



IES INDOOR REPORT

PHOTOMETRIC FILENAME : PTDC-22-L43-935-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-L43-935-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	3648
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	105
Total Luminaire Watts	34.7
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	3428	3555	3671
55	2898	3193	3407
65	2215	2771	3081
75	1540	2457	3037
85	877	2004	2505

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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	1394.180	1394.180	1394.180	1394.180	1394.180
5	1398.868	1390.430	1388.554	1383.867	1383.867
10	1380.116	1371.678	1370.740	1366.053	1365.115
15	1347.301	1337.925	1336.988	1335.112	1334.175
20	1300.422	1291.984	1291.046	1291.984	1291.984
25	1234.792	1226.353	1231.979	1235.729	1231.979
30	1154.160	1150.409	1156.035	1162.598	1157.910
35	1061.339	1060.402	1072.590	1077.278	1081.966
40	954.455	954.455	975.082	983.520	991.021
45	832.570	832.570	863.510	883.199	891.638
50	704.122	705.059	746.313	772.565	784.754
55	570.986	581.299	629.115	657.243	671.307
60	440.662	461.289	509.105	540.045	555.047
65	321.590	348.779	402.221	435.974	447.225
70	216.581	250.334	303.776	338.466	351.592
75	136.887	169.702	218.456	253.146	270.023
80	74.069	102.196	145.325	169.702	186.578
85	26.252	45.941	60.005	60.005	75.006
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	509.38	N.A.	14.00
0-30	1076.39	N.A.	29.50
0-40	1744.98	N.A.	47.80
0-60	2964.46	N.A.	81.30
0-80	3581.2	N.A.	98.20
0-90	3647.94	N.A.	100.00
10-90	3515.98	N.A.	96.40
20-40	1235.6	N.A.	33.90
20-50	1898.56	N.A.	52.00
40-70	1611.00	N.A.	44.20
60-80	616.74	N.A.	16.90
70-80	225.23	N.A.	6.20
80-90	66.73	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	3647.94	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	131.96
10-20	377.42
20-30	567.01
30-40	668.59
40-50	662.97
50-60	556.52
60-70	391.51
70-80	225.23
80-90	66.73
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

