



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-L40-930-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-L40-930-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	3257
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	102
Total Luminaire Watts	32
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	1346	1495	1609
55	1224	1451	1622
65	1046	1442	1698
75	771	1514	1900
85	295	1216	1118

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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	1131.421	1131.421	1131.421	1131.421	1131.421
5	1142.269	1128.709	1121.658	1118.946	1118.946
10	1121.116	1107.014	1103.217	1103.760	1102.132
15	1087.488	1077.725	1076.098	1079.895	1082.064
20	1043.555	1034.876	1038.673	1048.978	1051.148
25	986.061	978.468	992.028	1006.672	1009.926
30	919.890	918.263	936.704	956.230	963.824
35	842.329	848.837	875.957	900.907	910.127
40	760.428	772.361	814.124	842.871	853.719
45	662.256	682.867	736.021	783.751	791.887
50	580.355	605.847	657.917	704.562	718.122
55	488.692	514.184	579.270	629.170	647.611
60	398.655	426.859	496.285	556.490	573.847
65	307.534	346.586	424.147	482.725	499.539
70	222.379	266.313	346.586	408.961	422.520
75	138.851	192.548	272.821	328.687	342.247
80	66.714	124.749	197.972	224.006	216.413
85	17.899	61.832	73.765	65.629	67.799
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	411.36	N.A.	12.60
0-30	869.43	N.A.	26.70
0-40	1417.58	N.A.	43.50
0-60	2496.02	N.A.	76.60
0-80	3176.89	N.A.	97.50
0-90	3256.94	N.A.	100.00
10-90	3150.14	N.A.	96.70
20-40	1006.22	N.A.	30.90
20-50	1571.87	N.A.	48.30
40-70	1488.61	N.A.	45.70
60-80	680.87	N.A.	20.90
70-80	270.70	N.A.	8.30
80-90	80.04	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	3256.94	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	106.80
10-20	304.56
20-30	458.07
30-40	548.15
40-50	565.65
50-60	512.79
60-70	410.17
70-80	270.70
80-90	80.04
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

