



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT2-24-P27-835-D-POE_.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] AT2-24-P27-835-D-PoE

[_SEARCH_SOURCE TYPE]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	2798
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	129
Total Luminaire Watts	21.7
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	1274	1425	1520
55	1086	1259	1339
65	986	1205	1294
75	839	1147	1147
85	743	530	495

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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	1114.797	1114.797	1114.797	1114.797	1114.797
5	1108.901	1109.294	1109.294	1109.687	1110.080
10	1086.495	1087.674	1090.426	1093.964	1096.322
15	1046.400	1049.152	1055.441	1064.875	1069.199
20	986.258	992.154	1007.091	1025.173	1032.642
25	905.281	912.750	934.763	959.134	970.141
30	819.981	900.171	850.249	847.497	909.212
35	733.502	746.867	784.997	822.340	836.491
40	650.560	665.891	711.489	748.046	759.839
45	590.811	609.679	660.388	693.800	704.414
50	497.256	518.876	566.047	593.563	600.638
55	408.418	430.824	473.278	495.684	503.546
60	332.159	355.351	391.516	411.956	418.639
65	273.196	298.747	333.732	352.993	358.496
70	206.764	233.887	265.727	281.058	283.809
75	142.298	169.421	194.579	196.937	194.579
80	91.983	119.499	117.140	81.369	73.901
85	42.453	48.743	30.268	28.695	28.302
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	402.91	N.A.	14.40
0-30	834.87	N.A.	29.80
0-40	1326.91	N.A.	47.40
0-60	2241.12	N.A.	80.10
0-80	2751.08	N.A.	98.30
0-90	2797.84	N.A.	100.00
10-90	2692.53	N.A.	96.20
20-40	924.00	N.A.	33.00
20-50	1420.35	N.A.	50.80
40-70	1233.86	N.A.	44.10
60-80	509.97	N.A.	18.20
70-80	190.31	N.A.	6.80
80-90	46.75	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	2797.84	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	105.30
10-20	297.61
20-30	431.96
30-40	492.04
40-50	496.36
50-60	417.85
60-70	319.65
70-80	190.31
80-90	46.75
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	120	120	120	120	117	117	117	117	112	112	112	107	107	107	103	103	103	101
1	110	105	101	97	107	103	99	96	99	96	93	95	92	90	91	89	87	85
2	100	92	85	80	98	90	84	79	87	81	77	83	79	75	80	77	73	71
3	92	81	73	67	89	80	72	66	77	70	65	74	68	64	71	67	63	60
4	84	72	63	57	82	71	63	56	68	61	56	66	60	55	64	58	54	52
5	77	65	56	49	75	64	55	49	61	54	48	59	53	48	58	52	47	45
6	72	58	50	43	70	57	49	43	56	48	43	54	47	42	52	46	42	40
7	67	53	44	38	65	52	44	38	51	43	38	49	43	38	48	42	37	35
8	62	49	40	34	60	48	40	34	47	39	34	45	39	34	44	38	34	32
9	58	45	36	31	57	44	36	31	43	36	31	42	35	31	41	35	30	29
10	54	41	33	28	53	41	33	28	40	33	28	39	32	28	38	32	28	26

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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

