



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT3-24-P27-8TW-D-POE 4000K_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 19260.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUE DATE] 3-JAN-2020

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 4-22" LED ARRAYS 2x4' LUMINAIRE

[MORE] WHITE REFLECTOR w/FROSTED ACRYLIC CONCAVE LENS IN DOOR

[LUMCAT] AT3-24-P27-8TW-D-PoE 4000k

[_SEARCH_SOURCETYPE]LED

[_SEARCH_APPLICATION]INDOOR,COMMERCIAL,DIRECT,OFFICE,ARCHITECTURAL

[_SEARCH_MOUNTING]RECESSED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2608
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	108
Total Luminaire Watts	24.23
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.12
Spacing Criterion (90-270)	1.22
Spacing Criterion (Diagonal)	1.30
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.76 ft
Luminous Width (90-270)	1.88 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	1188	1328	1416
55	1012	1173	1248
65	919	1123	1206
75	782	1069	1069
85	693	494	462

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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	1039.096	1039.096	1039.096	1039.096	1039.096
5	1033.600	1033.967	1033.967	1034.333	1034.699
10	1012.716	1013.815	1016.380	1019.677	1021.876
15	975.343	977.908	983.771	992.564	996.594
20	919.285	924.781	938.704	955.558	962.520
25	843.808	850.769	871.287	894.004	904.263
30	764.300	839.045	792.512	789.948	847.472
35	683.693	696.150	731.691	766.498	779.689
40	606.384	620.673	663.175	697.250	708.242
45	550.692	568.279	615.544	646.687	656.580
50	463.490	483.641	527.609	553.256	559.852
55	380.684	401.569	441.140	462.024	469.352
60	309.604	331.221	364.929	383.982	390.211
65	254.645	278.460	311.069	329.023	334.152
70	192.724	218.005	247.683	261.972	264.537
75	132.635	157.916	181.366	183.564	181.366
80	85.736	111.384	109.186	75.844	68.882
85	39.571	45.433	28.212	26.747	26.380
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	375.55	N.A.	14.40
0-30	778.17	N.A.	29.80
0-40	1236.8	N.A.	47.40
0-60	2088.93	N.A.	80.10
0-80	2564.27	N.A.	98.30
0-90	2607.85	N.A.	100.00
10-90	2509.69	N.A.	96.20
20-40	861.25	N.A.	33.00
20-50	1323.91	N.A.	50.80
40-70	1150.07	N.A.	44.10
60-80	475.34	N.A.	18.20
70-80	177.39	N.A.	6.80
80-90	43.58	N.A.	1.70
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	2607.85	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	98.15
10-20	277.40
20-30	402.62
30-40	458.63
40-50	462.65
50-60	389.48
60-70	297.95
70-80	177.39
80-90	43.58
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	100	100	100	100	98	98	98	98	93	93	93	89	89	89	86	86	86	84
1	92	88	84	81	89	86	83	80	82	80	77	79	77	75	76	74	73	71
2	83	77	71	66	81	75	70	66	72	68	64	69	66	63	67	64	61	59
3	76	68	61	55	74	66	60	55	64	58	54	61	57	53	59	55	52	50
4	70	60	53	47	68	59	52	47	57	51	46	55	50	46	53	49	45	43
5	64	54	46	41	63	53	46	41	51	45	40	49	44	40	48	43	39	38
6	60	49	41	36	58	48	41	36	46	40	35	45	39	35	44	39	35	33
7	55	44	37	32	54	44	37	32	42	36	31	41	35	31	40	35	31	29
8	52	40	33	29	50	40	33	28	39	33	28	38	32	28	37	32	28	26
9	48	37	30	26	47	37	30	26	36	30	26	35	29	25	34	29	25	24
10	45	34	28	23	44	34	28	23	33	27	23	32	27	23	32	27	23	22

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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	12.3	13.9	12.7	14.2	14.5	13.4	15.0	13.7	15.3	15.6
	3H	14.1	15.5	14.4	15.8	16.2	15.4	16.9	15.8	17.2	17.5
	4H	14.7	16.1	15.1	16.4	16.8	16.1	17.5	16.5	17.9	18.2
	6H	15.2	16.5	15.6	16.9	17.3	16.5	17.7	16.9	18.1	18.5
	8H	15.4	16.6	15.9	17.0	17.4	16.5	17.7	16.9	18.1	18.5
	12H	15.6	16.7	16.0	17.1	17.5	16.6	17.7	17.0	18.1	18.5

