



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : AP-22-L40-835-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] GEN FROM LLI-20113-1  
 [TESTLAB] LightLab International (www.LightLabInt.com)  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.  
 [LUMCAT] AP-22-L40-835-DIM-UNV  
 [LUMINAIRE] RECESSED 2 X 2 ARCHED CENTER LED LUMINAIRE  
 [MORE] White steel fabricated housing with frosted white concave lens.  
 [MORE] 180 LEDs with 90 mounted along each long side of clear plastic sheet.  
 [ISSUE DATE] 2023-10-24  
 [SEARCH\_SOURCETYPE] LED  
 [SEARCH\_APPLICATION] Indoor, Architectural, Direct-Indirect  
 [SEARCH\_MOUNTING] Recessed  
 [CONVERT] Photometric web converted from original test data

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4026
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	112
Total Luminaire Watts	36.1
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.24
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.38
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.55 m
Luminous Width (90-270)	0.57 m
Luminous Height	0.00 m

### LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4102	4161	4288
55	3923	4007	4184
65	3663	3778	4002
75	3229	3346	3708
85	1975	2182	2670

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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>	1407.718	1407.718	1407.718	1407.718	1407.718
<b>5</b>	1399.346	1400.807	1400.356	1401.170	1401.032
<b>10</b>	1376.055	1377.163	1379.006	1382.574	1383.966
<b>15</b>	1340.637	1342.676	1345.509	1350.940	1353.901
<b>20</b>	1295.907	1296.496	1300.819	1308.435	1313.827
<b>25</b>	1238.267	1239.100	1245.600	1255.402	1261.274
<b>30</b>	1170.236	1173.608	1179.793	1191.145	1199.183
<b>35</b>	1094.058	1097.509	1104.773	1117.526	1126.643
<b>40</b>	1008.706	1012.274	1020.498	1034.546	1046.995
<b>45</b>	916.177	919.569	929.489	943.596	957.800
<b>50</b>	817.071	820.630	830.305	846.617	860.782
<b>55</b>	710.789	715.456	726.062	742.923	758.049
<b>60</b>	601.518	605.302	616.144	633.955	649.454
<b>65</b>	489.021	492.717	504.353	519.900	534.281
<b>70</b>	375.652	378.936	388.641	403.247	418.186
<b>75</b>	264.028	266.528	273.586	287.986	303.121
<b>80</b>	155.864	157.050	162.559	174.833	186.890
<b>85</b>	54.386	54.170	60.062	67.041	73.511
<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	513.09	N.A.	12.70
0-30	1088.04	N.A.	27.00
0-40	1780.84	N.A.	44.20
0-60	3152.06	N.A.	78.30
0-80	3947.77	N.A.	98.00
0-90	4026.45	N.A.	100.00
10-90	3893.41	N.A.	96.70
20-40	1267.75	N.A.	31.50
20-50	1986.91	N.A.	49.30
40-70	1872.95	N.A.	46.50
60-80	795.71	N.A.	19.80
70-80	293.99	N.A.	7.30
80-90	78.67	N.A.	2.00
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	4026.45	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	133.03
10-20	380.06
20-30	574.95
30-40	692.79
40-50	719.16
50-60	652.06
60-70	501.72
70-80	293.99
80-90	78.67
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	99	95	106	101	98	94	97	94	91	93	91	88	90	88	86	83
2	99	90	83	78	96	88	82	77	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	58	52	62	56	52	50
5	76	63	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	46	38	32	59	46	38	32	44	37	32	43	36	32	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

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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	16.8	18.5	17.2	18.8	19.1	17.1	18.8	17.5	19.1	19.4
	3H	18.6	20.1	19.0	20.4	20.8	19.1	20.5	19.4	20.9	21.2
	4H	19.3	20.7	19.7	21.1	21.4	19.8	21.2	20.2	21.6	21.9
	6H	19.8	21.1	20.2	21.5	21.9	20.4	21.7	20.8	22.0	22.4
	8H	19.9	21.2	20.4	21.6	22.0	20.6	21.8	21.0	22.2	22.6
	12H	20.0	21.2	20.5	21.6	22.0	20.7	21.9	21.1	22.2	22.7

