



IES INDOOR REPORT

PHOTOMETRIC FILENAME : PTDC-24-L90-935-RA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM BALLABS TEST NO. 19235.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 2022-05-06
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] 2x4' RECESSED LED LUMINAIRE
 [MORE] w/RIBBED FROSTED ACRYLIC CENTER DIFFUSER
 [LUMCAT] PTDC-24-L90-935-RA-DIM-UNV
 [LAMPCAT] HLM 90 CRI 3500K CCT
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] Indoor, Architectural, Office, Direct
 [_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	7575
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	106
Total Luminaire Watts	71.4
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.14
Spacing Criterion (90-270)	1.18
Spacing Criterion (Diagonal)	1.28
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	3249	3428	3603
55	2912	3187	3443
65	2559	3033	3446
75	1981	3042	3766
85	1196	3991	4573

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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	2898.076	2898.076	2898.076	2898.076	2898.076
5	2853.823	2849.889	2849.889	2840.055	2835.138
10	2844.972	2844.972	2849.889	2853.823	2853.823
15	2770.234	2774.168	2779.085	2785.968	2790.885
20	2587.322	2597.156	2608.957	2624.691	2629.608
25	2440.796	2449.646	2473.248	2493.899	2503.733
30	2138.892	2073.004	2342.456	2264.767	2252.966
35	1972.698	1991.382	2035.635	2073.004	2087.755
40	1755.367	1778.968	1828.138	1877.308	1895.993
45	1603.923	1624.575	1692.429	1755.367	1778.968
50	1393.476	1425.928	1500.666	1566.554	1589.172
55	1166.311	1201.713	1276.451	1351.190	1378.725
60	950.947	988.316	1072.888	1149.593	1178.112
65	755.250	804.420	894.893	984.382	1016.834
70	556.604	614.624	721.815	816.221	848.673
75	357.957	429.745	549.720	645.110	680.512
80	196.680	290.103	427.778	521.201	549.720
85	72.772	166.194	242.899	273.385	278.302
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1050.55	N.A.	13.90
0-30	2177.25	N.A.	28.70
0-40	3447.36	N.A.	45.50
0-60	5887.34	N.A.	77.70
0-80	7348.77	N.A.	97.00
0-90	7575.31	N.A.	100.00
10-90	7302.89	N.A.	96.40
20-40	2396.81	N.A.	31.60
20-50	3692.28	N.A.	48.70
40-70	3323.49	N.A.	43.90
60-80	1461.43	N.A.	19.30
70-80	577.93	N.A.	7.60
80-90	226.54	N.A.	3.00
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	7575.31	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	272.42
10-20	778.13
20-30	1126.7
30-40	1270.1
40-50	1295.47
50-60	1144.51
60-70	883.50
70-80	577.93
80-90	226.54
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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	85	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	60	52	46	58	51	46	56	50	45	43
6	70	57	48	41	68	56	47	41	54	46	41	52	46	40	51	45	40	38
7	65	52	43	37	63	51	42	37	49	42	36	48	41	36	46	40	36	34
8	61	47	39	33	59	46	38	33	45	38	32	44	37	32	43	37	32	30
9	57	43	35	30	55	43	35	30	42	34	29	41	34	29	40	33	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25

