



IES INDOOR REPORT

PHOTOMETRIC FILENAME : PTDC-24-L38-827-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-L38-827-RA-DIM-UNV
 [LAMPCAT] HLM 80 CRI 2700K 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	3650
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	116
Total Luminaire Watts	31.4
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	1565	1652	1736
55	1403	1536	1659
65	1233	1461	1660
75	954	1466	1814
85	576	1923	2204

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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	1396.452	1396.452	1396.452	1396.452	1396.452
5	1375.129	1373.234	1373.234	1368.495	1366.126
10	1370.864	1370.864	1373.234	1375.129	1375.129
15	1334.851	1336.747	1339.116	1342.433	1344.802
20	1246.714	1251.453	1257.139	1264.721	1267.090
25	1176.110	1180.374	1191.747	1201.698	1206.436
30	1030.636	998.888	1128.724	1091.289	1085.603
35	950.554	959.558	980.881	998.888	1005.995
40	845.832	857.205	880.898	904.590	913.594
45	772.859	782.809	815.506	845.832	857.205
50	671.453	687.091	723.104	754.852	765.751
55	561.993	579.052	615.065	651.078	664.346
60	458.218	476.225	516.976	553.937	567.679
65	363.921	387.614	431.209	474.329	489.967
70	268.202	296.160	347.810	393.300	408.937
75	172.483	207.075	264.885	310.849	327.908
80	94.771	139.787	206.127	251.143	264.885
85	35.065	80.082	117.042	131.732	134.101
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	506.21	N.A.	13.90
0-30	1049.12	N.A.	28.70
0-40	1661.13	N.A.	45.50
0-60	2836.84	N.A.	77.70
0-80	3541.04	N.A.	97.00
0-90	3650.2	N.A.	100.00
10-90	3518.94	N.A.	96.40
20-40	1154.91	N.A.	31.60
20-50	1779.14	N.A.	48.70
40-70	1601.44	N.A.	43.90
60-80	704.20	N.A.	19.30
70-80	278.48	N.A.	7.60
80-90	109.16	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	3650.2	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	131.27
10-20	374.95
20-30	542.91
30-40	612.01
40-50	624.23
50-60	551.49
60-70	425.72
70-80	278.48
80-90	109.16
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	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

X=2H	Y=2H	12.8	14.5	13.2	14.8	15.1	13.9	15.5	14.2	15.8	16.1
	3H	14.5	16.0	14.9	16.3	16.7	16.0	17.5	16.4	17.9	18.2
	4H	15.1	16.5	15.5	16.8	17.2	17.0	18.4	17.4	18.8	19.2
	6H	15.4	16.8	15.9	17.1	17.5	18.1	19.4	18.5	19.7	20.1
	8H	15.6	16.8	16.0	17.2	17.6	18.5	19.7	18.9	20.1	20.5
	12H	15.6	16.8	16.1	17.2	17.6	18.8	20.0	19.3	20.4	20.8

