



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AP-22-L40-830-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-L40-830-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	3986
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	110
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	4061	4120	4245
55	3884	3967	4142
65	3627	3740	3962
75	3197	3313	3671
85	1956	2160	2643

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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	1393.641	1393.641	1393.641	1393.641	1393.641
5	1385.353	1386.799	1386.352	1387.158	1387.022
10	1362.294	1363.391	1365.215	1368.748	1370.126
15	1327.231	1329.250	1332.054	1337.431	1340.362
20	1282.948	1283.531	1287.810	1295.351	1300.689
25	1225.884	1226.709	1233.143	1242.848	1248.661
30	1158.533	1161.872	1167.996	1179.234	1187.192
35	1083.118	1086.534	1093.725	1106.351	1115.376
40	998.619	1002.151	1010.293	1024.200	1036.525
45	907.015	910.373	920.194	934.160	948.222
50	808.900	812.423	822.002	838.151	852.174
55	703.682	708.301	718.802	735.494	750.468
60	595.503	599.249	609.982	627.616	642.959
65	484.131	487.790	499.309	514.701	528.938
70	371.896	375.147	384.754	399.215	414.005
75	261.388	263.862	270.850	285.106	300.090
80	154.305	155.480	160.934	173.084	185.021
85	53.842	53.628	59.461	66.371	72.776
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	507.96	N.A.	12.70
0-30	1077.16	N.A.	27.00
0-40	1763.03	N.A.	44.20
0-60	3120.54	N.A.	78.30
0-80	3908.3	N.A.	98.00
0-90	3986.18	N.A.	100.00
10-90	3854.48	N.A.	96.70
20-40	1255.07	N.A.	31.50
20-50	1967.04	N.A.	49.30
40-70	1854.22	N.A.	46.50
60-80	787.76	N.A.	19.80
70-80	291.05	N.A.	7.30
80-90	77.89	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	3986.18	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	131.70
10-20	376.26
20-30	569.20
30-40	685.87
40-50	711.97
50-60	645.54
60-70	496.71
70-80	291.05
80-90	77.89
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

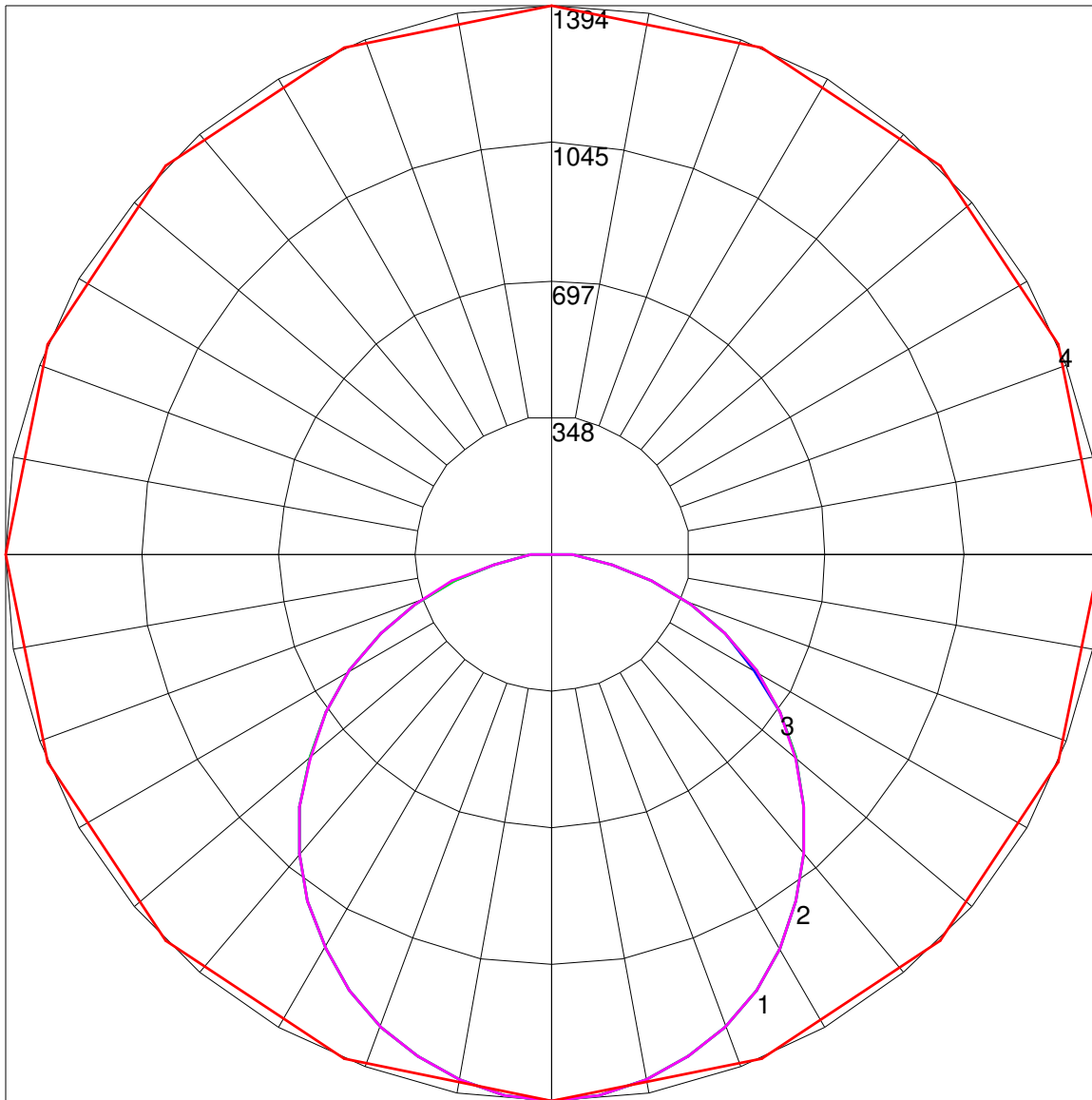
4H	2H	17.5	18.9	17.9	19.2	19.6	17.7	19.1	18.1	19.5	19.9
	3H	19.5	20.7	19.9	21.1	21.5	19.9	21.1	20.3	21.5	21.9
	4H	20.3	21.4	20.7	21.8	22.2	20.7	21.8	21.2	22.2	22.7
	6H	20.9	21.9	21.4	22.3	22.8	21.5	22.4	21.9	22.8	23.3
	8H	21.1	22.0	21.6	22.4	22.9	21.7	22.6	22.2	23.0	23.5
	12H	21.2	22.0	21.7	22.5	23.0	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 = 1393.641 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.)