



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT1-24-P58-8TW-D-POE 4000K_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from BALLABS TEST NO. 18876.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 26-JUN-2020

[MANUFAC] WILLIAMS LINEAR

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

[LUMINAIRE] 22" LED ARRAYS-SERIES 2x4' RECESSED LUMINAIRE w/WHITE

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

[MORE] DIFFUSER

[LUMCAT] AT1-24-P58-8TW-D-PoE 4000k

[_SEARCH_SOURCETYPE] LED

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

[_SEARCH_MOUNTING] Ceiling, Recessed

[_SEARCH_CERTIFICATION] DLC

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5835
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	117
Total Luminaire Watts	49.8
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.12
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.32
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.76 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	2664	3115	3380
55	2311	2830	3049
65	2055	2693	2911
75	1754	2608	2679
85	1479	1584	1619

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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	2244.959	2244.959	2244.959	2244.959	2244.959
5	2246.853	2244.959	2250.642	2250.642	2252.537
10	2186.230	2188.124	2201.386	2212.753	2218.436
15	2110.451	2121.818	2146.446	2172.969	2188.124
20	1977.837	2006.254	2047.933	2099.084	2121.818
25	1820.595	1847.118	1915.319	1989.204	2021.410
30	1665.248	1701.243	1795.967	1890.691	1926.686
35	1528.845	1572.418	1686.087	1790.284	1828.173
40	1328.030	1379.181	1506.112	1608.414	1636.831
45	1163.211	1218.151	1360.237	1447.383	1475.800
50	985.130	1047.647	1176.472	1252.251	1273.091
55	818.415	882.828	1002.180	1062.803	1079.854
60	672.540	736.953	844.938	896.089	911.245
65	536.138	606.234	702.852	746.425	759.686
70	405.419	479.303	562.661	594.867	600.550
75	280.383	356.162	416.786	431.941	428.152
80	176.187	244.388	267.122	204.604	185.659
85	79.568	111.774	85.252	85.252	87.146
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	816.89	N.A.	14.00
0-30	1703.19	N.A.	29.20
0-40	2745.18	N.A.	47.00
0-60	4648.25	N.A.	79.70
0-80	5723.88	N.A.	98.10
0-90	5834.68	N.A.	100.00
10-90	5621.76	N.A.	96.40
20-40	1928.29	N.A.	33.00
20-50	2955.03	N.A.	50.60
40-70	2572.68	N.A.	44.10
60-80	1075.63	N.A.	18.40
70-80	406.02	N.A.	7.00
80-90	110.80	N.A.	1.90
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	5834.68	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	212.92
10-20	603.97
20-30	886.29
30-40	1042.00
40-50	1026.74
50-60	876.33
60-70	669.61
70-80	406.02
80-90	110.80
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	256	256	256	256	250	250	250	250	239	239	239	228	228	228	219	219	219	215
1	234	224	214	206	228	219	210	203	210	203	196	201	196	190	193	189	185	180
2	213	195	181	169	207	191	178	167	184	172	163	177	167	159	170	162	155	151
3	194	172	155	141	189	169	153	140	162	148	137	156	145	135	151	141	132	128
4	178	153	134	120	173	150	133	119	145	129	117	140	126	116	135	124	114	110
5	164	137	118	104	160	134	117	103	130	114	102	126	112	101	122	110	100	95
6	152	124	105	91	148	122	104	90	118	102	90	114	100	89	111	98	88	84
7	141	112	94	81	137	111	93	80	107	91	80	104	90	79	101	88	78	74
8	131	103	85	72	128	101	84	72	98	83	71	96	81	71	93	80	71	66
9	123	94	77	65	120	93	76	65	91	75	65	88	74	64	86	73	64	60
10	115	87	70	59	113	86	70	59	84	69	59	82	68	58	80	67	58	54