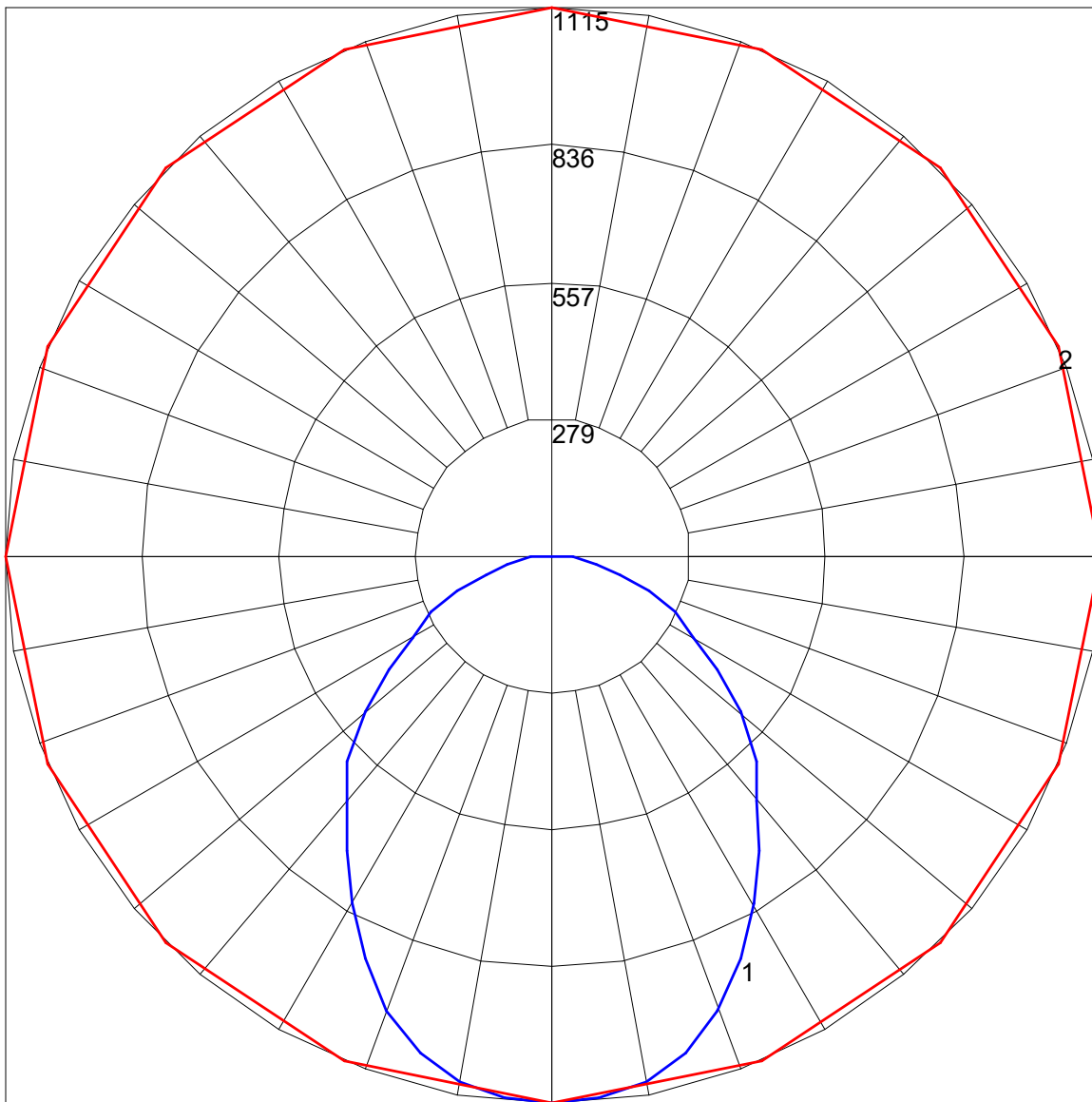
X=2H	Y=2H	11.9	13.5	12.3	13.8	14.1	13.0	14.6	13.3	14.9	15.2
	3H	13.7	15.1	14.0	15.4	15.8	15.0	16.5	15.4	16.8	17.1
	4H	14.3	15.7	14.7	16.0	16.4	15.7	17.1	16.1	17.5	17.8
	6H	14.8	16.1	15.2	16.5	16.9	16.1	17.3	16.5	17.7	18.1
	8H	15.0	16.2	15.5	16.6	17.0	16.1	17.3	16.5	17.7	18.1
	12H	15.2	16.3	15.6	16.7	17.1	16.2	17.3	16.6	17.7	18.1

UGR Viewed Endwise

4H	2H	12.7	14.1	13.1	14.5	14.8	13.6	14.9	14.0	15.3	15.7
	3H	14.8	15.9	15.2	16.3	16.7	15.8	17.0	16.3	17.4	17.8
	4H	15.6	16.6	16.0	17.0	17.4	16.7	17.8	17.2	18.2	18.6
	6H	16.2	17.2	16.7	17.6	18.0	17.1	18.0	17.6	18.5	18.9
	8H	16.5	17.3	16.9	17.8	18.2	17.2	18.1	17.7	18.5	19.0
	12H	16.6	17.4	17.1	17.9	18.4	17.3	18.0	17.7	18.5	19.0
8H	4H	16.0	16.9	16.5	17.3	17.8	17.0	17.9	17.5	18.3	18.8
	6H	16.9	17.6	17.4	18.1	18.6	17.5	18.2	18.0	18.7	19.2
	8H	17.2	17.8	17.7	18.4	18.8	17.6	18.3	18.1	18.8	19.3
	12H	17.5	18.0	18.0	18.5	19.1	17.7	18.3	18.2	18.8	19.3
12H	4H	16.1	16.8	16.5	17.3	17.8	17.1	17.8	17.5	18.3	18.8
	6H	17.0	17.6	17.5	18.1	18.6	17.6	18.2	18.1	18.7	19.2
	8H	17.3	17.9	17.8	18.4	19.0	17.7	18.3	18.3	18.8	19.4

Maximum UGR = 19.4

POLAR GRAPH



Maximum Candela = 1114.797 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.)