



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AP-22-L40-850-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-L40-850-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	4268
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	118
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	4348	4411	4545
55	4158	4248	4435
65	3883	4005	4242
75	3423	3547	3930
85	2094	2313	2830

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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	1492.181	1492.181	1492.181	1492.181	1492.181
5	1483.307	1484.855	1484.377	1485.239	1485.094
10	1458.618	1459.792	1461.745	1465.528	1467.003
15	1421.075	1423.237	1426.240	1431.996	1435.134
20	1373.661	1374.285	1378.867	1386.941	1392.656
25	1312.563	1313.446	1320.335	1330.726	1336.950
30	1240.450	1244.024	1250.581	1262.613	1271.134
35	1159.702	1163.359	1171.059	1184.578	1194.241
40	1069.228	1073.010	1081.728	1096.618	1109.815
45	971.148	974.743	985.259	1000.211	1015.268
50	866.095	869.867	880.123	897.414	912.428
55	753.437	758.383	769.626	787.498	803.531
60	637.609	641.620	653.112	671.992	688.421
65	518.362	522.280	534.614	551.094	566.337
70	398.191	401.672	411.959	427.442	443.277
75	279.870	282.519	290.001	305.265	321.309
80	165.216	166.473	172.313	185.322	198.103
85	57.649	57.420	63.665	71.064	77.922
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	543.88	N.A.	12.70
0-30	1153.32	N.A.	27.00
0-40	1887.69	N.A.	44.20
0-60	3341.18	N.A.	78.30
0-80	4184.64	N.A.	98.00
0-90	4268.03	N.A.	100.00
10-90	4127.02	N.A.	96.70
20-40	1343.81	N.A.	31.50
20-50	2106.12	N.A.	49.30
40-70	1985.32	N.A.	46.50
60-80	843.46	N.A.	19.80
70-80	311.63	N.A.	7.30
80-90	83.39	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	4268.03	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	141.02
10-20	402.86
20-30	609.45
30-40	734.36
40-50	762.31
50-60	691.19
60-70	531.83
70-80	311.63
80-90	83.39
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	17.0	18.7	17.4	19.0	19.3	17.3	19.0	17.7	19.3	19.6
	3H	18.8	20.3	19.2	20.6	21.0	19.3	20.7	19.6	21.1	21.4
	4H	19.5	20.9	19.9	21.3	21.6	20.0	21.4	20.4	21.8	22.1
	6H	20.0	21.3	20.4	21.7	22.1	20.6	21.9	21.0	22.2	22.6
	8H	20.1	21.4	20.6	21.8	22.2	20.8	22.0	21.2	22.4	22.8
	12H	20.2	21.4	20.7	21.8	22.2	20.9	22.1	21.3	22.4	22.9

