



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-22-P31-840-AF-POE PR_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 20220.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 02-10-2022

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO

[LUMINAIRE] 2x2' RECESSED LED LUMINAIRE

[MORE] WHITE REFLECTOR w/FROSTED ACRYLIC CENTER LENS

[MORE] POE READY LUMINAIRE

[LUMCAT] LT-22-P31-840-AF-POE PR

[LAMPCAT] HLM 80 CRI 4000K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3234
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	129
Total Luminaire Watts	25
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.30
Spacing Criterion (Diagonal)	1.38
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.92 ft
Luminous Width (90-270)	1.92 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2735	2997	3201
55	2512	2901	3272
65	2191	2900	3539
75	1674	3195	4171
85	767	2671	2585

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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	1089.000	1089.000	1089.000	1089.000	1089.000
5	1089.846	1083.923	1083.077	1081.385	1080.538
10	1072.077	1068.692	1066.154	1066.154	1068.692
15	1040.769	1040.769	1039.923	1045.000	1048.385
20	997.615	998.461	1002.692	1013.692	1019.615
25	950.231	952.769	960.385	977.308	984.923
30	891.846	896.923	910.461	934.154	943.461
35	821.615	833.461	856.308	886.769	895.231
40	741.231	758.154	795.385	828.385	838.538
45	660.846	680.308	724.308	764.077	773.385
50	577.077	599.923	646.461	698.923	706.538
55	492.462	515.308	568.615	634.615	641.385
60	405.308	430.692	492.462	563.538	577.077
65	316.462	347.769	418.846	492.462	511.077
70	231.000	269.077	350.308	425.615	442.538
75	148.077	195.462	282.615	358.769	368.923
80	75.308	125.231	199.692	253.000	248.769
85	22.846	49.077	79.538	98.154	77.000
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	396.93	N.A.	12.30
0-30	841.42	N.A.	26.00
0-40	1378.16	N.A.	42.60
0-60	2446.26	N.A.	75.60
0-80	3146.14	N.A.	97.30
0-90	3234.14	N.A.	100.00
10-90	3131.21	N.A.	96.80
20-40	981.22	N.A.	30.30
20-50	1538.1	N.A.	47.60
40-70	1483.34	N.A.	45.90
60-80	699.88	N.A.	21.60
70-80	284.64	N.A.	8.80
80-90	88.00	N.A.	2.70
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	3234.14	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	102.93
10-20	294.01
20-30	444.48
30-40	536.74
40-50	556.88
50-60	511.23
60-70	415.24
70-80	284.64
80-90	88.00
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	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	81	75	84	78	73	80	76	71	77	73	70	68
3	89	78	69	63	86	76	68	62	73	66	61	70	65	60	68	63	59	57
4	81	69	60	53	79	67	59	52	65	58	52	63	56	51	60	55	50	48
5	75	61	52	45	72	60	52	45	58	50	45	56	49	44	54	48	44	41
6	69	55	46	39	67	54	46	39	52	45	39	51	44	39	49	43	38	36
7	64	50	41	35	62	49	41	35	48	40	34	46	39	34	45	39	34	32
8	59	46	37	31	58	45	37	31	44	36	31	42	35	30	41	35	30	28
9	56	42	34	28	54	41	33	28	40	33	28	39	32	27	38	32	27	25
10	52	39	31	25	51	38	30	25	37	30	25	36	30	25	35	29	25	23

