



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AP-22-L50-840-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-L50-840-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	5216
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	114
Total Luminaire Watts	45.7
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	5314	5391	5556
55	5083	5192	5421
65	4746	4895	5185
75	4184	4335	4804
85	2559	2826	3459

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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	1823.781	1823.781	1823.781	1823.781	1823.781
5	1812.935	1814.827	1814.243	1815.297	1815.119
10	1782.760	1784.195	1786.582	1791.205	1793.009
15	1736.874	1739.516	1743.186	1750.222	1754.057
20	1678.924	1679.686	1685.287	1695.155	1702.140
25	1604.247	1605.327	1613.747	1626.447	1634.055
30	1516.109	1520.478	1528.492	1543.198	1553.612
35	1417.417	1421.887	1431.298	1447.821	1459.632
40	1306.837	1311.460	1322.115	1340.315	1356.444
45	1186.961	1191.355	1204.208	1222.483	1240.886
50	1058.564	1063.174	1075.709	1096.842	1115.193
55	920.869	926.915	940.656	962.500	982.096
60	779.302	784.204	798.250	821.326	841.405
65	633.556	638.344	653.419	673.561	692.192
70	486.679	490.934	503.507	522.430	541.785
75	342.064	345.302	354.446	373.103	392.712
80	201.931	203.468	210.605	226.506	242.127
85	70.460	70.181	77.813	86.856	95.238
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	664.74	N.A.	12.70
0-30	1409.62	N.A.	27.00
0-40	2307.18	N.A.	44.20
0-60	4083.68	N.A.	78.30
0-80	5114.57	N.A.	98.00
0-90	5216.5	N.A.	100.00
10-90	5044.15	N.A.	96.70
20-40	1642.44	N.A.	31.50
20-50	2574.15	N.A.	49.30
40-70	2426.51	N.A.	46.50
60-80	1030.89	N.A.	19.80
70-80	380.88	N.A.	7.30
80-90	101.93	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	5216.5	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	172.35
10-20	492.39
20-30	744.88
30-40	897.55
40-50	931.71
50-60	844.79
60-70	650.01
70-80	380.88
80-90	101.93
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	97	94	97	94	91	93	91	88	90	88	86	83
2	99	90	83	77	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	75	62	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	17.7	19.4	18.1	19.7	20.0	18.0	19.7	18.4	20.0	20.3
	3H	19.5	21.0	19.9	21.3	21.7	20.0	21.4	20.3	21.8	22.1
	4H	20.2	21.6	20.6	22.0	22.3	20.7	22.1	21.1	22.5	22.8
	6H	20.7	22.0	21.1	22.4	22.8	21.3	22.6	21.7	22.9	23.3
	8H	20.8	22.1	21.3	22.5	22.9	21.5	22.7	21.9	23.1	23.5
	12H	20.9	22.1	21.4	22.5	22.9	21.6	22.8	22.0	23.1	23.6

