



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AP-22-L40-840-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-L40-840-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	4147
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	115
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	4225	4286	4417
55	4041	4128	4309
65	3773	3891	4122
75	3326	3447	3819
85	2035	2247	2750

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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	1449.949	1449.949	1449.949	1449.949	1449.949
5	1441.327	1442.831	1442.367	1443.205	1443.063
10	1417.337	1418.478	1420.376	1424.051	1425.485
15	1380.857	1382.957	1385.875	1391.468	1394.518
20	1334.785	1335.391	1339.843	1347.688	1353.242
25	1275.415	1276.273	1282.968	1293.064	1299.112
30	1205.343	1208.816	1215.187	1226.880	1235.159
35	1126.880	1130.434	1137.916	1151.052	1160.442
40	1038.967	1042.642	1051.113	1065.582	1078.405
45	943.663	947.156	957.374	971.904	986.534
50	841.583	845.249	855.214	872.015	886.605
55	732.113	736.919	747.844	765.211	780.790
60	619.564	623.461	634.628	652.974	668.937
65	503.692	507.498	519.483	535.497	550.309
70	386.922	390.304	400.300	415.344	430.732
75	271.949	274.524	281.793	296.626	312.215
80	160.540	161.762	167.436	180.077	192.497
85	56.017	55.795	61.863	69.052	75.716
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	528.48	N.A.	12.70
0-30	1120.68	N.A.	27.00
0-40	1834.26	N.A.	44.20
0-60	3246.62	N.A.	78.30
0-80	4066.21	N.A.	98.00
0-90	4147.24	N.A.	100.00
10-90	4010.22	N.A.	96.70
20-40	1305.78	N.A.	31.50
20-50	2046.51	N.A.	49.30
40-70	1929.14	N.A.	46.50
60-80	819.59	N.A.	19.80
70-80	302.81	N.A.	7.30
80-90	81.03	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	4147.24	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	137.02
10-20	391.46
20-30	592.20
30-40	713.58
40-50	740.73
50-60	671.63
60-70	516.77
70-80	302.81
80-90	81.03
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

