	12H	19.5	20.1	20.0	20.6	21.1	22.5	23.1	23.0	23.6	24.2
12H	4H	18.6	19.4	19.1	19.9	20.4	20.7	21.5	21.2	22.0	22.5
	6H	19.4	20.1	19.9	20.5	21.1	22.0	22.6	22.5	23.1	23.6
	8H	19.7	20.3	20.2	20.8	21.3	22.4	23.0	22.9	23.5	24.1

Maximum UGR = 24.2

POLAR GRAPH



Maximum Candela = 1933.845 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.)