UGR Viewed Endwise

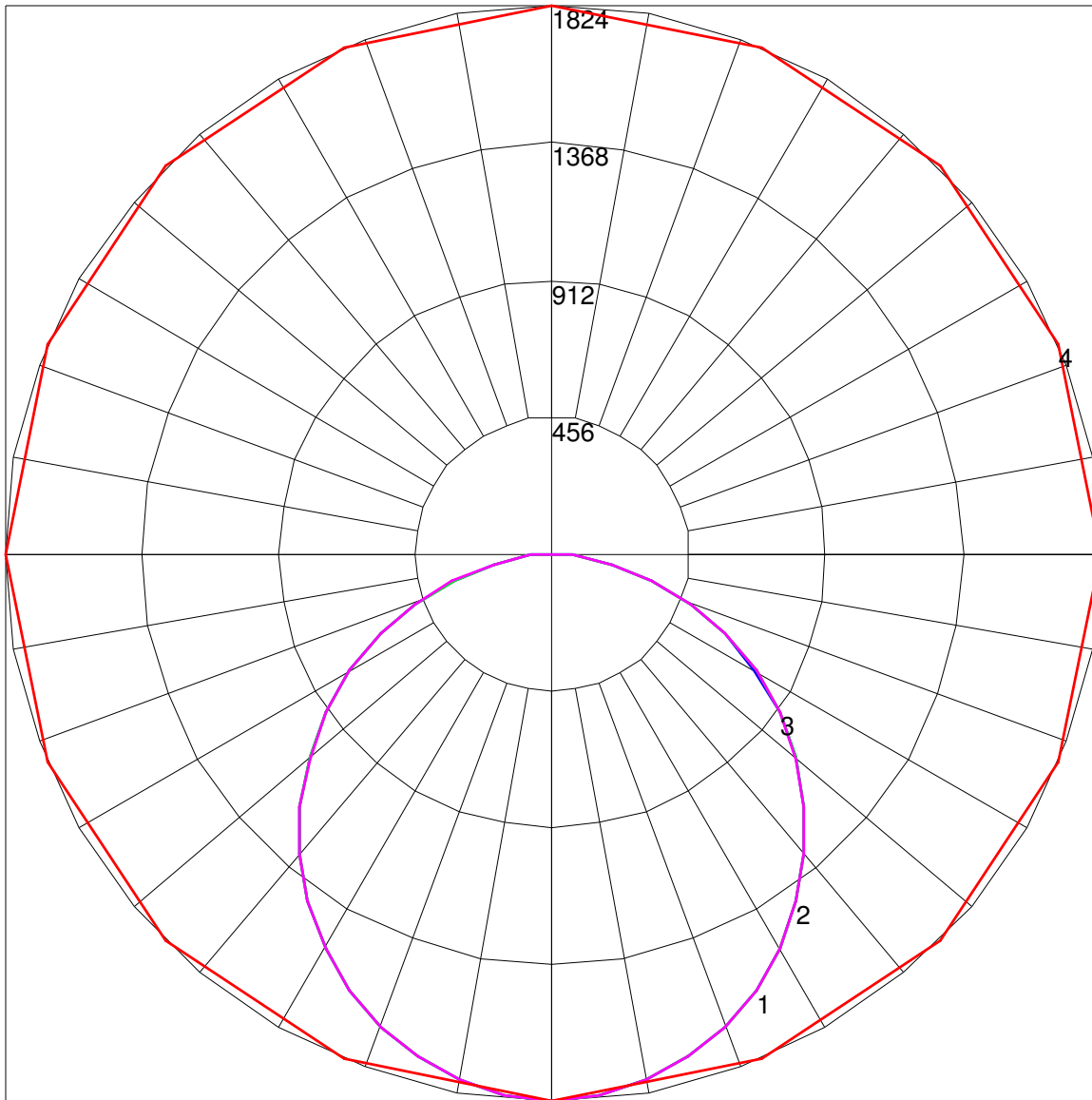
4H	2H	18.4	19.8	18.8	20.1	20.5	18.6	20.0	19.0	20.4	20.8
	3H	20.4	21.6	20.8	22.0	22.4	20.8	22.0	21.2	22.4	22.8
	4H	21.2	22.3	21.6	22.7	23.1	21.6	22.7	22.1	23.1	23.6
	6H	21.8	22.8	22.3	23.2	23.7	22.4	23.3	22.8	23.7	24.2
	8H	22.0	22.9	22.5	23.3	23.8	22.6	23.5	23.1	23.9	24.4
	12H	22.1	22.9	22.6	23.4	23.9	22.8	23.5	23.2	24.0	24.5

8H	4H	21.6	22.4	22.0	22.9	23.4	22.0	22.8	22.4	23.3	23.7
	6H	22.3	23.0	22.8	23.5	24.0	22.8	23.5	23.3	24.0	24.5
	8H	22.5	23.2	23.0	23.7	24.2	23.1	23.7	23.6	24.2	24.7
	12H	22.7	23.3	23.2	23.8	24.3	23.3	23.9	23.8	24.4	24.9

12H	4H	21.6	22.4	22.1	22.9	23.3	22.0	22.8	22.5	23.2	23.7
	6H	22.4	23.0	22.9	23.5	24.0	22.8	23.5	23.3	23.9	24.5
	8H	22.7	23.2	23.2	23.7	24.3	23.2	23.8	23.7	24.2	24.8

Maximum UGR = 24.9

POLAR GRAPH



Maximum Candela = 1823.781 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.)