

IES INDOOR REPORT

PHOTOMETRIC FILENAME : PTDC-22-L26-927-RA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 19562.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 2022-05-03

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 1-72 LED 22"ARRAY 2x2'RECESSED LUMINAIRE

[MORE] WHITE REFLECTOR w/CENTER FROSTED RIBBED ACRYLIC LENS

[MORE] ELECTRONIC 0-10V LED DRIVER

[LUMCAT] PTDC-22-L26-927-RA-DIM-UNV

[LAMPCAT] HLM 90 CRI 2700K CCT

[SEARCH_SOURCETYPE] LED

[SEARCH_APPLICATION] INDOOR

[SEARCH_MOUNTING] RECESSED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2159
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	101
Total Luminaire Watts	21.3
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.24
Spacing Criterion (90-270)	1.24
Spacing Criterion (Diagonal)	1.34
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.92 ft
Luminous Width (90-270)	1.93 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2029	2104	2172
55	1715	1890	2016
65	1311	1640	1823
75	911	1454	1797
85	519	1186	1483

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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	825.115	825.115	825.115	825.115	825.115
5	827.889	822.895	821.786	819.011	819.011
10	816.792	811.798	811.243	808.468	807.913
15	797.371	791.822	791.267	790.157	789.602
20	769.626	764.632	764.078	764.632	764.632
25	730.784	725.790	729.120	731.339	729.120
30	683.064	680.845	684.174	688.058	685.284
35	628.131	627.576	634.789	637.564	640.338
40	564.874	564.874	577.081	582.075	586.514
45	492.738	492.738	511.050	522.702	527.696
50	416.719	417.274	441.689	457.226	464.439
55	337.925	344.029	372.328	388.975	397.298
60	260.796	273.004	301.303	319.614	328.492
65	190.326	206.417	238.046	258.022	264.680
70	128.179	148.154	179.783	200.314	208.082
75	81.013	100.434	129.288	149.819	159.807
80	43.836	60.483	86.007	100.434	110.422
85	15.537	27.189	35.513	35.513	44.391
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	301.47	N.A.	14.00
0-30	637.04	N.A.	29.50
0-40	1032.73	N.A.	47.80
0-60	1754.45	N.A.	81.30
0-80	2119.46	N.A.	98.20
0-90	2158.95	N.A.	100.00
10-90	2080.85	N.A.	96.40
20-40	731.26	N.A.	33.90
20-50	1123.62	N.A.	52.00
40-70	953.43	N.A.	44.20
60-80	365.00	N.A.	16.90
70-80	133.30	N.A.	6.20
80-90	39.49	N.A.	1.80
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	2158.95	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	78.10
10-20	223.37
20-30	335.57
30-40	395.69
40-50	392.36
50-60	329.36
60-70	231.71
70-80	133.30
80-90	39.49
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	109	104	100	97	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	100	91	85	79	97	90	83	78	86	81	76	83	79	75	80	76	73	71
3	91	81	73	66	89	79	72	66	76	70	65	73	68	63	71	66	62	60
4	83	72	63	57	81	70	62	56	68	61	55	66	60	55	63	58	54	52
5	77	64	55	49	75	63	55	49	61	54	48	59	53	48	57	52	47	45
6	71	58	49	43	69	57	49	43	55	48	42	54	47	42	52	46	42	40
7	66	53	44	38	64	52	44	38	50	43	38	49	42	37	48	42	37	35
8	62	48	40	34	60	47	39	34	46	39	34	45	38	33	44	38	33	31
9	58	44	36	31	56	44	36	31	43	35	30	41	35	30	40	34	30	28
10	54	41	33	28	53	40	33	28	39	32	28	38	32	28	38	32	27	26

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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

