



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LPT-24-L90-835-SAF12095-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 18562.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 27-MAR-2020

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 4-72 LED 22" ARRAYS 2x4' RECESSED GRID LUMINAIRE

[MORE] WHITE INTERNAL REFLECTOR w/P12 ACRYLIC LENS

[LUMCAT] LPT-24-L90-835-SAF12095-DIM-UNV

[LAMPCAT] HLM 80 CRI 3500K CCT

[_SEARCH_SOURCETYPE] LED

[_SEARCH_APPLICATION] Indoor, Architectural, Classroom, Commercial, Educational, Office, Direct

[_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	9031
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	134
Total Luminaire Watts	67.4
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.16
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.24
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.77 ft
Luminous Width (90-270)	1.77 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4906	4837	4762
55	3883	3676	3524
65	3014	2740	2748
75	2487	2364	2674
85	2827	2865	3442

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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	4131.477	4131.477	4131.477	4131.477	4131.477
5	4070.324	4070.324	4066.178	4066.178	4066.178
10	3991.550	3991.550	3987.404	3987.404	3991.550
15	3851.623	3851.623	3851.623	3855.769	3855.769
20	3709.623	3709.623	3709.623	3713.769	3717.915
25	3477.447	3472.265	3477.447	3485.739	3489.885
30	3173.754	3173.754	3173.754	3182.046	3188.265
35	2891.827	2891.827	2891.827	2891.827	2900.119
40	2538.381	2532.162	2525.943	2515.578	2521.797
45	2145.549	2132.074	2115.490	2091.651	2082.322
50	1751.680	1747.534	1695.709	1654.249	1641.811
55	1377.505	1357.811	1303.913	1263.490	1250.015
60	1056.190	1028.205	981.563	951.504	951.504
65	787.738	757.679	716.219	712.073	718.292
70	574.219	555.562	518.248	550.380	563.854
75	398.015	395.942	378.321	413.562	428.073
80	281.927	277.781	281.927	307.840	324.424
85	152.365	146.146	154.438	180.350	185.533
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1474.92	N.A.	16.30
0-30	3071.68	N.A.	34.00
0-40	4869.69	N.A.	53.90
0-60	7684.9	N.A.	85.10
0-80	8862.71	N.A.	98.10
0-90	9030.87	N.A.	100.00
10-90	8644.62	N.A.	95.70
20-40	3394.77	N.A.	37.60
20-50	5024.00	N.A.	55.60
40-70	3559.69	N.A.	39.40
60-80	1177.81	N.A.	13.00
70-80	433.33	N.A.	4.80
80-90	168.16	N.A.	1.90
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	9030.87	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	386.25
10-20	1088.67
20-30	1596.76
30-40	1798.01
40-50	1629.23
50-60	1185.98
60-70	744.48
70-80	433.33
80-90	168.16
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	142	142	142	142	139	139	139	139	133	133	133	127	127	127	122	122	122	120
1	131	126	121	117	128	123	119	115	118	115	111	114	111	108	109	107	105	102
2	120	111	104	98	117	109	102	97	105	99	94	101	96	92	98	94	90	88
3	111	99	90	83	108	97	89	82	94	87	81	91	85	79	88	83	78	76
4	102	89	79	72	100	87	78	71	84	77	70	82	75	69	79	73	68	66
5	95	80	70	63	92	79	69	62	76	68	62	74	67	61	72	66	60	58
6	88	73	63	56	86	72	62	55	70	61	55	68	60	54	66	59	54	52
7	82	66	57	50	80	65	56	49	64	55	49	62	54	49	60	54	48	46
8	76	61	51	45	74	60	51	45	59	50	44	57	50	44	56	49	44	42
9	71	56	47	41	70	55	47	40	54	46	40	53	45	40	52	45	40	38
10	67	52	43	37	66	51	43	37	50	42	37	49	42	37	48	41	36	34

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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

X=2H	Y=2H	15.3	16.9	15.7	17.2	17.5	UGR Viewed Endwise			
	3H	16.7	18.1	17.1	18.4	18.7	14.8	16.3	15.2	16.6
	4H	17.2	18.5	17.6	18.9	19.2	16.2	17.6	16.6	17.9
	6H	17.7	18.9	18.1	19.3	19.7	16.9	18.2	17.3	18.5
	8H	17.9	19.0	18.3	19.4	19.8	17.6	18.8	18.0	19.1
	12H	18.1	19.2	18.5	19.6	20.0	17.9	19.0	18.3	19.4

