



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT2-22-P25-8TW-D-POE 4000K.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 19435.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 3-JAN-2020

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2-22" LED ARRAYS 2x2' LUMINAIRE

[MORE] WHITE REFLECTOR w/2 PIECE FROSTED ACRYLIC LENS IN DOOR

[LUMCAT] AT2-22-P25-8TW-D-PoE 4000k

[\_SEARCH\_SOURCETYPE] LED

[\_SEARCH\_APPLICATION] Indoor, Architectural, Classroom, Commercial, Office, Direct

[\_SEARCH\_MOUNTING] Recessed

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2582
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	103
Total Luminaire Watts	25.09
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.16
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.30
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	2666	2902	3135
55	2345	2648	2846
65	2072	2423	2662
75	1720	2180	2520
85	925	820	778

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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>
<b>0</b>	1016.173	1016.173	1016.173	1016.173	1016.173
<b>5</b>	1014.054	1010.877	1010.348	1009.818	1008.759
<b>10</b>	991.285	990.755	988.637	994.991	996.580
<b>15</b>	957.395	956.335	960.042	973.281	977.517
<b>20</b>	906.030	908.678	923.504	942.568	951.570
<b>25</b>	843.016	852.018	875.847	902.323	916.091
<b>30</b>	777.883	789.533	820.246	855.195	868.433
<b>35</b>	706.926	719.634	754.584	793.239	805.948
<b>40</b>	627.496	639.146	676.742	713.280	729.166
<b>45</b>	544.889	558.657	593.076	627.496	640.734
<b>50</b>	465.988	479.227	513.646	547.007	556.009
<b>55</b>	388.677	400.856	438.982	467.048	471.813
<b>60</b>	317.190	329.369	365.377	391.854	393.972
<b>65</b>	253.116	263.178	296.009	319.308	325.133
<b>70</b>	189.043	198.575	229.817	250.469	258.412
<b>75</b>	128.676	138.737	163.096	178.452	188.514
<b>80</b>	71.487	84.196	85.784	85.255	84.196
<b>85</b>	23.299	27.536	20.652	20.122	19.593
<b>90</b>	0.000	0.000	0.000	0.000	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	367.70	N.A.	14.20
0-30	771.90	N.A.	29.90
0-40	1243.34	N.A.	48.20
0-60	2091.53	N.A.	81.00
0-80	2546.93	N.A.	98.60
0-90	2581.8	N.A.	100.00
10-90	2485.93	N.A.	96.30
20-40	875.64	N.A.	33.90
20-50	1334.2	N.A.	51.70
40-70	1137.85	N.A.	44.10
60-80	455.41	N.A.	17.60
70-80	165.75	N.A.	6.40
80-90	34.87	N.A.	1.40
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	2581.8	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	95.87
10-20	271.83
20-30	404.20
30-40	471.43
40-50	458.56
50-60	389.63
60-70	289.66
70-80	165.75
80-90	34.87
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	186	186	186	186	182	182	182	182	174	174	174	166	166	166	159	159	159	156
1	171	163	157	151	166	160	154	149	153	148	144	147	143	140	142	138	135	132
2	156	143	133	124	151	140	131	123	135	127	120	130	123	117	125	119	114	111
3	142	126	114	104	138	124	112	103	119	109	101	115	106	99	111	104	98	94
4	130	112	99	89	127	110	98	88	106	95	87	103	93	86	99	91	84	81
5	120	101	87	77	117	99	86	76	96	84	75	92	82	75	90	81	74	71
6	111	91	77	67	108	89	76	67	87	75	66	84	74	66	81	72	65	62
7	103	83	69	60	101	81	68	59	79	67	59	77	66	59	75	65	58	55
8	96	75	62	53	94	74	62	53	72	61	53	70	60	53	69	59	52	49
9	90	69	57	48	88	68	56	48	67	56	48	65	55	48	63	54	47	45
10	84	64	52	44	82	63	52	44	62	51	44	60	50	43	59	50	43	40

