



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DS-L22-RGB940-DMX-UNV-OW-OF-WH WHITE ONLY.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from BALLABS TEST NO. 20310.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 16 OCT 2024

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC -CARTHAGE, MO

[LUMINAIRE] 4"SQ RECESSED LED DOWNLIGHT

[MORE] WHITE MIXING CHAMBER & 4" MATTE WHITE w/FROST FILM

[LUMCAT] 4DS-L22-RGB/940-DMX-UNV-OW-OF-WH WHITE ONLY

[_SEARCH_SOURCETYPE] LED

[_SEARCH_APPLICATION] Indoor, Classroom, Office, Downlight

[_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2173
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	39
Total Luminaire Watts	56.3
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.84
Spacing Criterion (90-270)	0.82
Spacing Criterion (Diagonal)	0.86
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.33 ft
Luminous Width (90-270)	0.33 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	23617	30545	23774
55	4852	6405	4270
65	0	0	0
75	0	0	0
85	0	0	0

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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	2793.084	2793.084	2793.084	2793.084	2793.084
5	2713.872	2703.540	2688.616	2688.616	2674.840
10	2480.828	2449.832	2416.540	2415.392	2413.096
15	2211.048	2145.612	2067.548	2096.248	2163.980
20	1936.676	1826.468	1744.960	1801.212	1883.868
25	1589.980	1515.360	1445.332	1474.032	1568.168
30	1083.712	1118.152	1166.368	1128.484	1097.488
35	604.996	695.688	858.704	697.984	570.556
40	290.444	348.992	498.232	357.028	299.628
45	172.200	174.496	222.712	165.312	173.348
50	96.432	92.988	87.248	88.396	87.248
55	28.700	35.588	37.884	34.440	25.256
60	1.148	3.444	11.480	3.444	0.000
65	0.000	0.000	0.000	0.000	0.000
70	0.000	0.000	0.000	0.000	0.000
75	0.000	0.000	0.000	0.000	0.000
80	0.000	0.000	0.000	0.000	0.000
85	0.000	0.000	0.000	0.000	0.000
90	0.000	0.000	0.000	0.000	0.000

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4DS-L22-RGB940-DMX-UNV-OW-OF-WH WHITE ONLY.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	844.37	N.A.	38.90
0-30	1525.76	N.A.	70.20
0-40	1977.12	N.A.	91.00
0-60	2171.72	N.A.	99.90
0-80	2172.88	N.A.	100.00
0-90	2172.88	N.A.	100.00
10-90	1923.91	N.A.	88.50
20-40	1132.75	N.A.	52.10
20-50	1291.54	N.A.	59.40
40-70	195.76	N.A.	9.00
60-80	1.15	N.A.	0.10
70-80	0.00	N.A.	0.00
80-90	0.00	N.A.	0.00
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	2172.88	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	248.97
10-20	595.40
20-30	681.39
30-40	451.36
40-50	158.79
50-60	35.82
60-70	1.15
70-80	0.00
80-90	0.00
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	226	226	226	226	221	221	221	221	211	211	211	202	202	202	194	194	194	190
1	216	211	206	202	211	207	202	199	199	195	192	192	189	187	185	183	181	178
2	205	196	188	182	201	193	186	180	187	181	176	181	176	172	176	172	169	165
3	195	183	173	166	191	180	171	164	175	168	162	170	164	159	166	161	157	154
4	185	171	160	152	182	168	159	151	164	156	149	161	153	148	157	151	146	143
5	176	160	149	140	172	158	148	140	155	145	139	151	144	137	148	142	136	133
6	167	150	138	130	164	148	138	130	145	136	129	143	134	128	140	133	127	125
7	158	141	129	121	156	140	129	121	137	127	120	135	126	120	133	125	119	117
8	151	133	121	114	148	132	121	113	130	120	113	128	119	112	126	118	112	109
9	144	125	114	107	142	124	114	106	123	113	106	121	112	106	119	111	105	103
10	137	119	108	100	135	118	107	100	116	107	100	115	106	100	113	105	99	97

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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

