



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : LT-24-P65-835-AF-(P48)-POE PR\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 20168.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 15-DEC-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2x4' RECESSED LED LUMINAIRE

[MORE] WHITE REFLECTOR w/FROSTED ACRYLIC CENTER LENS

[LUMCAT] LT-24-P65-835-AF-(P48)-POE PR

[LAMPCAT] HLM 80 CRI 3500K CCT

[\_SEARCH\_SOURCETYPE] LED

[\_SEARCH\_APPLICATION] Indoor, Architectural, Classroom, Commercial, Office, Direct

[\_SEARCH\_MOUNTING] Recessed

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4813
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	158
Total Luminaire Watts	30.5
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.24
Spacing Criterion (90-270)	1.30
Spacing Criterion (Diagonal)	1.38
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.92 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	2023	2145	2364
55	1856	2122	2461
65	1613	2156	2644
75	1273	2310	3116
85	659	2621	2764

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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>
<b>0</b>	1581.962	1581.962	1581.962	1581.962	1581.962
<b>5</b>	1590.678	1573.246	1568.888	1568.888	1568.888
<b>10</b>	1562.787	1547.098	1547.098	1550.584	1549.713
<b>15</b>	1518.335	1505.261	1510.491	1520.078	1522.693
<b>20</b>	1456.451	1451.221	1458.194	1477.370	1485.214
<b>25</b>	1384.108	1380.622	1392.824	1425.073	1434.661
<b>30</b>	1298.691	1301.306	1320.481	1364.933	1373.649
<b>35</b>	1210.659	1215.017	1237.678	1293.461	1312.636
<b>40</b>	1108.681	1117.397	1151.390	1215.888	1244.651
<b>45</b>	998.859	1018.034	1058.999	1125.241	1167.078
<b>50</b>	873.348	908.212	954.407	1029.365	1079.918
<b>55</b>	743.479	790.545	849.814	931.745	985.785
<b>60</b>	610.123	662.419	742.607	833.254	883.807
<b>65</b>	475.896	534.294	636.271	734.763	780.086
<b>70</b>	349.513	408.783	525.578	635.400	678.108
<b>75</b>	230.104	294.602	417.499	529.936	563.057
<b>80</b>	119.410	191.753	306.805	395.708	389.607
<b>85</b>	40.094	93.262	159.504	206.570	168.220
<b>90</b>	0.000	0.000	0.000	0.000	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	576.68	N.A.	12.00
0-30	1223.13	N.A.	25.40
0-40	2006.75	N.A.	41.70
0-60	3601.00	N.A.	74.80
0-80	4658.34	N.A.	96.80
0-90	4813.23	N.A.	100.00
10-90	4663.8	N.A.	96.90
20-40	1430.08	N.A.	29.70
20-50	2256.11	N.A.	46.90
40-70	2221.9	N.A.	46.20
60-80	1057.34	N.A.	22.00
70-80	429.69	N.A.	8.90
80-90	154.89	N.A.	3.20
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	4813.23	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	149.43
10-20	427.24
20-30	646.46
30-40	783.62
40-50	826.03
50-60	768.21
60-70	627.65
70-80	429.69
80-90	154.89
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	100	96	92	96	92	89	92	89	86	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	35
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