UGR Viewed Endwise

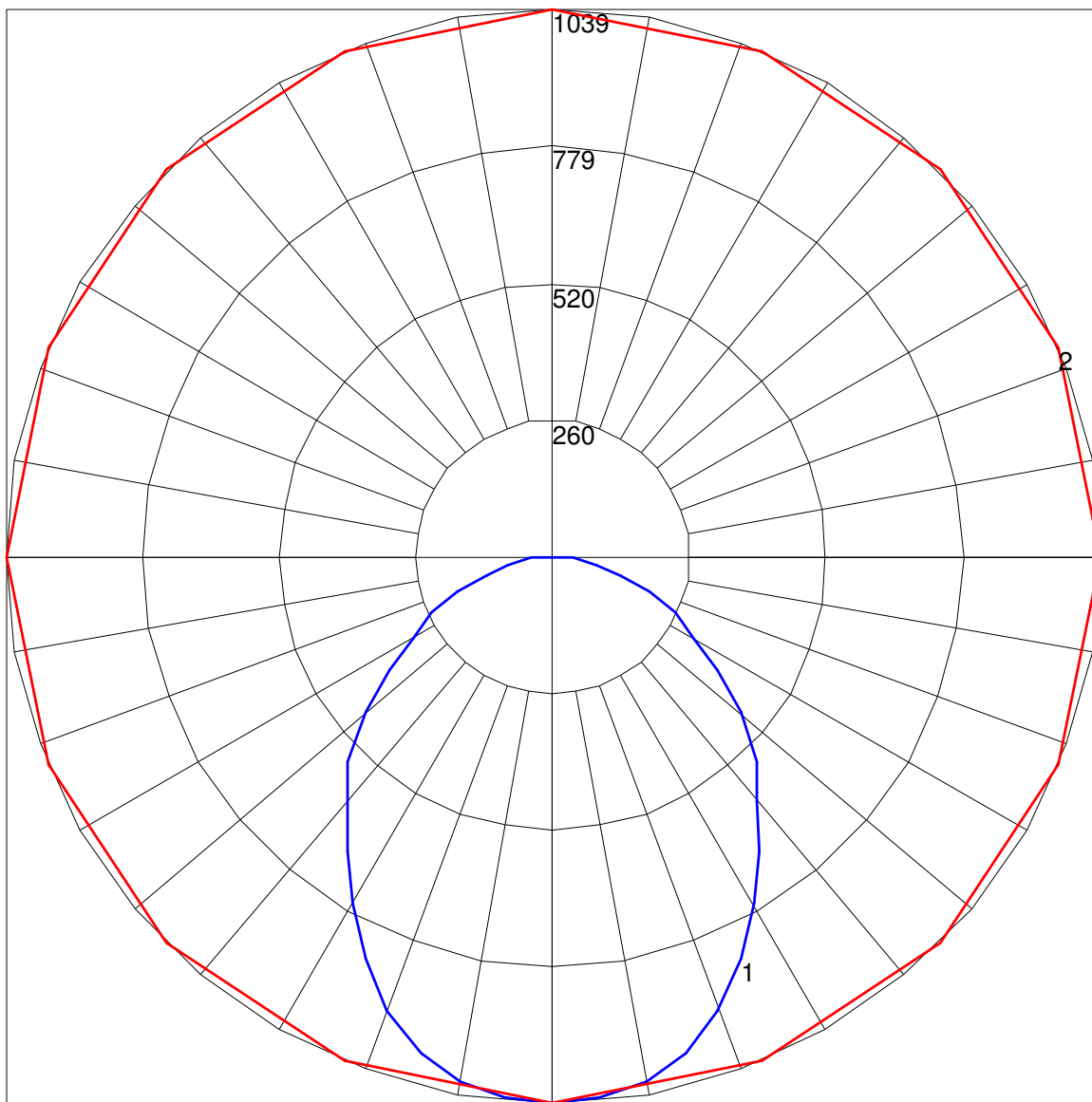
4H	2H	13.1	14.5	13.5	14.9	15.2	14.0	15.3	14.4	15.7	16.1
	3H	15.2	16.3	15.6	16.7	17.1	16.2	17.4	16.7	17.8	18.2
	4H	16.0	17.0	16.4	17.4	17.8	17.1	18.2	17.6	18.6	19.0
	6H	16.6	17.6	17.1	18.0	18.4	17.5	18.4	18.0	18.9	19.3
	8H	16.9	17.7	17.3	18.2	18.6	17.6	18.5	18.1	18.9	19.4
	12H	17.0	17.8	17.5	18.3	18.8	17.7	18.4	18.1	18.9	19.4

8H	4H	16.4	17.3	16.9	17.7	18.2	17.4	18.3	17.9	18.7	19.2
	6H	17.3	18.0	17.8	18.5	19.0	17.9	18.6	18.4	19.1	19.6
	8H	17.6	18.2	18.1	18.8	19.2	18.0	18.7	18.5	19.2	19.7
	12H	17.9	18.4	18.4	18.9	19.5	18.1	18.7	18.6	19.2	19.7

12H	4H	16.5	17.2	16.9	17.7	18.2	17.5	18.2	17.9	18.7	19.2
	6H	17.4	18.0	17.9	18.5	19.0	18.0	18.6	18.5	19.1	19.6
	8H	17.7	18.3	18.2	18.8	19.4	18.1	18.7	18.7	19.2	19.8

Maximum UGR = 19.8

POLAR GRAPH



Maximum Candela = 1039.096 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.)