



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AT3-14-L20-8TW-D-DALI-UNV 4000K_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from BALLABS TEST NO. 19434.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 3-JAN-2020

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2-42 LED 22" ARRAYS 1x4' RECESSED LUMINAIRE

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

[LUMCAT] AT3-14-L20-8TW-D-DALI-UNV 4000k

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1896
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	90
Total Luminaire Watts	21.05
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.12
Spacing Criterion (90-270)	1.06
Spacing Criterion (Diagonal)	1.22
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.76 ft
Luminous Width (90-270)	0.77 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2454	2370	2348
55	2087	2037	1958
65	1855	1797	1328
75	1474	1052	963
85	1214	835	620

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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	864.493	864.493	864.493	864.493	864.493
5	855.280	854.091	852.903	851.417	850.822
10	845.176	841.907	836.558	832.397	831.209
15	809.812	806.543	798.519	792.278	788.712
20	771.773	764.343	751.565	740.272	735.814
25	691.832	684.105	671.326	660.628	657.656
30	636.259	626.452	611.891	603.273	600.598
35	576.229	567.017	554.238	547.700	545.620
40	513.525	504.609	494.505	490.939	488.859
45	467.759	457.952	451.711	448.443	447.551
50	391.979	384.846	380.686	378.011	376.228
55	322.736	316.792	315.009	309.660	302.825
60	259.437	255.574	254.385	239.526	225.261
65	211.294	208.917	204.756	168.203	151.264
70	154.830	154.236	134.622	101.635	98.960
75	102.824	104.013	73.403	68.648	67.162
80	63.002	55.275	45.766	43.388	41.902
85	28.529	22.288	19.614	15.750	14.562
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	305.94	N.A.	16.10
0-30	618.38	N.A.	32.60
0-40	967.10	N.A.	51.00
0-60	1593.23	N.A.	84.00
0-80	1871.71	N.A.	98.70
0-90	1895.89	N.A.	100.00
10-90	1814.89	N.A.	95.70
20-40	661.16	N.A.	34.90
20-50	1006.28	N.A.	53.10
40-70	813.85	N.A.	42.90
60-80	278.48	N.A.	14.70
70-80	90.76	N.A.	4.80
80-90	24.18	N.A.	1.30
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	1895.89	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	80.99
10-20	224.95
20-30	312.44
30-40	348.72
40-50	345.12
50-60	281.01
60-70	187.72
70-80	90.76
80-90	24.18
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	80	80	80	80	78	78	78	78	75	75	75	72	72	72	69	69	69	67
1	74	71	68	66	72	69	67	65	67	65	63	64	62	61	62	60	59	58
2	68	63	58	55	66	61	57	54	59	56	53	57	54	52	55	52	50	49
3	62	55	50	46	60	54	50	46	52	48	45	51	47	44	49	46	43	42
4	57	50	44	40	56	49	43	39	47	42	39	45	42	38	44	41	38	36
5	53	45	39	35	51	44	38	34	42	38	34	41	37	34	40	36	33	32
6	49	40	35	30	48	40	34	30	39	34	30	37	33	30	36	33	30	28
7	45	37	31	27	44	36	31	27	35	30	27	34	30	27	33	29	26	25
8	42	34	28	24	41	33	28	24	32	28	24	32	27	24	31	27	24	23
9	40	31	26	22	39	31	26	22	30	25	22	29	25	22	29	25	22	21
10	37	29	24	20	37	28	23	20	28	23	20	27	23	20	27	23	20	19