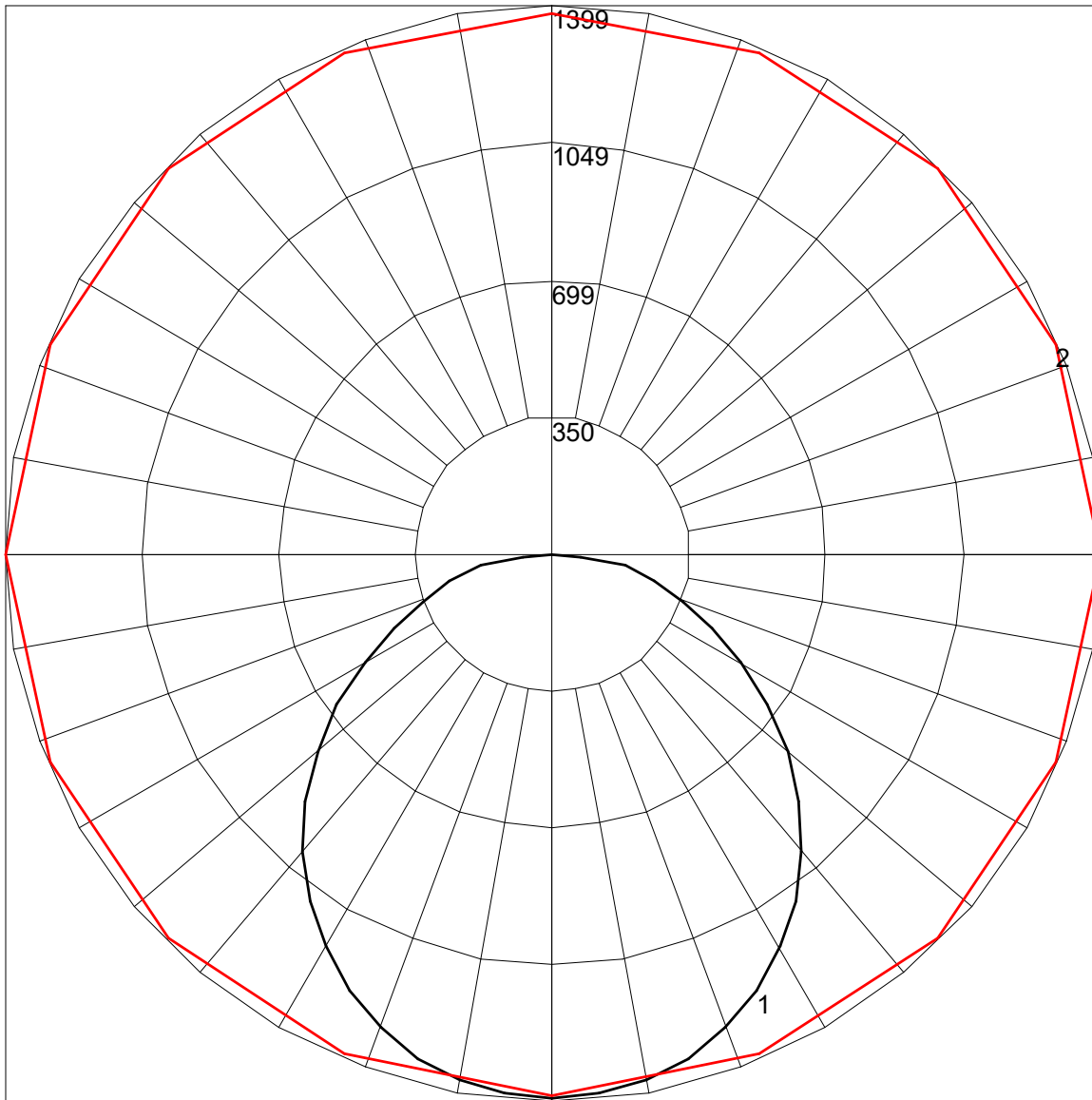
Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	15.3	16.9	15.6	17.2	17.5	16.3	17.9	16.7	18.2	18.5
	3H	16.6	18.0	16.9	18.3	18.7	18.1	19.6	18.5	19.9	20.3
	4H	17.0	18.3	17.4	18.7	19.1	18.9	20.3	19.3	20.6	21.0
	6H	17.2	18.5	17.7	18.9	19.3	19.6	20.9	20.0	21.2	21.6
	8H	17.3	18.5	17.7	18.9	19.3	19.8	21.0	20.3	21.4	21.8
	12H	17.3	18.5	17.8	18.9	19.3	20.0	21.1	20.4	21.5	22.0
4H	2H	16.0	17.3	16.4	17.7	18.1	16.8	18.2	17.2	18.5	18.9
	3H	17.5	18.6	17.9	19.0	19.4	18.9	20.0	19.3	20.4	20.8
	4H	18.1	19.1	18.5	19.5	19.9	19.8	20.8	20.2	21.2	21.7
	6H	18.4	19.3	18.9	19.8	20.2	20.7	21.6	21.1	22.0	22.5
	8H	18.5	19.4	19.0	19.8	20.3	21.0	21.8	21.4	22.2	22.7
	12H	18.6	19.4	19.1	19.8	20.3	21.2	21.9	21.6	22.4	22.9
8H	4H	18.5	19.3	19.0	19.8	20.2	20.1	20.9	20.5	21.3	21.8
	6H	19.0	19.7	19.5	20.2	20.7	21.0	21.7	21.5	22.2	22.7
	8H	19.2	19.8	19.7	20.4	20.8	21.4	22.1	22.0	22.6	23.1
	12H	19.3	19.9	19.8	20.4	20.9	21.7	22.3	22.2	22.7	23.3
12H	4H	18.6	19.3	19.1	19.8	20.3	20.1	20.8	20.5	21.3	21.8
	6H	19.2	19.8	19.7	20.3	20.8	21.1	21.7	21.6	22.2	22.7
	8H	19.4	20.0	19.9	20.5	21.0	21.5	22.1	22.0	22.6	23.1

Maximum UGR = 23.3

POLAR GRAPH



Maximum Candela = 1398.868 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.)