



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT3-22-P16-8TW-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] AT3-22-P16-8TW-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	1493
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	97
Total Luminaire Watts	15.44
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	1542	1678	1813
55	1356	1531	1646
65	1198	1401	1539
75	995	1261	1457
85	535	474	450

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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	587.585	587.585	587.585	587.585	587.585
5	586.361	584.524	584.217	583.911	583.299
10	573.194	572.888	571.663	575.338	576.256
15	553.598	552.986	555.129	562.784	565.233
20	523.897	525.428	534.002	545.025	550.230
25	487.460	492.665	506.444	521.754	529.715
30	449.798	456.535	474.294	494.503	502.157
35	408.768	416.117	436.326	458.678	466.027
40	362.839	369.576	391.315	412.443	421.629
45	315.073	323.034	342.937	362.839	370.494
50	269.450	277.105	297.008	316.298	321.503
55	224.746	231.789	253.834	270.063	272.818
60	183.410	190.452	211.274	226.583	227.808
65	146.361	152.178	171.162	184.635	188.003
70	109.311	114.823	132.888	144.830	149.422
75	74.405	80.223	94.308	103.187	109.005
80	41.336	48.685	49.603	49.297	48.685
85	13.473	15.922	11.942	11.635	11.329
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	212.62	N.A.	14.20
0-30	446.34	N.A.	29.90
0-40	718.94	N.A.	48.20
0-60	1209.39	N.A.	81.00
0-80	1472.72	N.A.	98.60
0-90	1492.88	N.A.	100.00
10-90	1437.45	N.A.	96.30
20-40	506.32	N.A.	33.90
20-50	771.48	N.A.	51.70
40-70	657.94	N.A.	44.10
60-80	263.33	N.A.	17.60
70-80	95.84	N.A.	6.40
80-90	20.16	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	1492.88	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	55.44
10-20	157.18
20-30	233.72
30-40	272.60
40-50	265.15
50-60	225.30
60-70	167.49
70-80	95.84
80-90	20.16
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 RW	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	97	97	97	97	95	95	95	95	90	90	90	87	87	87	83	83	83	81
1	89	85	82	79	87	83	80	78	80	77	75	77	75	73	74	72	71	69
2	81	75	69	65	79	73	68	64	70	66	62	68	64	61	65	62	60	58
3	74	66	59	54	72	64	58	54	62	57	53	60	55	52	58	54	51	49
4	68	58	51	46	66	57	51	46	55	50	45	53	49	45	52	47	44	42
5	63	52	45	40	61	51	45	40	50	44	39	48	43	39	47	42	38	37
6	58	47	40	35	56	47	40	35	45	39	35	44	38	34	42	38	34	32
7	54	43	36	31	52	42	36	31	41	35	31	40	35	31	39	34	30	29
8	50	39	33	28	49	39	32	28	38	32	28	37	31	27	36	31	27	26
9	47	36	30	25	46	36	29	25	35	29	25	34	29	25	33	28	25	23
10	44	33	27	23	43	33	27	23	32	27	23	31	26	23	31	26	22	21