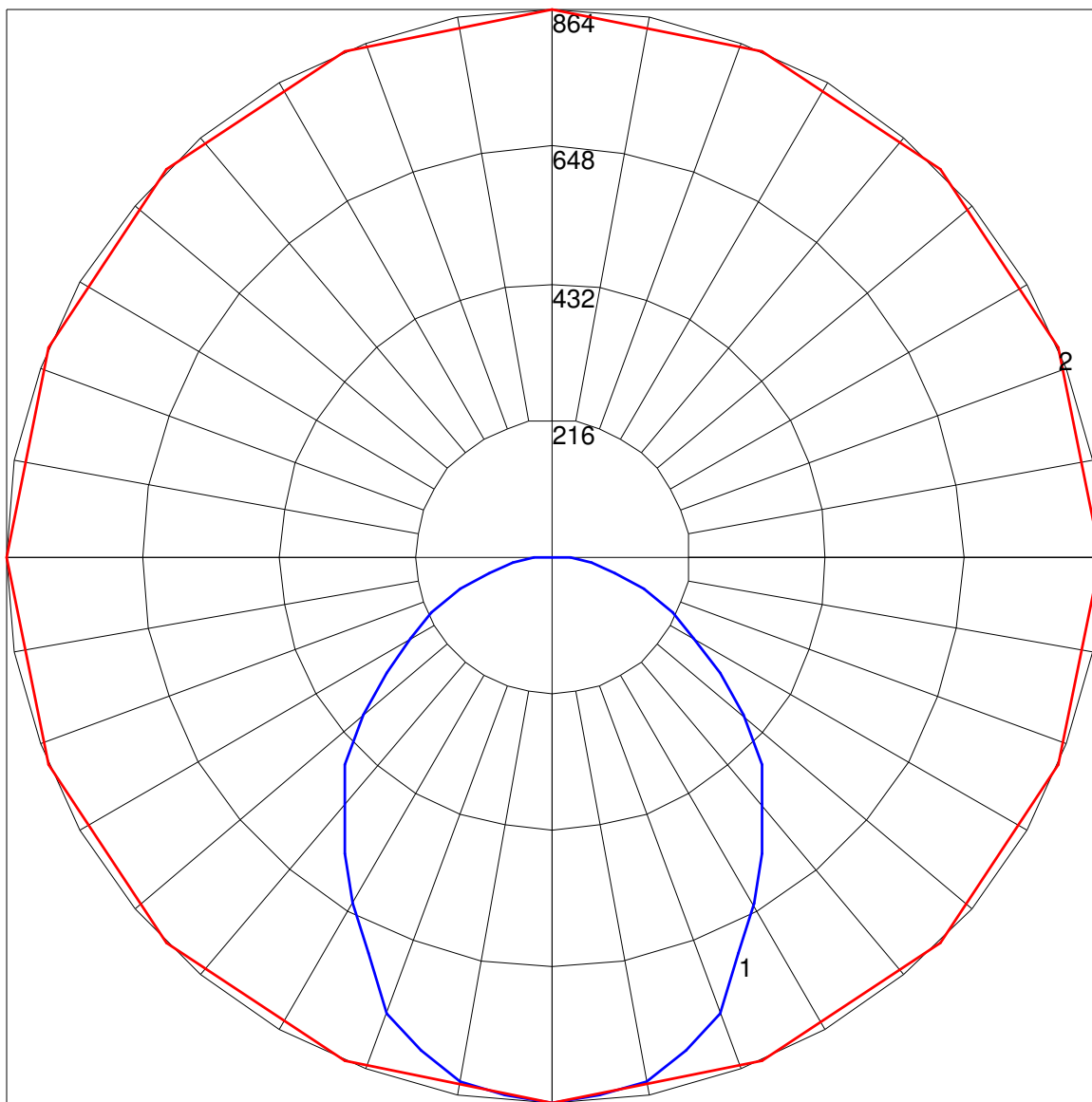
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UGR TABLE - CORRECTED

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	15.7	17.3	16.1	17.6	17.9	15.4	16.9	15.7	17.2	17.5
	3H	17.4	18.8	17.8	19.1	19.5	16.3	17.7	16.7	18.0	18.4
	4H	18.0	19.3	18.4	19.6	20.0	16.6	17.9	17.0	18.3	18.7
	6H	18.4	19.6	18.8	20.0	20.4	16.9	18.1	17.3	18.5	18.9
	8H	18.5	19.7	19.0	20.1	20.5	17.0	18.1	17.4	18.5	18.9
	12H	18.6	19.7	19.1	20.1	20.6	17.0	18.1	17.4	18.5	18.9
4H	2H	16.3	17.6	16.7	18.0	18.3	16.0	17.3	16.4	17.7	18.0
	3H	18.1	19.2	18.6	19.6	20.0	17.1	18.2	17.5	18.6	19.0
	4H	18.9	19.8	19.3	20.2	20.7	17.5	18.5	17.9	18.9	19.3
	6H	19.4	20.2	19.8	20.7	21.1	17.9	18.7	18.3	19.2	19.6
	8H	19.6	20.3	20.0	20.8	21.3	18.0	18.8	18.5	19.2	19.7
	12H	19.7	20.4	20.2	20.9	21.3	18.1	18.8	18.5	19.2	19.7
8H	4H	19.0	19.8	19.4	20.2	20.7	17.8	18.5	18.2	19.0	19.5
	6H	19.6	20.2	20.1	20.7	21.2	18.2	18.9	18.7	19.4	19.8
	8H	19.8	20.4	20.3	20.9	21.4	18.4	19.0	18.9	19.5	20.0
	12H	20.0	20.5	20.5	21.0	21.6	18.5	19.0	19.0	19.5	20.1
12H	4H	19.0	19.7	19.5	20.2	20.6	17.8	18.5	18.3	19.0	19.4
	6H	19.6	20.2	20.1	20.7	21.2	18.3	18.9	18.8	19.3	19.9
	8H	19.9	20.4	20.4	20.9	21.5	18.5	19.0	19.0	19.5	20.0

Maximum UGR = 21.6

POLAR GRAPH



Maximum Candela = 864.493 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.)