UGR Viewed Endwise

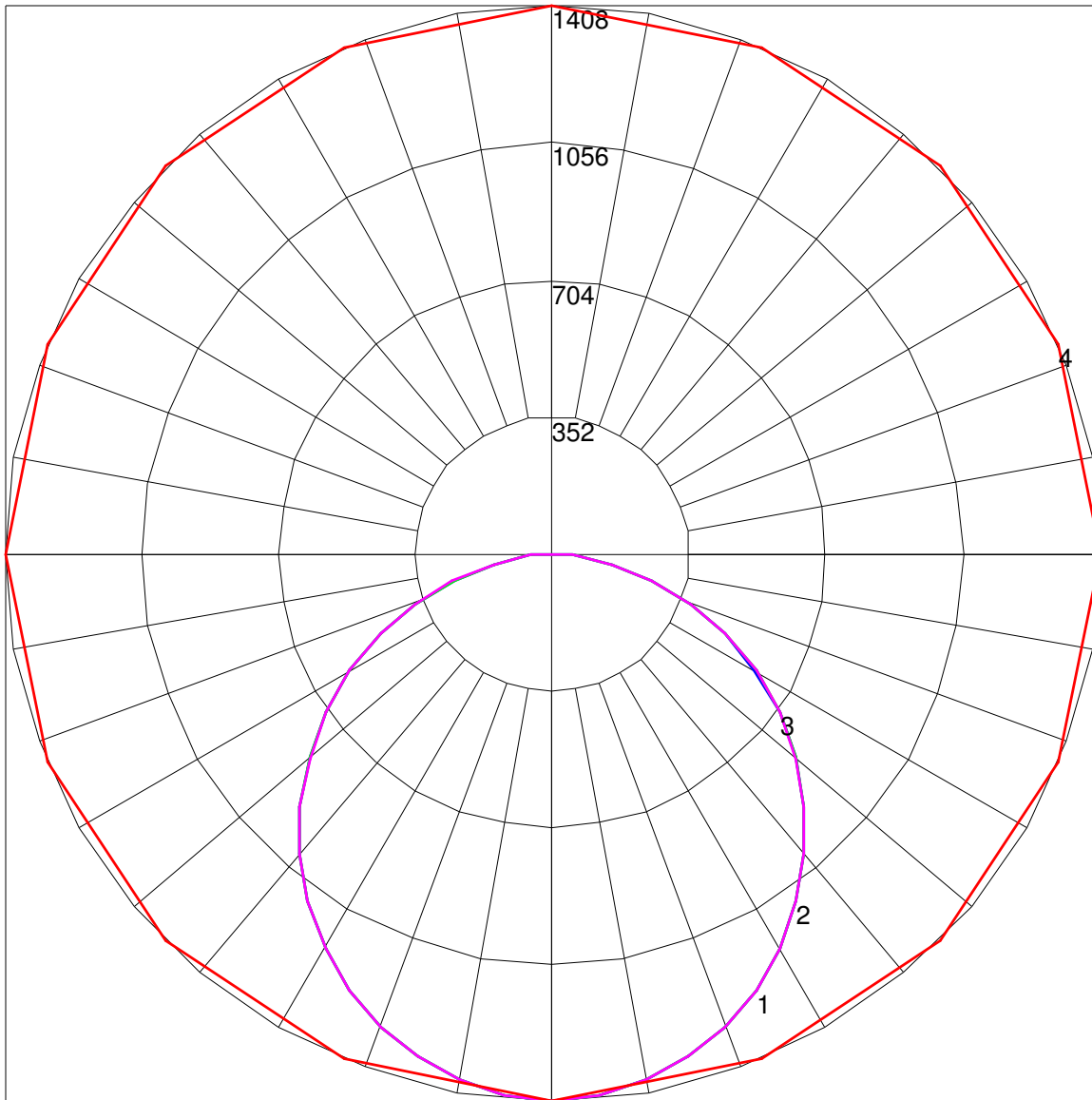
4H	2H	17.5	18.9	17.9	19.2	19.6	17.7	19.1	18.1	19.5	19.9
	3H	19.5	20.7	19.9	21.1	21.5	19.9	21.1	20.3	21.5	21.9
	4H	20.3	21.4	20.7	21.8	22.2	20.7	21.8	21.2	22.2	22.7
	6H	20.9	21.9	21.4	22.3	22.8	21.5	22.4	21.9	22.8	23.3
	8H	21.1	22.0	21.6	22.4	22.9	21.7	22.6	22.2	23.0	23.5
	12H	21.2	22.0	21.7	22.5	23.0	21.9	22.6	22.3	23.1	23.6

8H	4H	20.7	21.5	21.1	22.0	22.5	21.1	21.9	21.5	22.4	22.8
	6H	21.4	22.1	21.9	22.6	23.1	21.9	22.6	22.4	23.1	23.6
	8H	21.6	22.3	22.1	22.8	23.3	22.2	22.8	22.7	23.3	23.8
	12H	21.8	22.4	22.3	22.9	23.4	22.4	23.0	22.9	23.5	24.0

12H	4H	20.7	21.5	21.2	22.0	22.4	21.1	21.9	21.6	22.3	22.8
	6H	21.5	22.1	22.0	22.6	23.1	21.9	22.6	22.4	23.0	23.6
	8H	21.8	22.3	22.3	22.8	23.4	22.3	22.9	22.8	23.3	23.9

Maximum UGR = 24.0

POLAR GRAPH



Maximum Candela = 1407.718 Located At Horizontal Angle = 0, Vertical Angle = 0

# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)

# 2 - Vertical Plane Through Horizontal Angles (5 - 185)

# 3 - Vertical Plane Through Horizontal Angles (10 - 190)

# 4 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)