



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT2-22-L50-835-D-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from BALLABS TEST NO. 18882.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 02-JAN-2020

[MANUFAC] WILLIAMS LINEAR

[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO

[LUMINAIRE] 2-56LED 22" ARRAYS-SERIES 2x2' RECESSED LUMINAIRE w/WHITE

[MORE] REFL, FROST CONCAVE ACRYLIC LENS w/DEEP ACRYLIC CENTER

[MORE] DIFFUSER

[LUMCAT] AT2-22-L50-835-D-DIM-UNV

[_SEARCH_SOURCETYPE] LED

[_SEARCH_APPLICATION] Indoor, Architectural, Classroom, Commercial, Office, Direct

[_SEARCH_MOUNTING] Ceiling, Recessed

[_SEARCH_CERTIFICATION] DLC

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5209
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	108
Total Luminaire Watts	48.31
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.16
Spacing Criterion (90-270)	1.24
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.76 ft
Luminous Width (90-270)	1.77 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	5484	5881	6290
55	4803	5185	5613
65	4089	4587	5003
75	3254	3898	4406
85	1610	2416	2114

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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	2129.854	2129.854	2129.854	2129.854	2129.854
5	2124.783	2114.640	2117.176	2114.640	2114.640
10	2074.072	2074.072	2079.143	2081.678	2084.214
15	1992.935	2000.541	2015.754	2025.897	2036.039
20	1896.584	1906.726	1932.082	1954.901	1972.650
25	1767.271	1787.556	1823.053	1850.944	1876.300
30	1617.675	1637.959	1696.276	1731.774	1752.058
35	1463.007	1475.684	1546.679	1589.784	1617.675
40	1293.125	1308.339	1376.798	1424.974	1452.864
45	1120.709	1140.993	1201.846	1255.092	1285.519
50	953.363	976.183	1031.965	1075.069	1110.567
55	796.160	813.908	859.548	895.046	930.543
60	644.027	669.383	707.416	745.449	768.269
65	499.501	532.463	560.354	585.710	611.065
70	365.118	408.222	423.435	446.255	471.610
75	243.412	266.232	291.587	324.549	329.620
80	131.848	154.668	172.417	187.630	182.559
85	40.569	53.246	60.853	65.924	53.246
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	768.84	N.A.	14.80
0-30	1606.46	N.A.	30.80
0-40	2566.81	N.A.	49.30
0-60	4265.28	N.A.	81.90
0-80	5132.08	N.A.	98.50
0-90	5208.68	N.A.	100.00
10-90	5007.84	N.A.	96.10
20-40	1797.98	N.A.	34.50
20-50	2724.44	N.A.	52.30
40-70	2254.9	N.A.	43.30
60-80	866.80	N.A.	16.60
70-80	310.36	N.A.	6.00
80-90	76.59	N.A.	1.50
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	5208.68	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	200.83
10-20	568.00
20-30	837.62
30-40	960.36
40-50	926.46
50-60	772.00
60-70	556.44
70-80	310.36
80-90	76.59
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	199	199	199	199	194	194	194	194	186	186	186	178	178	178	170	170	170	167
1	183	175	168	162	178	171	165	159	164	159	154	158	153	150	152	148	145	142
2	167	154	143	133	162	150	140	132	145	136	129	139	132	126	134	128	123	120
3	153	136	123	112	149	133	121	111	128	118	109	124	115	107	119	112	105	102
4	140	121	107	96	136	119	105	95	115	103	94	111	101	93	107	98	91	88
5	129	108	94	83	126	107	93	83	103	91	82	100	89	81	97	88	80	77
6	120	98	84	73	117	96	83	73	93	81	72	91	80	72	88	78	71	68
7	111	89	75	65	108	88	74	65	85	73	64	83	72	64	81	71	63	60
8	104	82	68	58	101	80	67	58	78	66	58	76	65	57	74	64	57	54
9	97	75	62	53	95	74	61	52	72	60	52	70	60	52	69	59	52	49
10	91	69	57	48	89	69	56	48	67	55	48	65	55	47	64	54	47	44