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UGR TABLE - CORRECTED

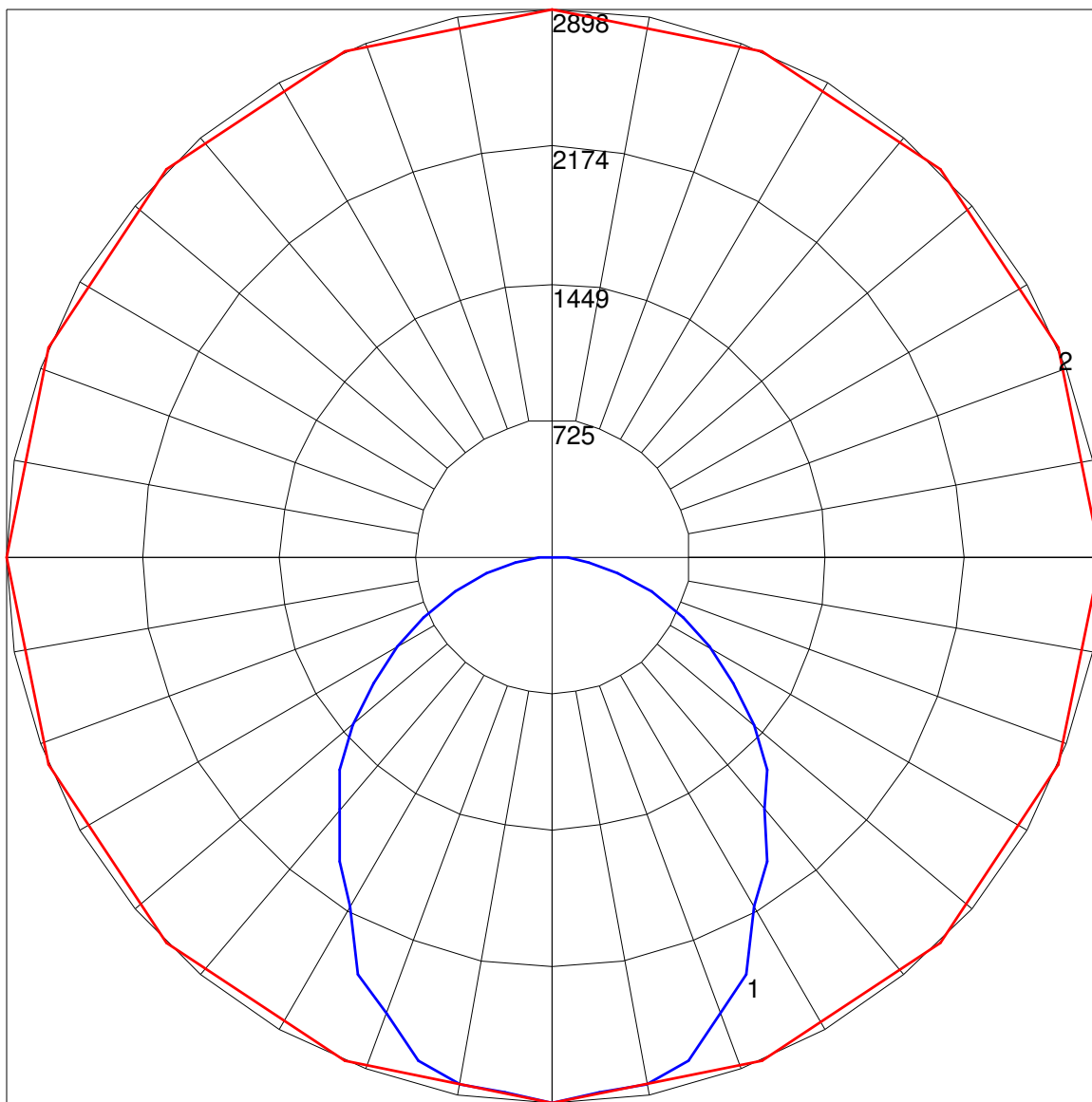
Reflectances

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	17.0	15.7	17.3	17.6	16.4	18.0	16.7	18.3	18.6
	3H	17.0	18.5	17.4	18.8	19.2	18.5	20.0	18.9	20.4	20.7
	4H	17.6	19.0	18.0	19.3	19.7	19.5	20.9	19.9	21.3	21.7
	6H	17.9	19.3	18.4	19.6	20.0	20.6	21.9	21.0	22.2	22.6
	8H	18.1	19.3	18.5	19.7	20.1	21.0	22.2	21.4	22.6	23.0
	12H	18.1	19.3	18.6	19.7	20.1	21.3	22.5	21.8	22.9	23.3
4H	2H	16.1	17.5	16.5	17.9	18.3	16.9	18.3	17.3	18.7	19.0
	3H	18.0	19.2	18.5	19.6	20.0	19.4	20.6	19.8	21.0	21.4
	4H	18.7	19.8	19.2	20.2	20.7	20.5	21.6	21.0	22.0	22.5
	6H	19.3	20.2	19.7	20.7	21.1	21.8	22.7	22.2	23.2	23.6
	8H	19.4	20.3	19.9	20.8	21.2	22.3	23.2	22.8	23.6	24.1
	12H	19.6	20.4	20.1	20.8	21.3	22.7	23.5	23.2	24.0	24.5
8H	4H	19.3	20.2	19.8	20.7	21.1	20.9	21.8	21.3	22.2	22.7
	6H	20.1	20.8	20.6	21.3	21.8	22.3	23.1	22.8	23.6	24.0
	8H	20.4	21.0	20.9	21.5	22.0	23.0	23.7	23.5	24.2	24.6
	12H	20.6	21.2	21.1	21.7	22.2	23.6	24.1	24.1	24.6	25.2
12H	4H	19.5	20.3	20.0	20.8	21.2	20.9	21.7	21.4	22.2	22.7
	6H	20.3	21.0	20.9	21.5	22.0	22.4	23.1	23.0	23.6	24.1
	8H	20.7	21.3	21.2	21.8	22.4	23.2	23.7	23.7	24.2	24.8

Maximum UGR = 25.2

POLAR GRAPH



Maximum Candela = 2898.076 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.)