



IES INDOOR REPORT

PHOTOMETRIC FILENAME : PTDC-22-L52-935-RA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] BALLABS TEST NO. 19562.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUE DATE] 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-L52-935-RA-DIM-UNV
 [LAMPCAT] HLM 90 CRI 3500K CCT
 [SEARCH_SOURCE TYPE] LED
 [SEARCH_APPLICATION] INDOOR
 [SEARCH_MOUNTING] RECESSED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4374
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	126
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	4110	4262	4401
55	3474	3828	4085
65	2656	3322	3693
75	1846	2946	3641
85	1051	2403	3004

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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	1671.540	1671.540	1671.540	1671.540	1671.540
5	1677.160	1667.043	1664.795	1659.175	1659.175
10	1654.678	1644.561	1643.437	1637.817	1636.693
15	1615.335	1604.094	1602.969	1600.721	1599.597
20	1559.129	1549.013	1547.888	1549.013	1549.013
25	1480.442	1470.325	1477.070	1481.566	1477.070
30	1383.770	1379.273	1386.018	1393.886	1388.266
35	1272.483	1271.359	1285.973	1291.593	1297.214
40	1144.336	1144.336	1169.066	1179.183	1188.176
45	998.203	998.203	1035.298	1058.904	1069.021
50	844.201	845.325	894.785	926.260	940.873
55	684.578	696.943	754.272	787.995	804.857
60	528.328	553.058	610.387	647.483	665.468
65	385.567	418.166	482.240	522.707	536.197
70	259.668	300.135	364.209	405.801	421.538
75	164.119	203.462	261.916	303.508	323.741
80	88.804	122.527	174.236	203.462	223.696
85	31.475	55.081	71.943	71.943	89.928
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	610.72	N.A.	14.00
0-30	1290.53	N.A.	29.50
0-40	2092.13	N.A.	47.80
0-60	3554.22	N.A.	81.30
0-80	4293.65	N.A.	98.20
0-90	4373.66	N.A.	100.00
10-90	4215.45	N.A.	96.40
20-40	1481.41	N.A.	33.90
20-50	2276.27	N.A.	52.00
40-70	1931.49	N.A.	44.20
60-80	739.43	N.A.	16.90
70-80	270.03	N.A.	6.20
80-90	80.01	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	4373.66	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	158.21
10-20	452.51
20-30	679.81
30-40	801.59
40-50	794.86
50-60	667.23
60-70	469.40
70-80	270.03
80-90	80.01
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	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

X=2H	Y=2H	15.9	17.5	16.2	17.8	18.1	UGR Viewed Endwise			
	3H	17.2	18.6	17.5	18.9	19.3	16.9	18.5	17.3	18.8
	4H	17.6	18.9	18.0	19.3	19.7	18.7	20.2	19.1	20.5
	6H	17.8	19.1	18.3	19.5	19.9	19.5	20.9	19.9	21.2
	8H	17.9	19.1	18.3	19.5	19.9	20.2	21.5	20.6	21.8
	12H	17.9	19.1	18.4	19.5	19.9	20.4	21.6	20.9	22.0
							20.6	21.7	21.0	22.1