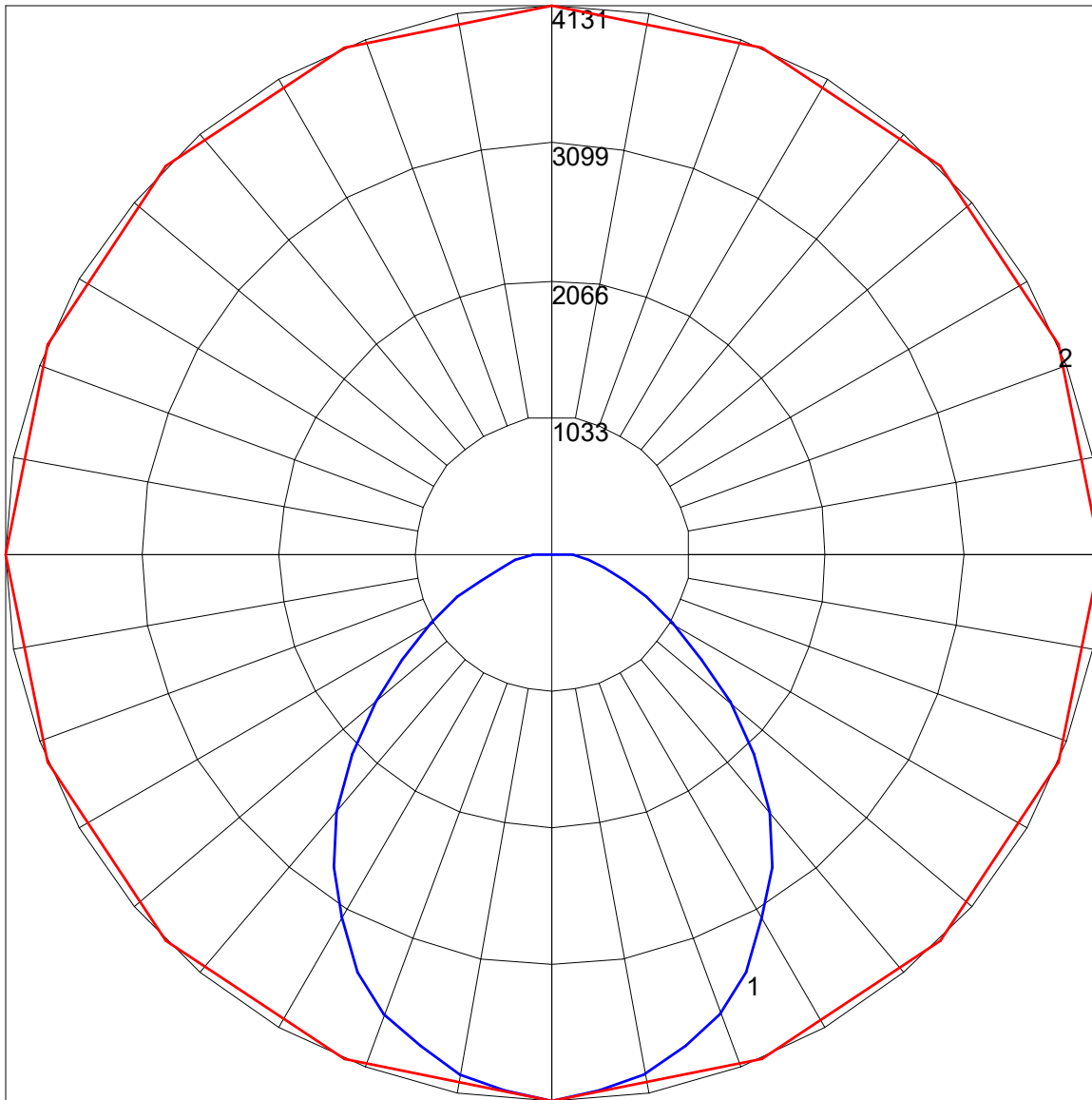
4H	2H	15.7	17.0	16.1	17.3	17.7	18.2	19.2	18.6	19.6
	3H	17.3	18.4	17.7	18.8	19.2	15.2	16.5	15.6	16.9
	4H	18.0	18.9	18.4	19.3	19.8	16.9	18.0	17.3	18.4
	6H	18.6	19.5	19.1	19.9	20.4	17.8	18.7	18.2	19.1
	8H	18.9	19.7	19.4	20.1	20.6	18.6	19.5	19.1	19.9
	12H	19.2	19.9	19.6	20.3	20.8	19.0	19.8	19.5	20.2

8H	4H	18.2	19.0	18.7	19.4	19.9	19.4	20.1	19.8	20.5
	6H	19.0	19.7	19.5	20.2	20.7	18.0	18.8	18.5	19.3
	8H	19.4	20.0	19.9	20.5	21.0	19.1	19.7	19.6	20.2
	12H	19.8	20.3	20.3	20.8	21.4	19.6	20.2	20.1	20.7

12H	4H	18.3	19.0	18.7	19.4	19.9	20.1	20.6	20.6	21.1
	6H	19.1	19.7	19.6	20.2	20.7	18.1	18.8	18.6	19.3
	8H	19.6	20.1	20.1	20.6	21.2	19.1	19.7	19.7	20.2

Maximum UGR = 21.6

POLAR GRAPH



Maximum Candela = 4131.477 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)