

IES INDOOR REPORT

PHOTOMETRIC FILENAME : PTDC-22-L26-935-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-L26-935-RA-DIM-UNV

[LAMPCAT] HLM 90 CRI 3500K 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	2212
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	104
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	2078	2155	2225
55	1757	1936	2066
65	1343	1680	1868
75	933	1490	1841
85	532	1215	1519

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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	845.240	845.240	845.240	845.240	845.240
5	848.082	842.966	841.829	838.987	838.987
10	836.714	831.598	831.029	828.187	827.619
15	816.819	811.135	810.566	809.429	808.861
20	788.398	783.282	782.714	783.282	783.282
25	748.609	743.493	746.903	749.177	746.903
30	699.724	697.451	700.861	704.840	701.998
35	643.451	642.882	650.272	653.114	655.956
40	578.651	578.651	591.156	596.272	600.819
45	504.757	504.757	523.514	535.451	540.567
50	426.883	427.451	452.462	468.378	475.767
55	346.167	352.420	381.409	398.462	406.988
60	267.157	279.662	308.652	327.410	336.504
65	194.968	211.452	243.852	264.315	271.136
70	131.305	151.768	184.168	205.199	213.157
75	82.989	102.884	132.442	153.473	163.705
80	44.905	61.958	88.105	102.884	113.115
85	15.916	27.853	36.379	36.379	45.474
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	308.82	N.A.	14.00
0-30	652.58	N.A.	29.50
0-40	1057.92	N.A.	47.80
0-60	1797.24	N.A.	81.30
0-80	2171.15	N.A.	98.20
0-90	2211.61	N.A.	100.00
10-90	2131.61	N.A.	96.40
20-40	749.10	N.A.	33.90
20-50	1151.03	N.A.	52.00
40-70	976.69	N.A.	44.20
60-80	373.91	N.A.	16.90
70-80	136.55	N.A.	6.20
80-90	40.46	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	2211.61	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	80.00
10-20	228.82
20-30	343.76
30-40	405.34
40-50	401.93
50-60	337.39
60-70	237.36
70-80	136.55
80-90	40.46
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	99	91	85	79	97	90	83	78	86	81	76	83	78	75	80	76	73	71
3	91	81	73	66	88	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