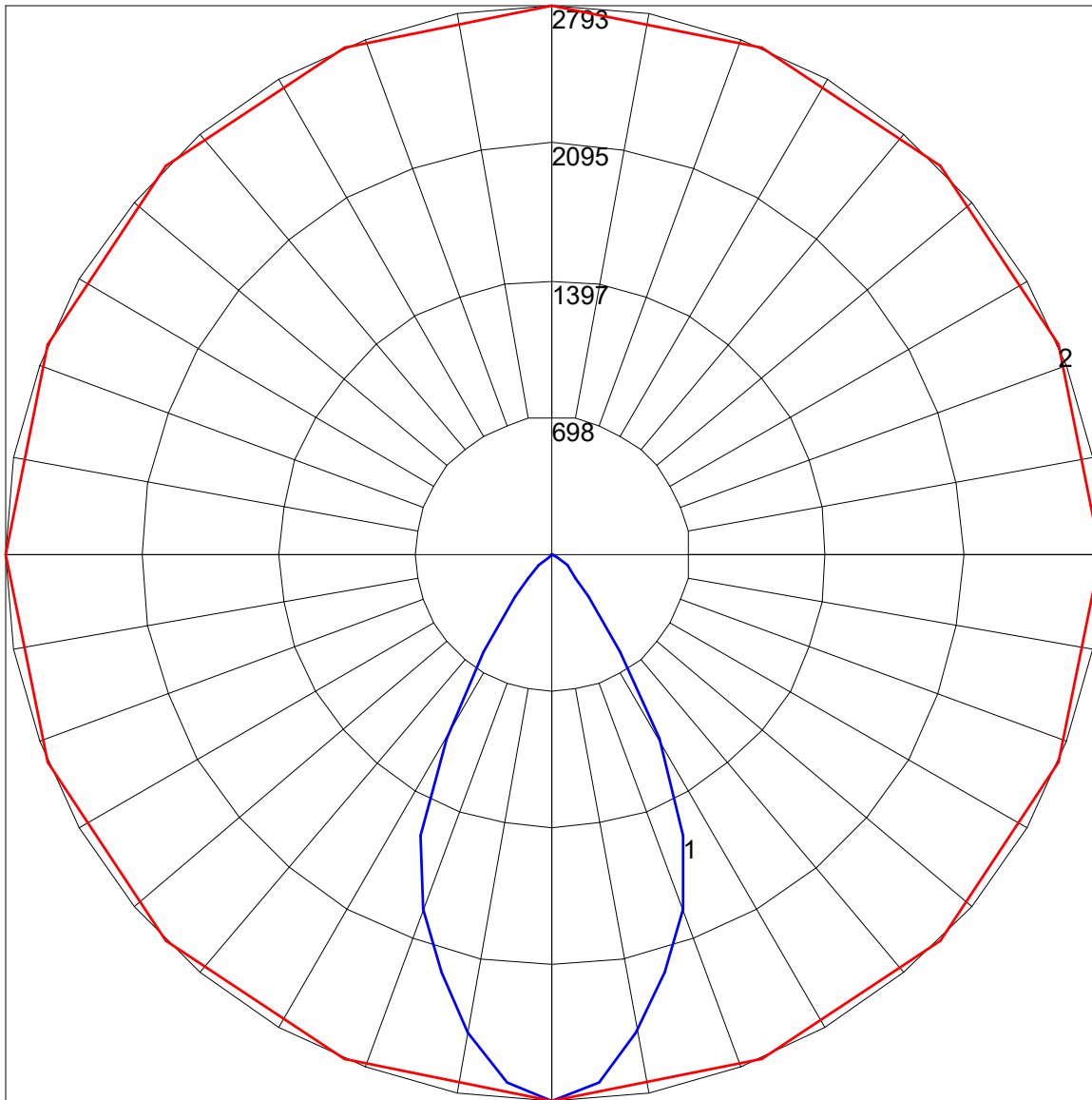
X=2H	Y=2H	4.3	5.3	4.7	5.6	5.9	4.0	5.0	4.3	5.3	5.6
	3H	4.1	5.0	4.5	5.3	5.7	3.8	4.7	4.2	5.0	5.4
	4H	4.0	4.8	4.4	5.2	5.6	3.7	4.5	4.1	4.8	5.2
	6H	3.9	4.7	4.3	5.0	5.4	3.6	4.3	4.0	4.7	5.1
	8H	3.9	4.6	4.3	4.9	5.4	3.5	4.2	4.0	4.6	5.0
	12H	3.8	4.5	4.2	4.8	5.3	3.5	4.1	3.9	4.5	4.9

UGR Viewed Endwise

4H	2H	4.0	4.8	4.4	5.2	5.6	3.7	4.5	4.1	4.9	5.2
	3H	3.8	4.5	4.2	4.9	5.3	3.5	4.1	3.9	4.5	4.9
	4H	3.7	4.3	4.1	4.7	5.2	3.4	3.9	3.8	4.4	4.8
	6H	3.6	4.1	4.1	4.5	5.0	3.3	3.7	3.7	4.2	4.7
	8H	3.5	4.0	4.0	4.4	4.9	3.2	3.6	3.7	4.1	4.6
	12H	3.4	3.8	3.9	4.3	4.8	3.1	3.5	3.6	4.0	4.5
8H	4H	3.5	4.0	4.0	4.4	4.9	3.2	3.6	3.7	4.1	4.6
	6H	3.4	3.8	3.9	4.3	4.7	3.1	3.4	3.6	3.9	4.4
	8H	3.3	3.6	3.8	4.2	4.7	3.0	3.3	3.5	3.8	4.3
	12H	3.3	3.5	3.8	4.0	4.6	2.9	3.2	3.4	3.7	4.3
12H	4H	3.4	3.8	3.9	4.3	4.8	3.1	3.5	3.6	4.0	4.5
	6H	3.3	3.6	3.8	4.1	4.7	3.0	3.3	3.5	3.8	4.3
	8H	3.3	3.5	3.8	4.0	4.6	2.9	3.2	3.4	3.7	4.3

Maximum UGR = 5.9

POLAR GRAPH



Maximum Candela = 2793.084 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)