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UGR TABLE - CORRECTED

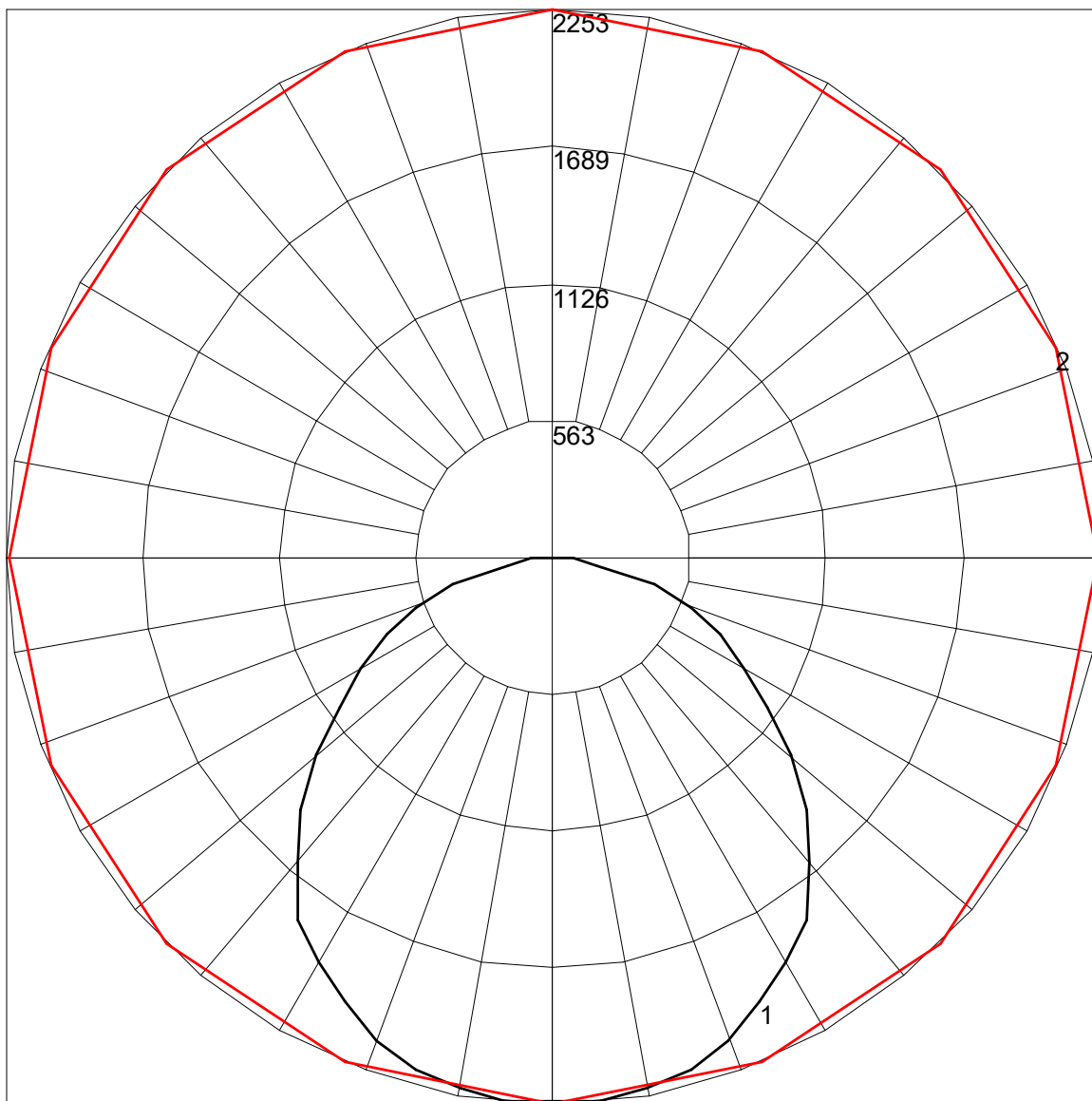
Reflectances

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	12.0	13.6	12.3	13.9	14.2	13.4	15.0	13.8	15.3	15.7
	3H	13.7	15.1	14.1	15.5	15.8	15.4	16.8	15.8	17.2	17.5
	4H	14.3	15.7	14.7	16.0	16.4	16.1	17.5	16.5	17.9	18.2
	6H	14.8	16.1	15.2	16.5	16.9	16.5	17.8	17.0	18.2	18.6
	8H	15.0	16.2	15.4	16.6	17.0	16.6	17.8	17.1	18.2	18.6
	12H	15.1	16.3	15.5	16.7	17.1	16.7	17.9	17.1	18.2	18.7
4H	2H	12.9	14.3	13.3	14.6	15.0	14.0	15.4	14.4	15.7	16.1
	3H	14.9	16.0	15.3	16.4	16.8	16.2	17.4	16.6	17.8	18.2
	4H	15.7	16.7	16.1	17.1	17.5	17.1	18.2	17.6	18.6	19.0
	6H	16.3	17.2	16.8	17.7	18.1	17.6	18.5	18.1	19.0	19.4
	8H	16.5	17.4	17.0	17.8	18.3	17.8	18.6	18.2	19.0	19.5
	12H	16.7	17.5	17.2	17.9	18.4	17.8	18.6	18.3	19.1	19.6
8H	4H	16.2	17.0	16.6	17.5	17.9	17.4	18.3	17.9	18.7	19.2
	6H	17.0	17.7	17.5	18.2	18.7	18.1	18.8	18.5	19.2	19.7
	8H	17.3	18.0	17.8	18.5	19.0	18.2	18.9	18.7	19.4	19.9
	12H	17.6	18.2	18.1	18.6	19.2	18.4	19.0	18.9	19.4	20.0
12H	4H	16.2	17.0	16.7	17.5	17.9	17.5	18.2	17.9	18.7	19.2
	6H	17.1	17.8	17.6	18.2	18.8	18.1	18.8	18.6	19.2	19.8
	8H	17.5	18.1	18.0	18.6	19.1	18.4	18.9	18.9	19.4	20.0

Maximum UGR = 20.0

POLAR GRAPH



Maximum Candela = 2252.537 Located At Horizontal Angle = 90, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)