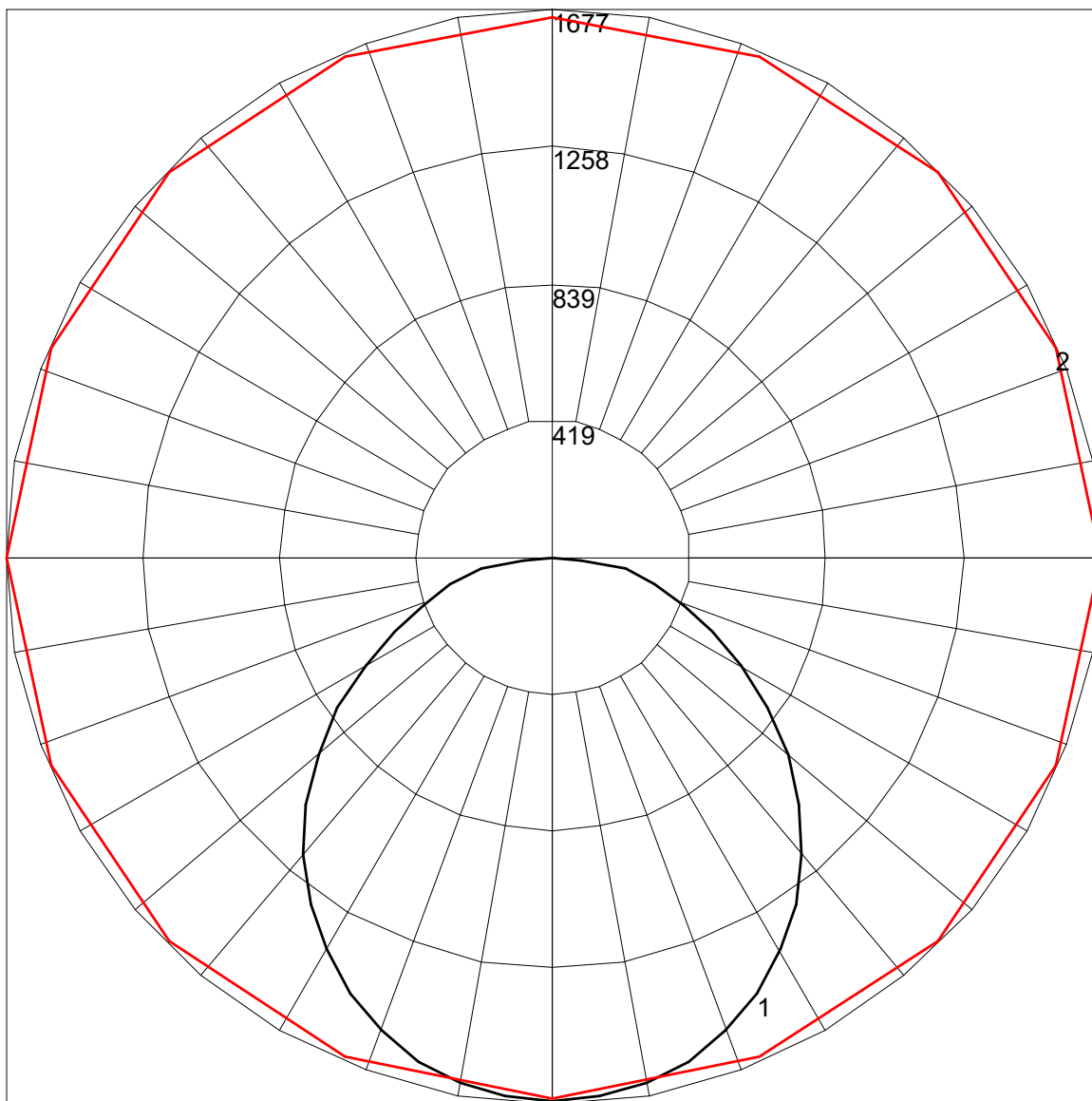
4H	2H	16.6	17.9	17.0	18.3	18.7	17.4	18.8	17.8	19.1
	3H	18.1	19.2	18.5	19.6	20.0	19.5	20.6	19.9	21.0
	4H	18.7	19.7	19.1	20.1	20.5	20.4	21.4	20.8	21.8
	6H	19.0	19.9	19.5	20.4	20.8	21.3	22.2	21.7	22.6
	8H	19.1	20.0	19.6	20.4	20.9	21.6	22.4	22.0	22.8
	12H	19.2	20.0	19.7	20.4	20.9	21.8	22.5	22.2	23.0

8H	4H	19.1	19.9	19.6	20.4	20.8	20.7	21.5	21.1	21.9
	6H	19.6	20.3	20.1	20.8	21.3	21.6	22.3	22.1	22.8
	8H	19.8	20.4	20.3	21.0	21.4	22.0	22.7	22.6	23.2
	12H	19.9	20.5	20.4	21.0	21.5	22.3	22.9	22.8	23.3

12H	4H	19.2	19.9	19.7	20.4	20.9	20.7	21.4	21.1	21.9
	6H	19.8	20.4	20.3	20.9	21.4	21.7	22.3	22.2	22.8
	8H	20.0	20.6	20.5	21.1	21.6	22.1	22.7	22.6	23.2

Maximum UGR = 23.9

POLAR GRAPH



Maximum Candela = 1677.16 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.)