UGR Viewed Endwise

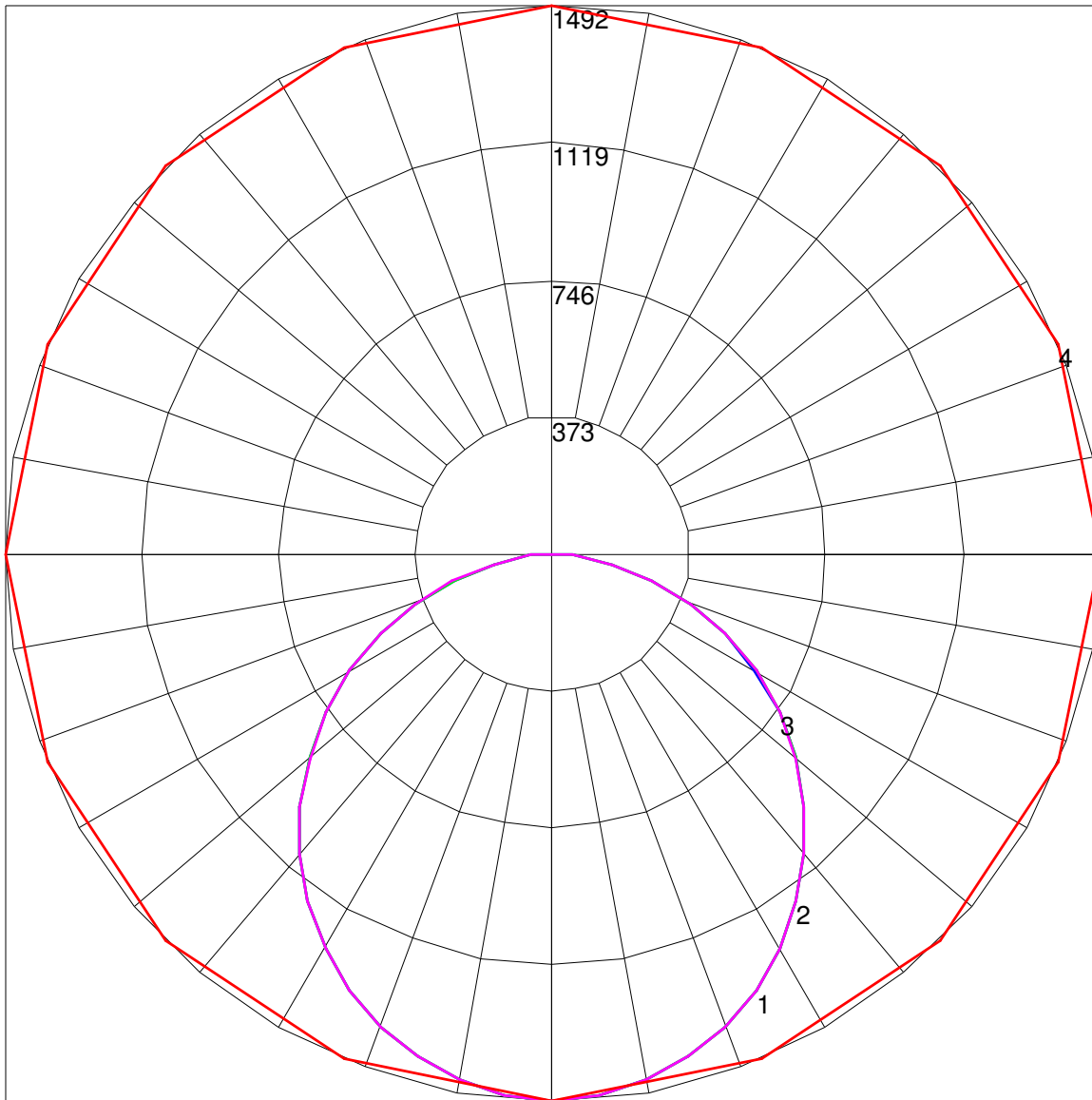
4H	2H	17.7	19.1	18.1	19.4	19.8	17.9	19.3	18.3	19.7	20.1
	3H	19.7	20.9	20.1	21.3	21.7	20.1	21.3	20.5	21.7	22.1
	4H	20.5	21.6	20.9	22.0	22.4	21.0	22.0	21.4	22.4	22.9
	6H	21.1	22.1	21.6	22.5	23.0	21.7	22.6	22.1	23.0	23.5
	8H	21.3	22.2	21.8	22.6	23.1	21.9	22.8	22.4	23.2	23.7
	12H	21.4	22.2	21.9	22.7	23.2	22.1	22.8	22.5	23.3	23.8

8H	4H	20.9	21.7	21.3	22.2	22.7	21.3	22.1	21.7	22.6	23.0
	6H	21.6	22.3	22.1	22.8	23.3	22.1	22.8	22.6	23.3	23.8
	8H	21.8	22.5	22.3	23.0	23.5	22.4	23.0	22.9	23.5	24.0
	12H	22.0	22.6	22.5	23.1	23.6	22.6	23.2	23.1	23.7	24.2

12H	4H	20.9	21.7	21.4	22.2	22.6	21.3	22.1	21.8	22.5	23.0
	6H	21.7	22.3	22.2	22.8	23.3	22.1	22.8	22.6	23.2	23.8
	8H	22.0	22.5	22.5	23.0	23.6	22.5	23.1	23.0	23.5	24.1

Maximum UGR = 24.2

POLAR GRAPH



Maximum Candela = 1492.181 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.)