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**UGR TABLE - CORRECTED**

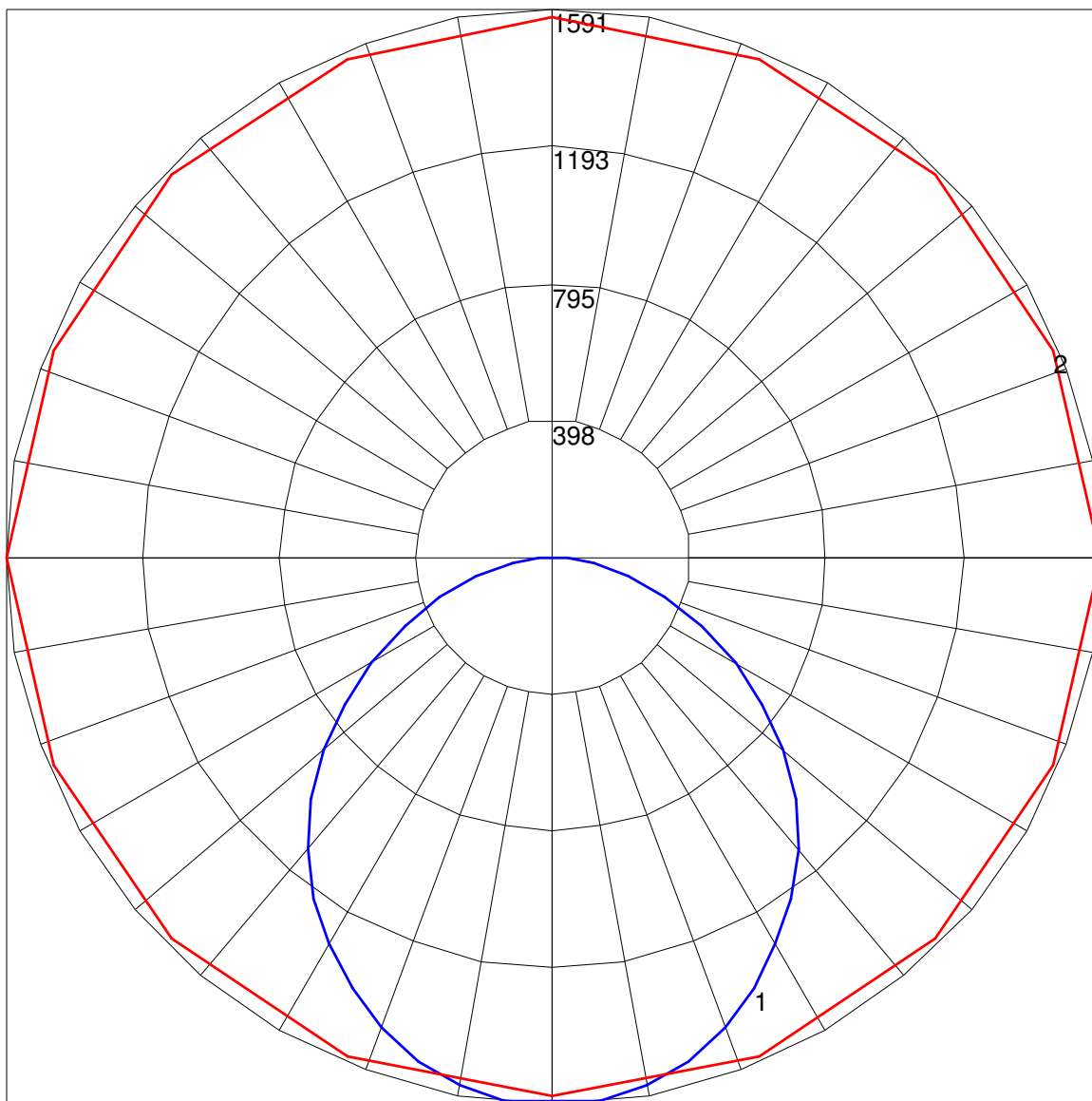
Reflectances

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	14.0	15.7	14.4	16.0	16.4	15.6	17.3	15.9	17.6	17.9
	3H	15.6	17.2	16.0	17.5	17.9	18.1	19.6	18.5	20.0	20.3
	4H	16.2	17.7	16.6	18.0	18.4	19.3	20.7	19.7	21.1	21.4
	6H	16.6	17.9	17.0	18.3	18.7	20.3	21.6	20.7	22.0	22.4
	8H	16.7	18.0	17.1	18.4	18.8	20.6	21.9	21.1	22.3	22.7
	12H	16.7	18.0	17.2	18.4	18.8	20.9	22.1	21.3	22.5	22.9
4H	2H	15.0	16.4	15.4	16.8	17.1	16.2	17.6	16.5	17.9	18.3
	3H	16.9	18.1	17.3	18.5	18.9	18.9	20.2	19.3	20.6	21.0
	4H	17.6	18.7	18.0	19.1	19.5	20.3	21.4	20.7	21.8	22.3
	6H	18.1	19.0	18.5	19.5	19.9	21.5	22.5	22.0	23.0	23.4
	8H	18.2	19.1	18.7	19.6	20.0	22.0	22.9	22.5	23.4	23.8
	12H	18.3	19.1	18.8	19.6	20.1	22.3	23.1	22.8	23.6	24.1
8H	4H	18.3	19.2	18.8	19.7	20.1	20.6	21.6	21.1	22.0	22.5
	6H	19.0	19.8	19.5	20.3	20.8	22.1	22.8	22.6	23.3	23.8
	8H	19.3	20.0	19.8	20.5	20.9	22.7	23.4	23.2	23.9	24.3
	12H	19.4	20.0	19.9	20.5	21.1	23.1	23.7	23.6	24.2	24.8
12H	4H	18.5	19.3	19.0	19.8	20.3	20.7	21.5	21.1	22.0	22.4
	6H	19.3	20.0	19.8	20.5	21.0	22.1	22.8	22.7	23.3	23.8
	8H	19.6	20.3	20.1	20.8	21.3	22.8	23.4	23.3	23.9	24.5

Maximum UGR = 24.8

POLAR GRAPH



Maximum Candela = 1590.678 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.)