



IES INDOOR REPORT

PHOTOMETRIC FILENAME : PTDC-24-L49-940-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-L49-940-RA-DIM-UNV
 [LAMPCAT] HLM 90 CRI 4000K 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	4238
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	114
Total Luminaire Watts	37.2
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	1817	1918	2016
55	1629	1783	1926
65	1432	1697	1928
75	1108	1702	2107
85	669	2233	2559

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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	1621.397	1621.397	1621.397	1621.397	1621.397
5	1596.639	1594.438	1594.438	1588.936	1586.185
10	1591.687	1591.687	1594.438	1596.639	1596.639
15	1549.873	1552.074	1554.825	1558.676	1561.427
20	1447.538	1453.040	1459.642	1468.445	1471.196
25	1365.561	1370.512	1383.717	1395.271	1400.773
30	1196.654	1159.791	1310.542	1267.077	1260.475
35	1103.672	1114.126	1138.884	1159.791	1168.044
40	982.081	995.286	1022.795	1050.304	1060.758
45	897.353	908.907	946.869	982.081	995.286
50	779.613	797.769	839.583	876.446	889.100
55	652.520	672.327	714.141	755.955	771.360
60	532.029	552.937	600.253	643.167	659.122
65	422.543	450.052	500.669	550.736	568.892
70	311.405	343.866	403.836	456.654	474.810
75	200.268	240.431	307.554	360.922	380.728
80	110.037	162.305	239.331	291.598	307.554
85	40.714	92.981	135.896	152.952	155.703
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	587.75	N.A.	13.90
0-30	1218.12	N.A.	28.70
0-40	1928.7	N.A.	45.50
0-60	3293.81	N.A.	77.70
0-80	4111.44	N.A.	97.00
0-90	4238.19	N.A.	100.00
10-90	4085.78	N.A.	96.40
20-40	1340.95	N.A.	31.60
20-50	2065.73	N.A.	48.70
40-70	1859.4	N.A.	43.90
60-80	817.63	N.A.	19.30
70-80	323.34	N.A.	7.60
80-90	126.74	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	4238.19	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	152.41
10-20	435.34
20-30	630.36
30-40	710.59
40-50	724.78
50-60	640.33
60-70	494.30
70-80	323.34
80-90	126.74
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