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UGR TABLE - CORRECTED

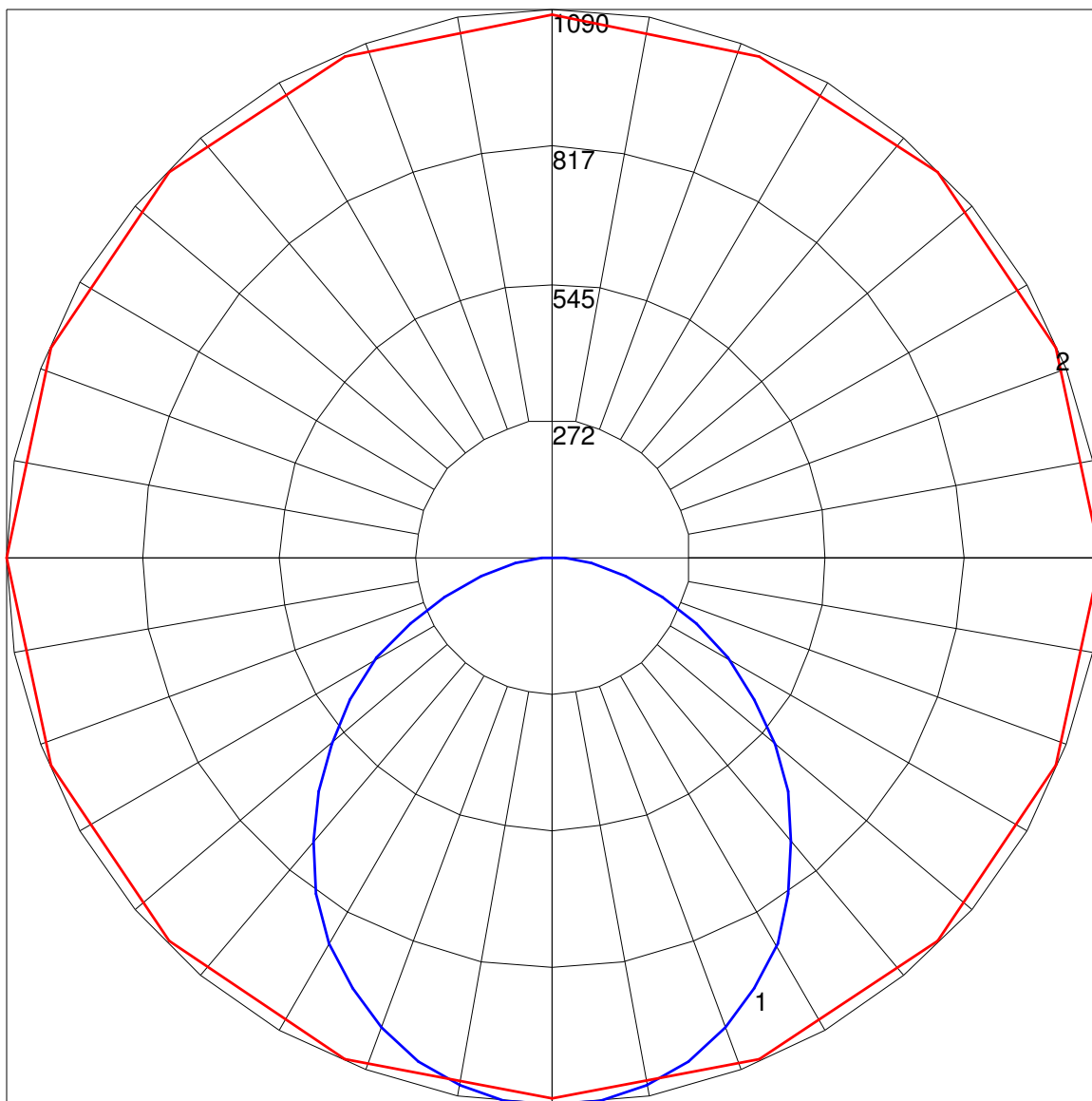
Reflectances

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	15.0	16.6	15.3	16.9	17.3	16.7	18.4	17.1	18.7	19.0
	3H	16.6	18.1	17.0	18.4	18.8	19.1	20.7	19.5	21.0	21.4
	4H	17.1	18.6	17.5	18.9	19.3	20.3	21.7	20.7	22.1	22.5
	6H	17.5	18.8	17.9	19.2	19.6	21.3	22.6	21.7	23.0	23.4
	8H	17.6	18.9	18.0	19.2	19.6	21.6	22.8	22.0	23.2	23.6
	12H	17.6	18.8	18.0	19.2	19.7	21.7	22.9	22.1	23.3	23.7
4H	2H	15.9	17.3	16.3	17.7	18.0	17.2	18.7	17.6	19.0	19.4
	3H	17.8	19.0	18.2	19.4	19.8	20.0	21.2	20.4	21.6	22.0
	4H	18.5	19.6	18.9	20.0	20.5	21.4	22.5	21.8	22.9	23.3
	6H	19.0	20.0	19.5	20.4	20.9	22.5	23.5	23.0	23.9	24.4
	8H	19.1	20.0	19.6	20.5	20.9	22.9	23.8	23.4	24.2	24.7
	12H	19.2	20.0	19.7	20.5	21.0	23.1	23.9	23.6	24.4	24.9
8H	4H	19.3	20.2	19.7	20.6	21.1	21.7	22.6	22.1	23.0	23.5
	6H	20.0	20.7	20.5	21.2	21.7	23.0	23.8	23.5	24.3	24.8
	8H	20.2	20.9	20.7	21.4	21.8	23.5	24.2	24.0	24.7	25.2
	12H	20.3	20.9	20.8	21.4	22.0	23.8	24.4	24.3	24.9	25.5
12H	4H	19.5	20.3	19.9	20.8	21.2	21.7	22.5	22.2	23.0	23.5
	6H	20.2	20.9	20.8	21.4	21.9	23.1	23.8	23.6	24.2	24.8
	8H	20.5	21.1	21.0	21.6	22.2	23.6	24.2	24.1	24.7	25.3

Maximum UGR = 25.5

POLAR GRAPH



Maximum Candela = 1089.846 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.)