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UGR TABLE - CORRECTED

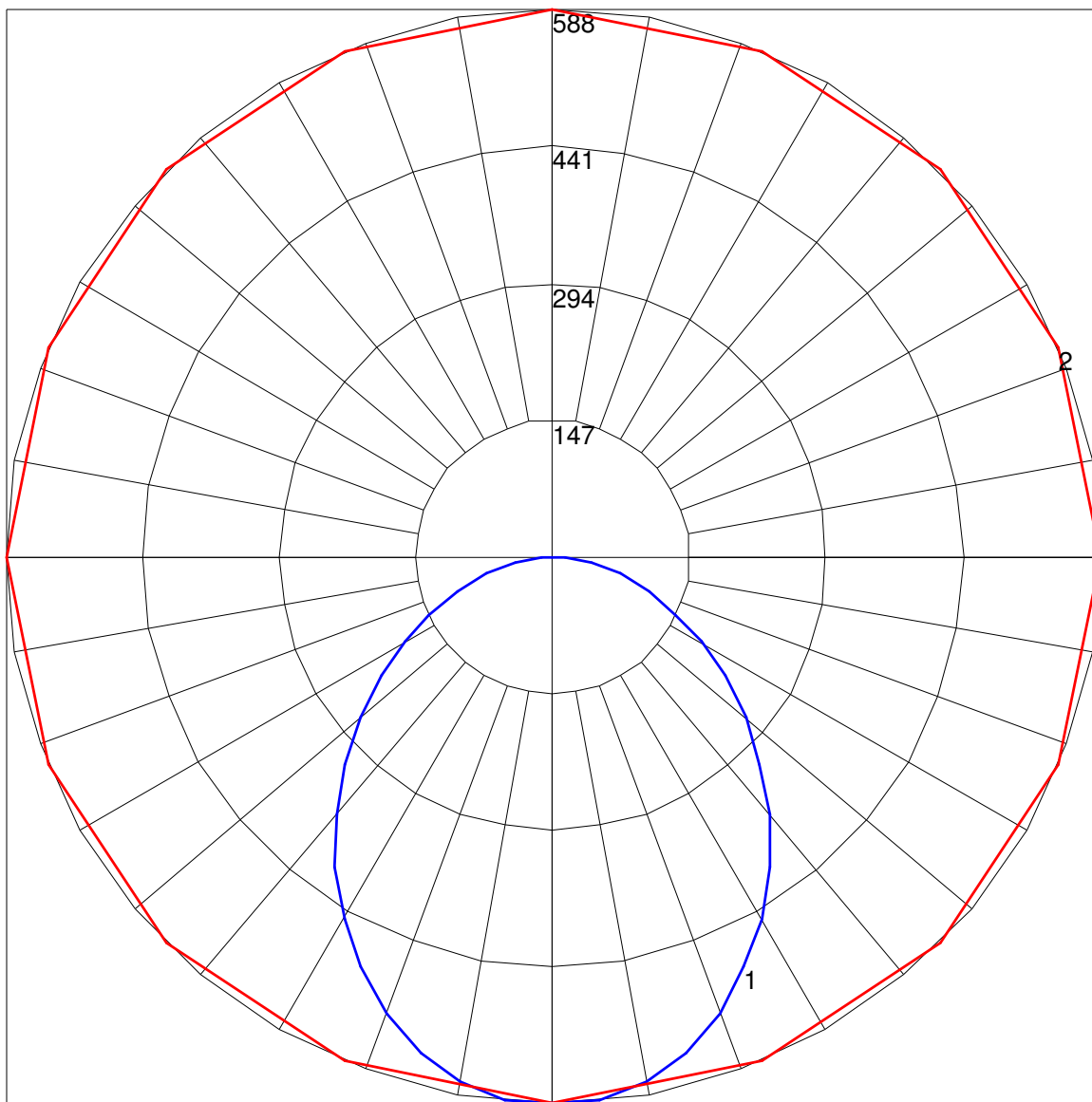
Reflectances

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	13.4	15.0	13.8	15.3	15.6	14.6	16.2	15.0	16.5	16.8
	3H	15.1	16.5	15.4	16.8	17.2	16.5	17.9	16.9	18.3	18.6
	4H	15.7	17.0	16.1	17.4	17.7	17.2	18.6	17.6	18.9	19.3
	6H	16.1	17.3	16.5	17.7	18.1	17.6	18.9	18.1	19.3	19.7
	8H	16.2	17.4	16.6	17.8	18.2	17.7	18.9	18.2	19.3	19.7
	12H	16.2	17.4	16.6	17.7	18.2	17.7	18.9	18.2	19.3	19.7
4H	2H	14.2	15.5	14.6	15.9	16.3	15.1	16.5	15.5	16.8	17.2
	3H	16.1	17.2	16.5	17.6	18.0	17.3	18.4	17.7	18.8	19.2
	4H	16.8	17.8	17.2	18.2	18.6	18.1	19.2	18.6	19.6	20.0
	6H	17.3	18.2	17.7	18.6	19.1	18.7	19.5	19.1	20.0	20.4
	8H	17.4	18.3	17.9	18.7	19.2	18.8	19.6	19.2	20.0	20.5
	12H	17.5	18.3	18.0	18.7	19.2	18.8	19.5	19.3	20.0	20.5
8H	4H	17.2	18.0	17.6	18.4	18.9	18.4	19.2	18.8	19.7	20.1
	6H	17.8	18.5	18.3	19.0	19.5	19.0	19.7	19.5	20.2	20.6
	8H	18.0	18.6	18.5	19.1	19.6	19.1	19.7	19.6	20.2	20.7
	12H	18.1	18.7	18.7	19.2	19.7	19.2	19.7	19.7	20.2	20.8
12H	4H	17.2	18.0	17.7	18.4	18.9	18.4	19.1	18.9	19.6	20.1
	6H	17.9	18.5	18.4	19.0	19.5	19.0	19.6	19.5	20.1	20.6
	8H	18.1	18.7	18.6	19.2	19.7	19.2	19.7	19.7	20.2	20.8

Maximum UGR = 20.8

POLAR GRAPH



Maximum Candela = 587.585 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.)