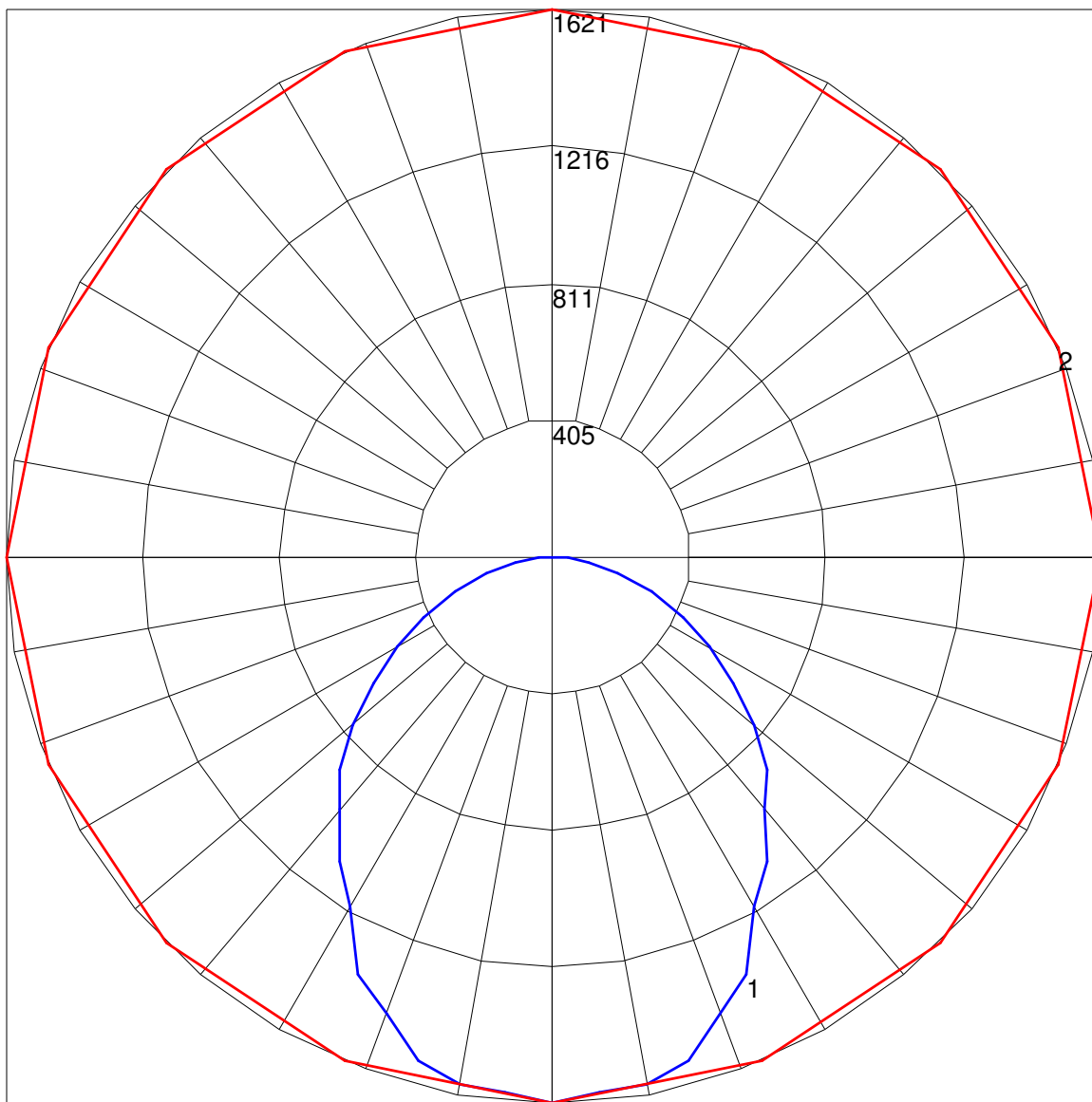
X=2H	Y=2H	13.3	15.0	13.7	15.3	15.6	14.4	16.0	14.7	16.3	16.6
	3H	15.0	16.5	15.4	16.8	17.2	16.5	18.0	16.9	18.4	18.7
	4H	15.6	17.0	16.0	17.3	17.7	17.5	18.9	17.9	19.3	19.7
	6H	15.9	17.3	16.4	17.6	18.0	18.6	19.9	19.0	20.2	20.6
	8H	16.1	17.3	16.5	17.7	18.1	19.0	20.2	19.4	20.6	21.0
	12H	16.1	17.3	16.6	17.7	18.1	19.3	20.5	19.8	20.9	21.3

UGR Viewed Endwise

4H	2H	14.1	15.5	14.5	15.9	16.3	14.9	16.3	15.3	16.7	17.0
	3H	16.0	17.2	16.5	17.6	18.0	17.4	18.6	17.8	18.9	19.3
	4H	16.7	17.8	17.2	18.2	18.7	18.5	19.6	19.0	20.0	20.5
	6H	17.3	18.2	17.7	18.7	19.1	19.8	20.7	20.2	21.2	21.6
	8H	17.4	18.3	17.9	18.8	19.2	20.3	21.2	20.8	21.6	22.1
	12H	17.6	18.4	18.1	18.8	19.3	20.7	21.5	21.2	22.0	22.5
8H	4H	17.3	18.2	17.8	18.7	19.1	18.9	19.8	19.3	20.2	20.7
	6H	18.1	18.8	18.6	19.3	19.8	20.3	21.1	20.8	21.6	22.0
	8H	18.4	19.0	18.9	19.5	20.0	21.0	21.7	21.5	22.2	22.6
	12H	18.6	19.2	19.1	19.7	20.2	21.6	22.1	22.1	22.6	23.2
12H	4H	17.5	18.3	18.0	18.8	19.2	18.9	19.7	19.4	20.2	20.7
	6H	18.3	19.0	18.9	19.5	20.0	20.4	21.1	21.0	21.6	22.1
	8H	18.7	19.3	19.2	19.8	20.4	21.2	21.7	21.7	22.2	22.8

Maximum UGR = 23.2

POLAR GRAPH



Maximum Candela = 1621.397 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.)