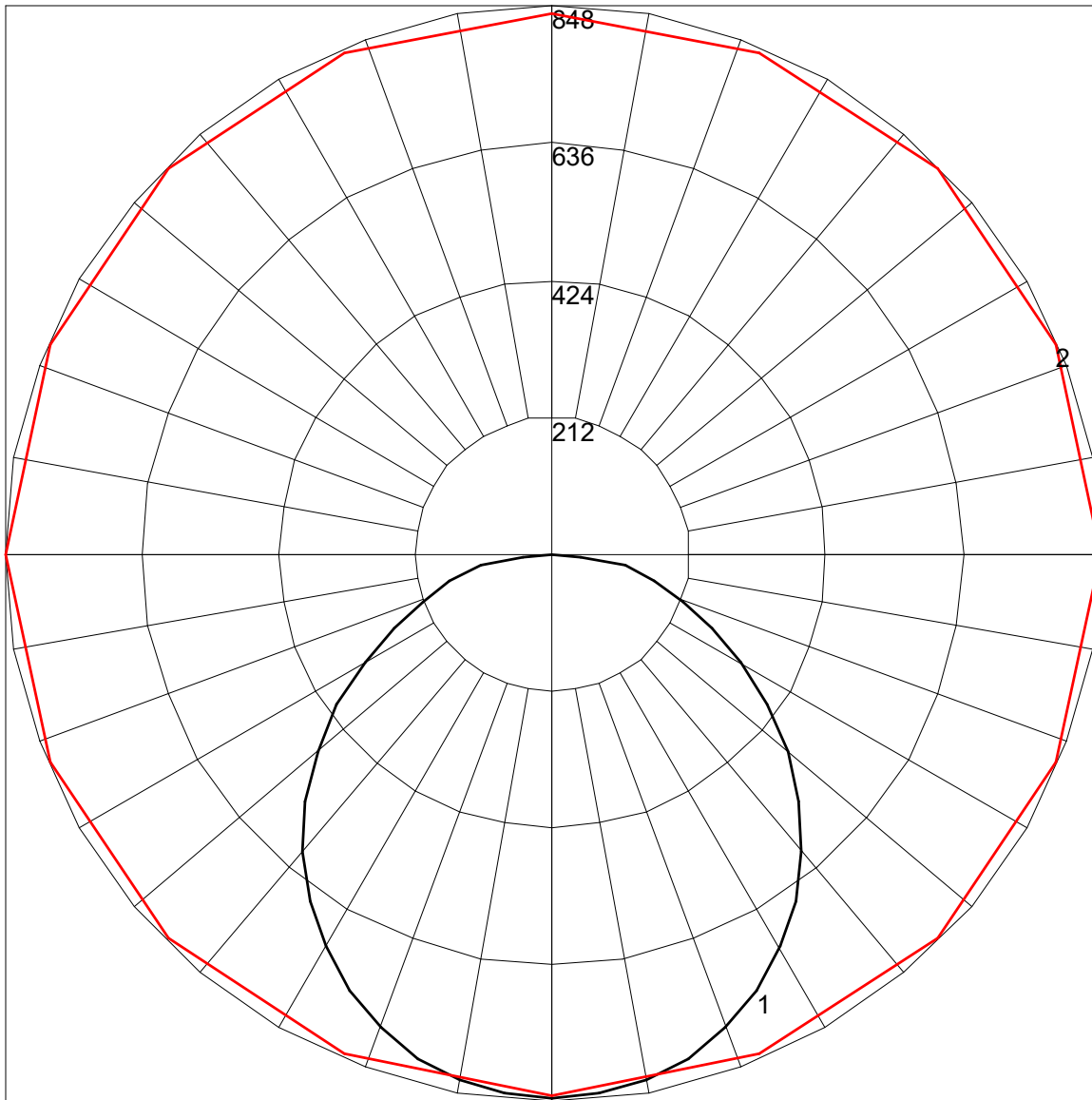
Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	13.6	15.2	13.9	15.5	15.8	14.6	16.2	15.0	16.5	16.8
	3H	14.9	16.3	15.2	16.6	17.0	16.4	17.9	16.8	18.2	18.6
	4H	15.3	16.6	15.7	17.0	17.4	17.2	18.6	17.6	18.9	19.3
	6H	15.5	16.8	16.0	17.2	17.6	17.9	19.2	18.3	19.5	19.9
	8H	15.6	16.8	16.0	17.2	17.6	18.1	19.3	18.6	19.7	20.1
	12H	15.6	16.8	16.1	17.2	17.6	18.3	19.4	18.7	19.8	20.3
4H	2H	14.3	15.6	14.7	16.0	16.4	15.1	16.5	15.5	16.8	17.2
	3H	15.8	16.9	16.2	17.3	17.7	17.2	18.3	17.6	18.7	19.1
	4H	16.4	17.4	16.8	17.8	18.2	18.1	19.1	18.5	19.5	20.0
	6H	16.7	17.6	17.2	18.1	18.5	19.0	19.9	19.4	20.3	20.8
	8H	16.8	17.7	17.3	18.1	18.6	19.3	20.1	19.7	20.5	21.0
	12H	16.9	17.7	17.4	18.1	18.6	19.5	20.2	20.0	20.7	21.2
8H	4H	16.8	17.6	17.3	18.1	18.6	18.4	19.2	18.8	19.6	20.1
	6H	17.3	18.0	17.8	18.5	19.0	19.3	20.0	19.8	20.5	21.0
	8H	17.5	18.1	18.0	18.7	19.1	19.7	20.4	20.3	20.9	21.4
	12H	17.6	18.2	18.1	18.7	19.2	20.0	20.6	20.5	21.0	21.6
12H	4H	16.9	17.6	17.4	18.1	18.6	18.4	19.1	18.8	19.6	20.1
	6H	17.5	18.1	18.0	18.6	19.1	19.4	20.0	19.9	20.5	21.0
	8H	17.7	18.3	18.2	18.8	19.3	19.8	20.4	20.3	20.9	21.4

Maximum UGR = 21.6

POLAR GRAPH



Maximum Candela = 848.082 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.)