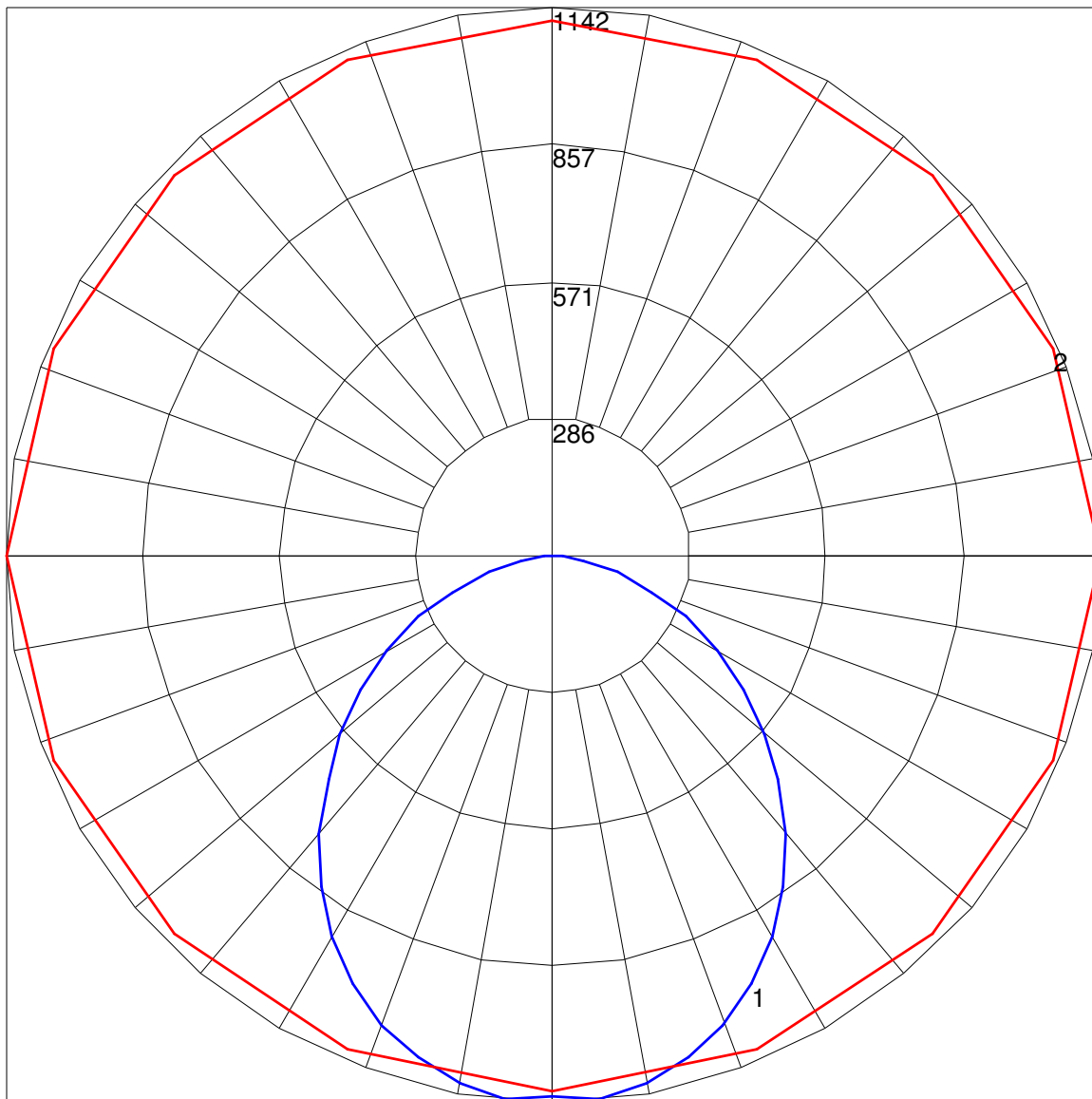
Reflectances

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	12.4	14.1	12.8	14.4	14.7	14.1	15.8	14.5	16.1	16.4
	3H	14.0	15.5	14.4	15.8	16.2	16.5	18.0	16.9	18.3	18.7
	4H	14.5	15.9	14.9	16.3	16.7	17.5	19.0	17.9	19.3	19.7
	6H	14.8	16.2	15.2	16.5	16.9	18.4	19.7	18.8	20.1	20.4
	8H	14.9	16.2	15.3	16.6	17.0	18.6	19.9	19.0	20.3	20.7
	12H	14.9	16.1	15.4	16.5	17.0	18.7	20.0	19.2	20.3	20.8
4H	2H	13.4	14.8	13.8	15.1	15.5	14.7	16.1	15.1	16.5	16.8
	3H	15.2	16.4	15.6	16.8	17.2	17.3	18.5	17.7	18.9	19.3
	4H	15.9	17.0	16.3	17.4	17.8	18.6	19.7	19.0	20.1	20.5
	6H	16.4	17.3	16.8	17.8	18.2	19.6	20.6	20.1	21.0	21.4
	8H	16.5	17.4	17.0	17.8	18.3	19.9	20.8	20.4	21.2	21.7
	12H	16.6	17.4	17.0	17.8	18.3	20.1	20.9	20.5	21.3	21.8
8H	4H	16.7	17.6	17.1	18.0	18.5	18.9	19.8	19.4	20.2	20.7
	6H	17.3	18.1	17.8	18.6	19.0	20.1	20.8	20.6	21.3	21.8
	8H	17.6	18.2	18.1	18.7	19.2	20.5	21.2	21.0	21.7	22.2
	12H	17.7	18.3	18.2	18.8	19.3	20.7	21.3	21.2	21.8	22.4
12H	4H	16.8	17.6	17.3	18.1	18.6	18.9	19.7	19.4	20.2	20.7
	6H	17.6	18.3	18.1	18.7	19.3	20.2	20.8	20.7	21.3	21.8
	8H	17.9	18.5	18.4	19.0	19.5	20.6	21.2	21.1	21.7	22.3

Maximum UGR = 22.4

POLAR GRAPH



Maximum Candela = 1142.269 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.)