UGR Viewed Endwise

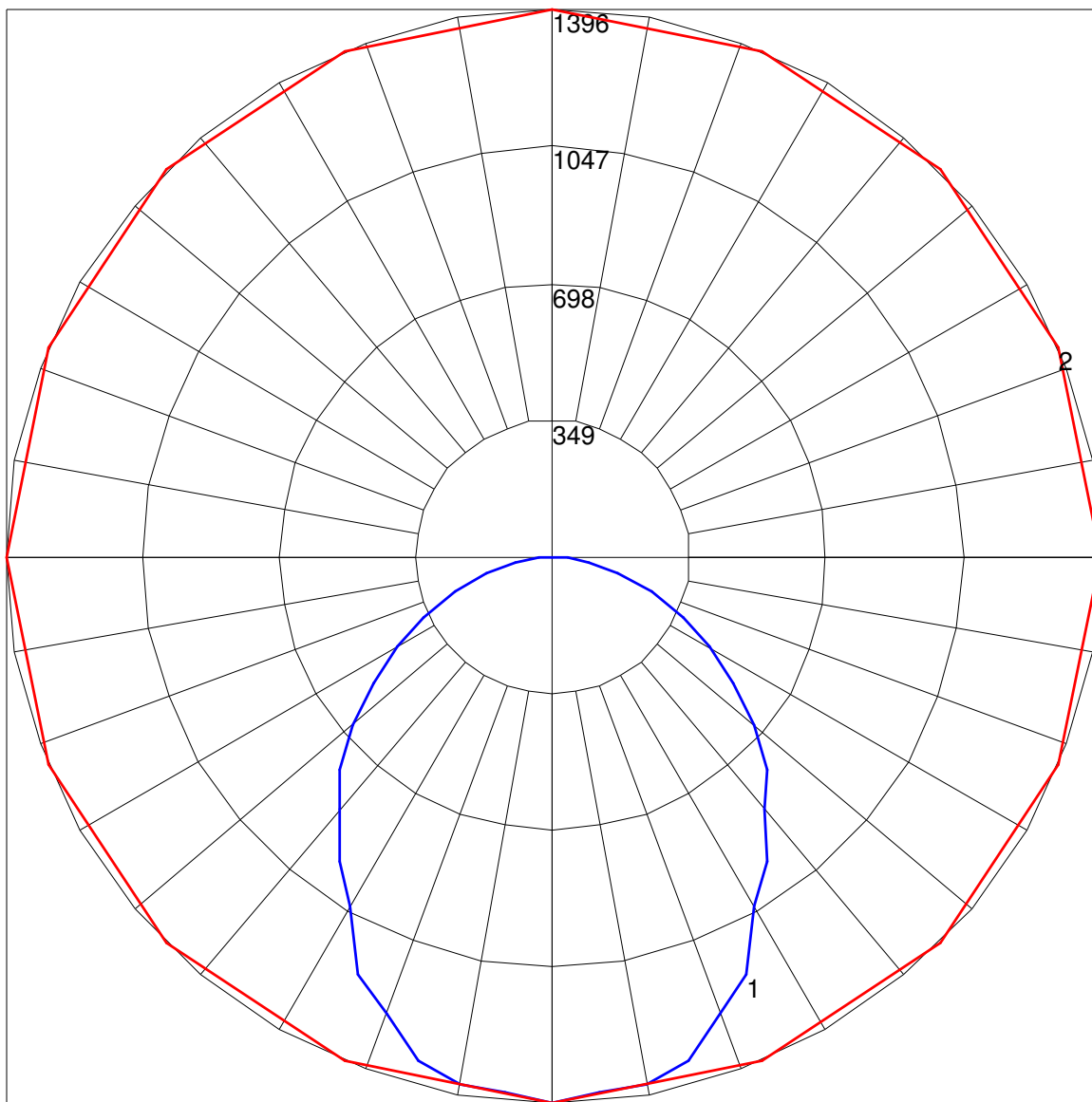
4H	2H	13.6	15.0	14.0	15.4	15.8	14.4	15.8	14.8	16.2	16.5
	3H	15.5	16.7	16.0	17.1	17.5	16.9	18.1	17.3	18.4	18.8
	4H	16.2	17.3	16.7	17.7	18.2	18.0	19.1	18.5	19.5	20.0
	6H	16.8	17.7	17.2	18.2	18.6	19.3	20.2	19.7	20.7	21.1
	8H	16.9	17.8	17.4	18.3	18.7	19.8	20.7	20.3	21.1	21.6
	12H	17.1	17.9	17.6	18.3	18.8	20.2	21.0	20.7	21.5	22.0

8H	4H	16.8	17.7	17.3	18.2	18.6	18.4	19.3	18.8	19.7	20.2
	6H	17.6	18.3	18.1	18.8	19.3	19.8	20.6	20.3	21.1	21.5
	8H	17.9	18.5	18.4	19.0	19.5	20.5	21.2	21.0	21.7	22.1
	12H	18.1	18.7	18.6	19.2	19.7	21.1	21.6	21.6	22.1	22.7

12H	4H	17.0	17.8	17.5	18.3	18.7	18.4	19.2	18.9	19.7	20.2
	6H	17.8	18.5	18.4	19.0	19.5	19.9	20.6	20.5	21.1	21.6
	8H	18.2	18.8	18.7	19.3	19.9	20.7	21.2	21.2	21.7	22.3

Maximum UGR = 22.7

POLAR GRAPH



Maximum Candela = 1396.452 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.)