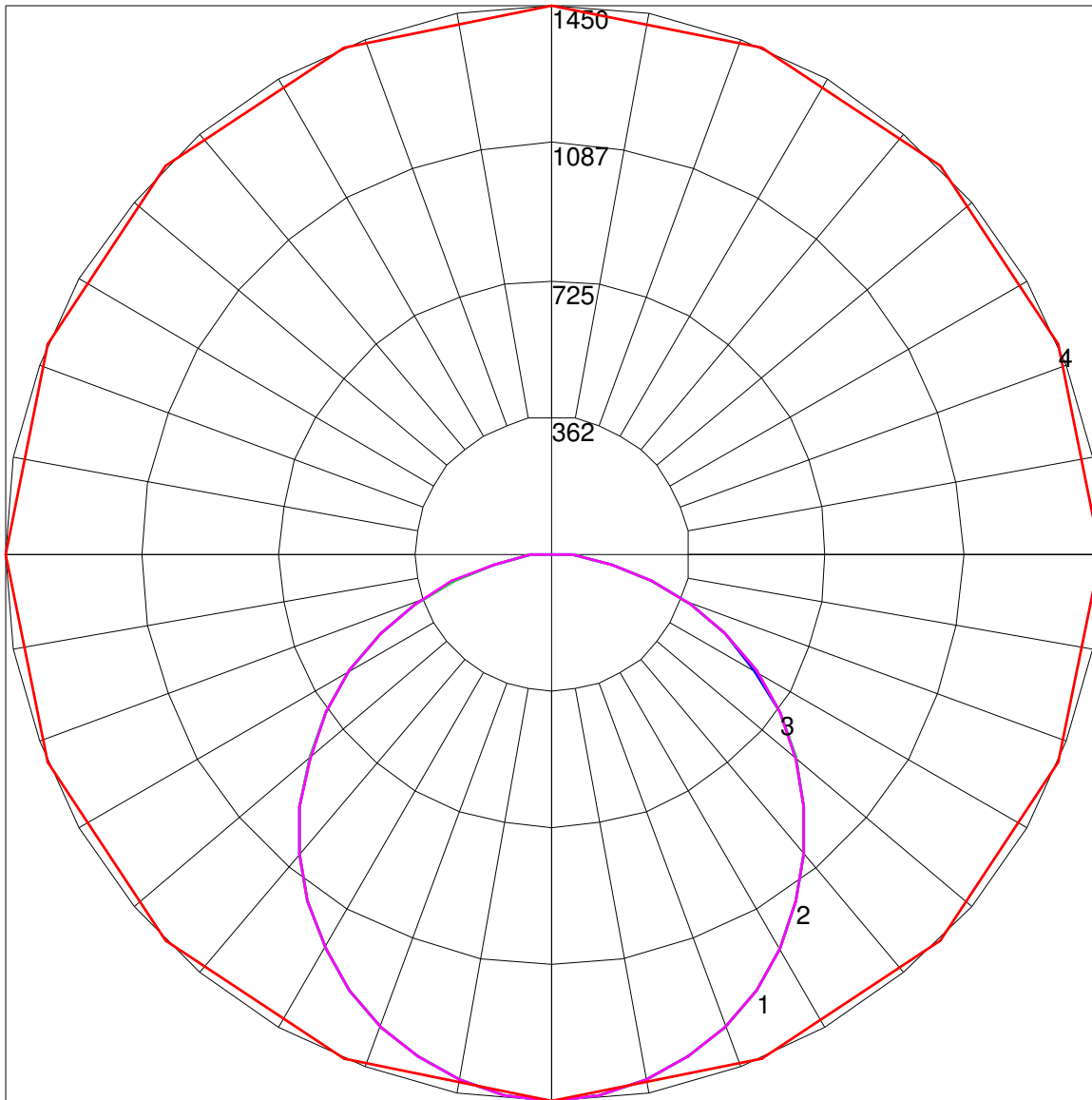
Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	16.9	18.6	17.3	18.9	19.2	17.2	18.9	17.6	19.2	19.5
	3H	18.7	20.2	19.1	20.5	20.9	19.2	20.6	19.5	21.0	21.3
	4H	19.4	20.8	19.8	21.2	21.5	19.9	21.3	20.3	21.7	22.0
	6H	19.9	21.2	20.3	21.6	22.0	20.5	21.8	20.9	22.1	22.5
	8H	20.0	21.3	20.5	21.7	22.1	20.7	21.9	21.1	22.3	22.7
	12H	20.1	21.3	20.6	21.7	22.1	20.8	22.0	21.2	22.3	22.8
4H	2H	17.6	19.0	18.0	19.3	19.7	17.8	19.2	18.2	19.6	20.0
	3H	19.6	20.8	20.0	21.2	21.6	20.0	21.2	20.4	21.6	22.0
	4H	20.4	21.5	20.8	21.9	22.3	20.8	21.9	21.3	22.3	22.8
	6H	21.0	22.0	21.5	22.4	22.9	21.6	22.5	22.0	22.9	23.4
	8H	21.2	22.1	21.7	22.5	23.0	21.8	22.7	22.3	23.1	23.6
	12H	21.3	22.1	21.8	22.6	23.1	22.0	22.7	22.4	23.2	23.7
8H	4H	20.8	21.6	21.2	22.1	22.6	21.2	22.0	21.6	22.5	22.9
	6H	21.5	22.2	22.0	22.7	23.2	22.0	22.7	22.5	23.2	23.7
	8H	21.7	22.4	22.2	22.9	23.4	22.3	22.9	22.8	23.4	23.9
	12H	21.9	22.5	22.4	23.0	23.5	22.5	23.1	23.0	23.6	24.1
12H	4H	20.8	21.6	21.3	22.1	22.5	21.2	22.0	21.7	22.4	22.9
	6H	21.6	22.2	22.1	22.7	23.2	22.0	22.7	22.5	23.1	23.7
	8H	21.9	22.4	22.4	22.9	23.5	22.4	23.0	22.9	23.4	24.0

Maximum UGR = 24.1

POLAR GRAPH



Maximum Candela = 1449.949 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.)