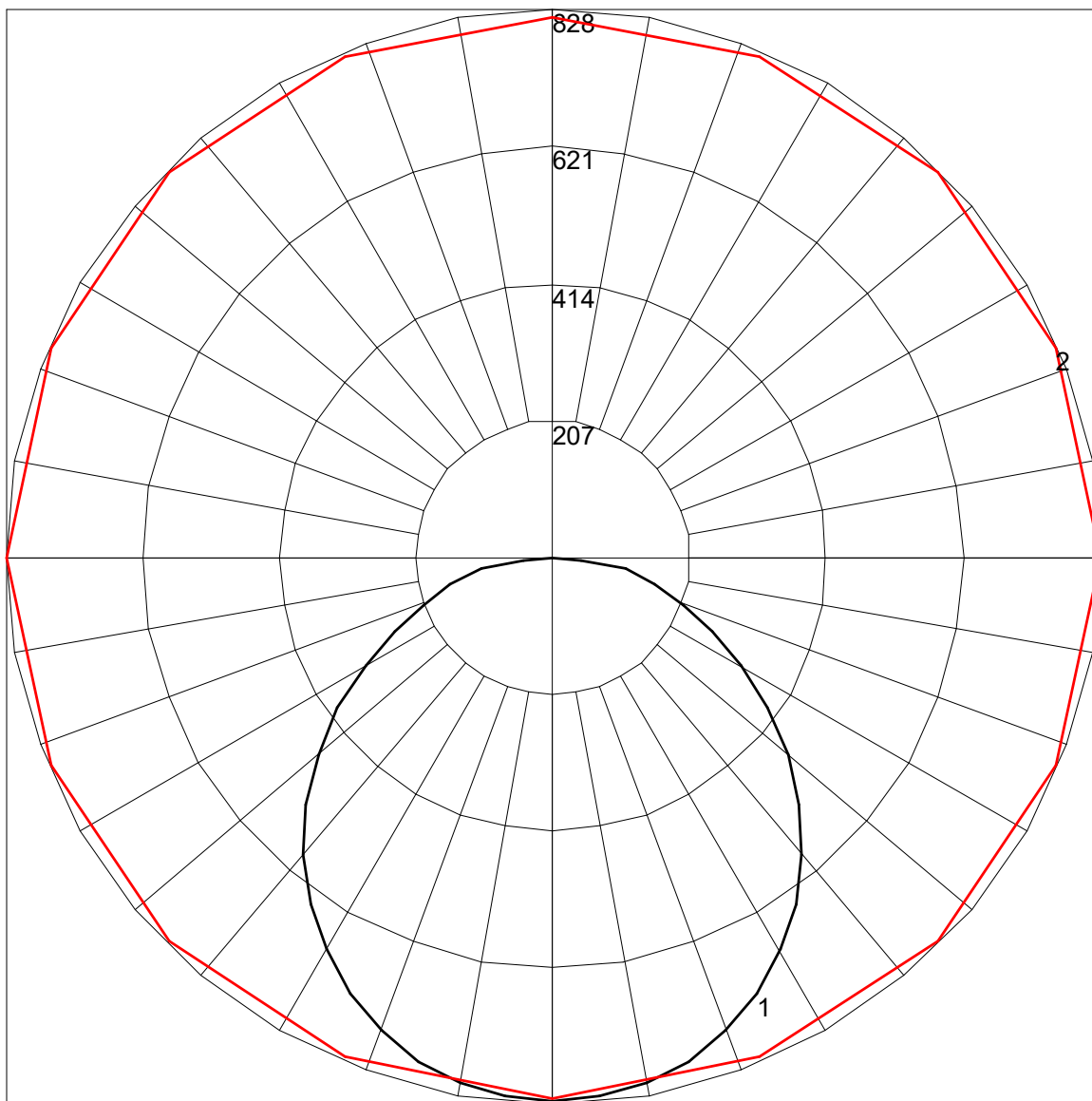
X=2H	Y=2H	13.5	15.1	13.8	15.4	15.7	14.5	16.1	14.9	16.4	16.7
	3H	14.8	16.2	15.1	16.5	16.9	16.3	17.8	16.7	18.1	18.5
	4H	15.2	16.5	15.6	16.9	17.3	17.1	18.5	17.5	18.8	19.2
	6H	15.4	16.7	15.9	17.1	17.5	17.8	19.1	18.2	19.4	19.8
	8H	15.5	16.7	15.9	17.1	17.5	18.0	19.2	18.5	19.6	20.0
	12H	15.5	16.7	16.0	17.1	17.5	18.2	19.3	18.6	19.7	20.2

UGR Viewed Endwise

4H	2H	14.2	15.5	14.6	15.9	16.3	15.0	16.4	15.4	16.7	17.1
	3H	15.7	16.8	16.1	17.2	17.6	17.1	18.2	17.5	18.6	19.0
	4H	16.3	17.3	16.7	17.7	18.1	18.0	19.0	18.4	19.4	19.9
	6H	16.6	17.5	17.1	18.0	18.4	18.9	19.8	19.3	20.2	20.7
	8H	16.7	17.6	17.2	18.0	18.5	19.2	20.0	19.6	20.4	20.9
	12H	16.8	17.6	17.3	18.0	18.5	19.4	20.1	19.9	20.6	21.1
8H	4H	16.7	17.5	17.2	18.0	18.5	18.3	19.1	18.7	19.5	20.0
	6H	17.2	17.9	17.7	18.4	18.9	19.2	19.9	19.7	20.4	20.9
	8H	17.4	18.0	17.9	18.6	19.0	19.6	20.3	20.2	20.8	21.3
	12H	17.5	18.1	18.0	18.6	19.1	19.9	20.5	20.4	21.0	21.5
12H	4H	16.8	17.5	17.3	18.0	18.5	18.3	19.0	18.7	19.5	20.0
	6H	17.4	18.0	17.9	18.5	19.0	19.3	19.9	19.8	20.4	20.9
	8H	17.6	18.2	18.1	18.7	19.2	19.7	20.3	20.2	20.8	21.3

Maximum UGR = 21.5

POLAR GRAPH



Maximum Candela = 827.889 Located At Horizontal Angle = 0, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)