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UGR TABLE - CORRECTED

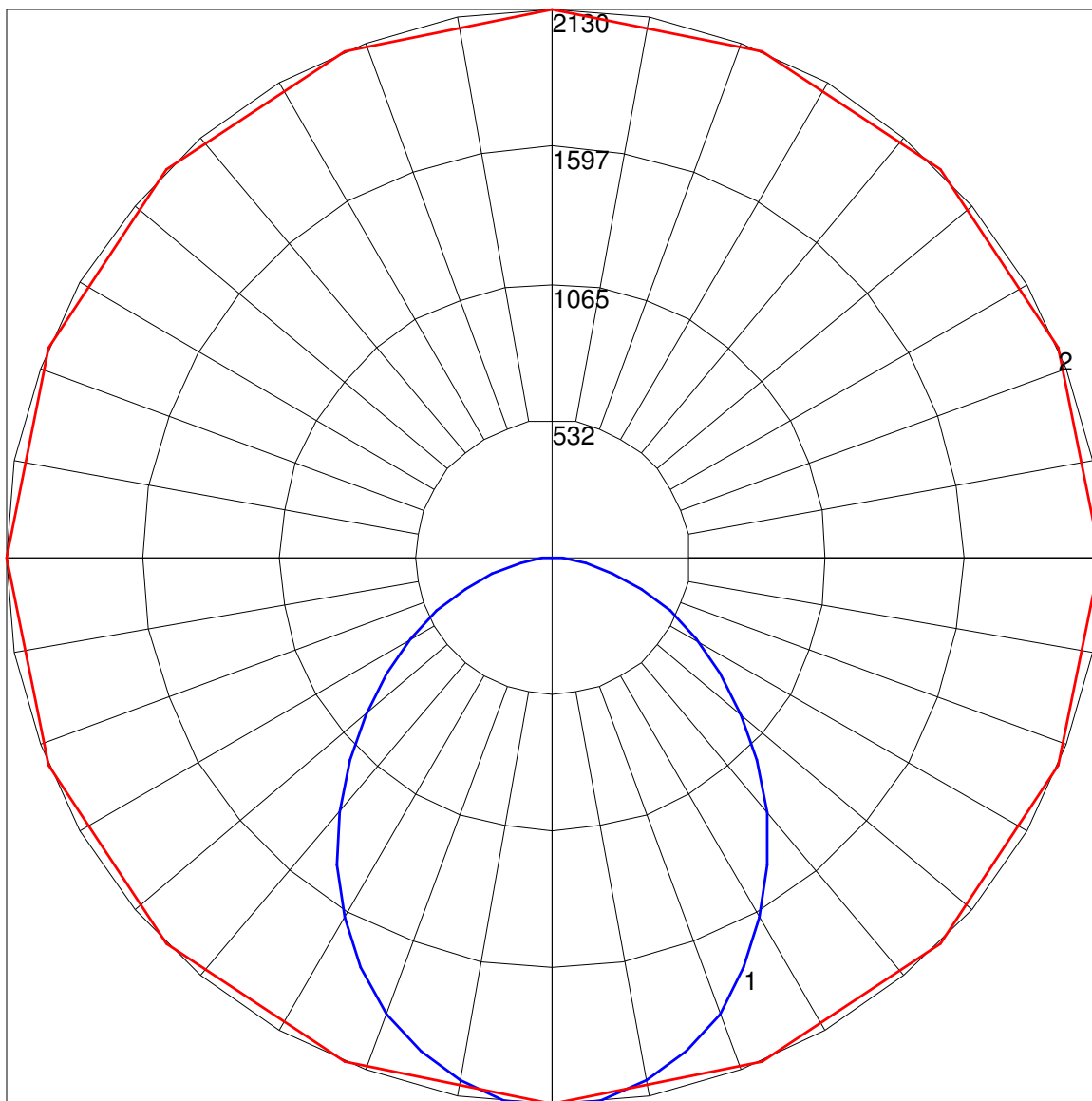
Reflectances

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	15.4	17.0	15.7	17.3	17.6	16.2	17.7	16.5	18.1	18.4
	3H	17.0	18.4	17.4	18.7	19.1	17.9	19.3	18.3	19.7	20.0
	4H	17.5	18.9	17.9	19.2	19.6	18.6	19.9	19.0	20.3	20.6
	6H	17.9	19.1	18.3	19.5	19.9	19.0	20.3	19.5	20.6	21.0
	8H	17.9	19.1	18.4	19.5	19.9	19.2	20.3	19.6	20.7	21.1
	12H	18.0	19.1	18.4	19.5	19.9	19.2	20.3	19.6	20.7	21.2
4H	2H	16.1	17.4	16.5	17.7	18.1	16.7	18.0	17.1	18.4	18.7
	3H	17.9	19.0	18.3	19.4	19.8	18.6	19.8	19.1	20.2	20.6
	4H	18.5	19.5	19.0	20.0	20.4	19.5	20.5	19.9	20.9	21.3
	6H	19.0	19.9	19.4	20.3	20.8	20.0	20.9	20.5	21.4	21.8
	8H	19.1	19.9	19.6	20.4	20.9	20.2	21.0	20.7	21.5	22.0
	12H	19.2	19.9	19.7	20.4	20.9	20.3	21.0	20.8	21.5	22.0
8H	4H	18.9	19.7	19.3	20.1	20.6	19.7	20.5	20.2	21.0	21.4
	6H	19.5	20.1	20.0	20.6	21.1	20.4	21.1	20.9	21.6	22.1
	8H	19.6	20.3	20.1	20.8	21.2	20.6	21.3	21.1	21.8	22.3
	12H	19.8	20.3	20.3	20.8	21.3	20.8	21.3	21.3	21.8	22.4
12H	4H	18.9	19.7	19.4	20.1	20.6	19.7	20.5	20.2	20.9	21.4
	6H	19.5	20.1	20.0	20.6	21.1	20.4	21.1	21.0	21.5	22.1
	8H	19.8	20.3	20.3	20.8	21.4	20.7	21.3	21.2	21.8	22.3

Maximum UGR = 22.4

POLAR GRAPH



Maximum Candela = 2129.854 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.)