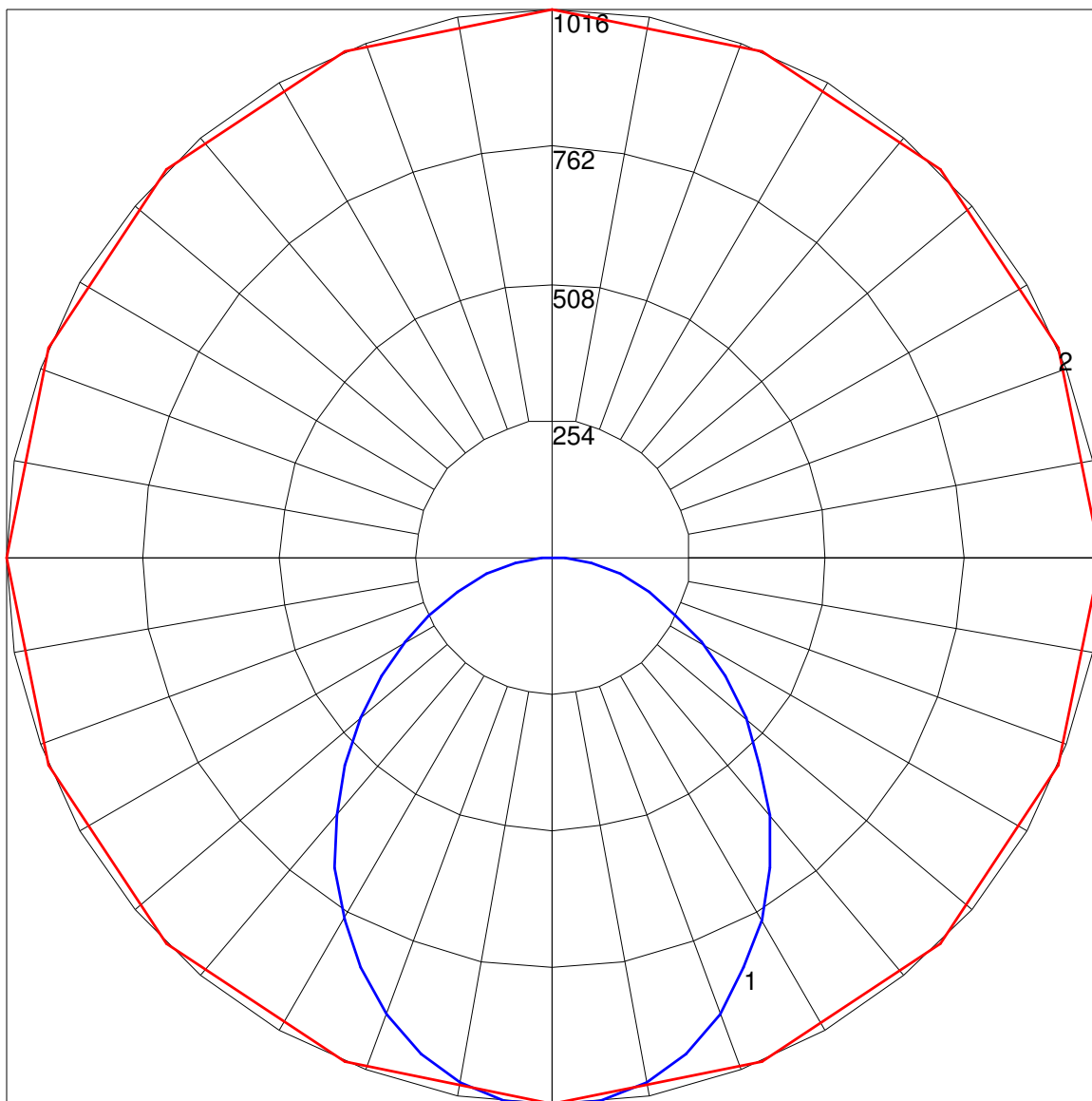
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**UGR TABLE - CORRECTED**

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	13.0	14.6	13.4	14.9	15.2	14.2	15.8	14.6	16.1	16.4
	3H	14.7	16.1	15.0	16.4	16.8	16.1	17.5	16.5	17.9	18.2
	4H	15.3	16.6	15.7	17.0	17.3	16.8	18.2	17.2	18.5	18.9
	6H	15.7	16.9	16.1	17.3	17.7	17.2	18.5	17.7	18.9	19.3
	8H	15.8	17.0	16.2	17.4	17.8	17.3	18.5	17.8	18.9	19.3
	12H	15.8	17.0	16.2	17.3	17.8	17.3	18.5	17.8	18.9	19.3
4H	2H	13.8	15.1	14.2	15.5	15.9	14.7	16.1	15.1	16.4	16.8
	3H	15.7	16.8	16.1	17.2	17.6	16.9	18.0	17.3	18.4	18.8
	4H	16.4	17.4	16.8	17.8	18.2	17.7	18.8	18.2	19.2	19.6
	6H	16.9	17.8	17.3	18.2	18.7	18.3	19.1	18.7	19.6	20.0
	8H	17.0	17.9	17.5	18.3	18.8	18.4	19.2	18.8	19.6	20.1
	12H	17.1	17.9	17.6	18.3	18.8	18.4	19.1	18.9	19.6	20.1
8H	4H	16.8	17.6	17.2	18.0	18.5	18.0	18.8	18.4	19.3	19.7
	6H	17.4	18.1	17.9	18.6	19.1	18.6	19.3	19.1	19.8	20.2
	8H	17.6	18.2	18.1	18.7	19.2	18.7	19.3	19.2	19.8	20.3
	12H	17.7	18.3	18.3	18.8	19.3	18.8	19.3	19.3	19.8	20.4
12H	4H	16.8	17.6	17.3	18.0	18.5	18.0	18.7	18.5	19.2	19.7
	6H	17.5	18.1	18.0	18.6	19.1	18.6	19.2	19.1	19.7	20.2
	8H	17.7	18.3	18.2	18.8	19.3	18.8	19.3	19.3	19.8	20.4

Maximum UGR = 20.4

POLAR GRAPH



Maximum Candela = 1016.173 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.)