



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DS-L22-RGB940-DMX-UNV-OW-OF-CS 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"SEMI-SPEC TRIM w/FROST FILM

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

[_SEARCH_SOURCE] 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	2195
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	23860	30858	24019
55	4902	6471	4314
65	0	0	0
75	0	0	0
85	0	0	0

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	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0	2821.794	2821.794	2821.794	2821.794	2821.794
5	2741.767	2731.329	2716.252	2716.252	2702.334
10	2506.328	2475.013	2441.379	2440.219	2437.900
15	2233.775	2167.666	2088.800	2117.795	2186.223
20	1956.583	1845.242	1762.896	1819.726	1903.232
25	1606.323	1530.936	1460.188	1489.183	1584.287
30	1094.851	1129.645	1178.357	1140.083	1108.769
35	611.215	702.839	867.530	705.158	576.421
40	293.429	352.579	503.353	360.698	302.708
45	173.970	176.290	225.001	167.011	175.130
50	97.423	93.944	88.145	89.305	88.145
55	28.995	35.954	38.273	34.794	25.516
60	1.160	3.479	11.598	3.479	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

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Zone	Lumens	%Lamp	%Fixt
0-20	853.05	N.A.	38.90
0-30	1541.44	N.A.	70.20
0-40	1997.44	N.A.	91.00
0-60	2194.05	N.A.	99.90
0-80	2195.21	N.A.	100.00
0-90	2195.21	N.A.	100.00
10-90	1943.68	N.A.	88.50
20-40	1144.39	N.A.	52.10
20-50	1304.81	N.A.	59.40
40-70	197.77	N.A.	9.00
60-80	1.16	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	2195.21	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	251.52
10-20	601.52
20-30	688.40
30-40	455.99
40-50	160.42
50-60	36.18
60-70	1.16
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	94
2	108	103	99	96	106	101	98	95	98	95	93	95	93	91	92	90	89	87
3	103	96	91	87	101	95	90	86	92	88	85	90	86	84	87	85	82	81
4	97	90	84	80	95	89	84	80	86	82	79	84	81	78	83	79	77	75
5	92	84	78	74	91	83	78	74	81	77	73	80	75	72	78	74	72	70
6	88	79	73	69	86	78	72	68	77	72	68	75	71	67	74	70	67	66
7	83	74	68	64	82	73	68	64	72	67	63	71	66	63	70	66	63	61
8	79	70	64	60	78	69	64	60	68	63	59	67	62	59	66	62	59	57
9	76	66	60	56	74	65	60	56	64	59	56	64	59	56	63	58	55	54
10	72	62	57	53	71	62	56	53	61	56	53	60	56	52	60	55	52	51

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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

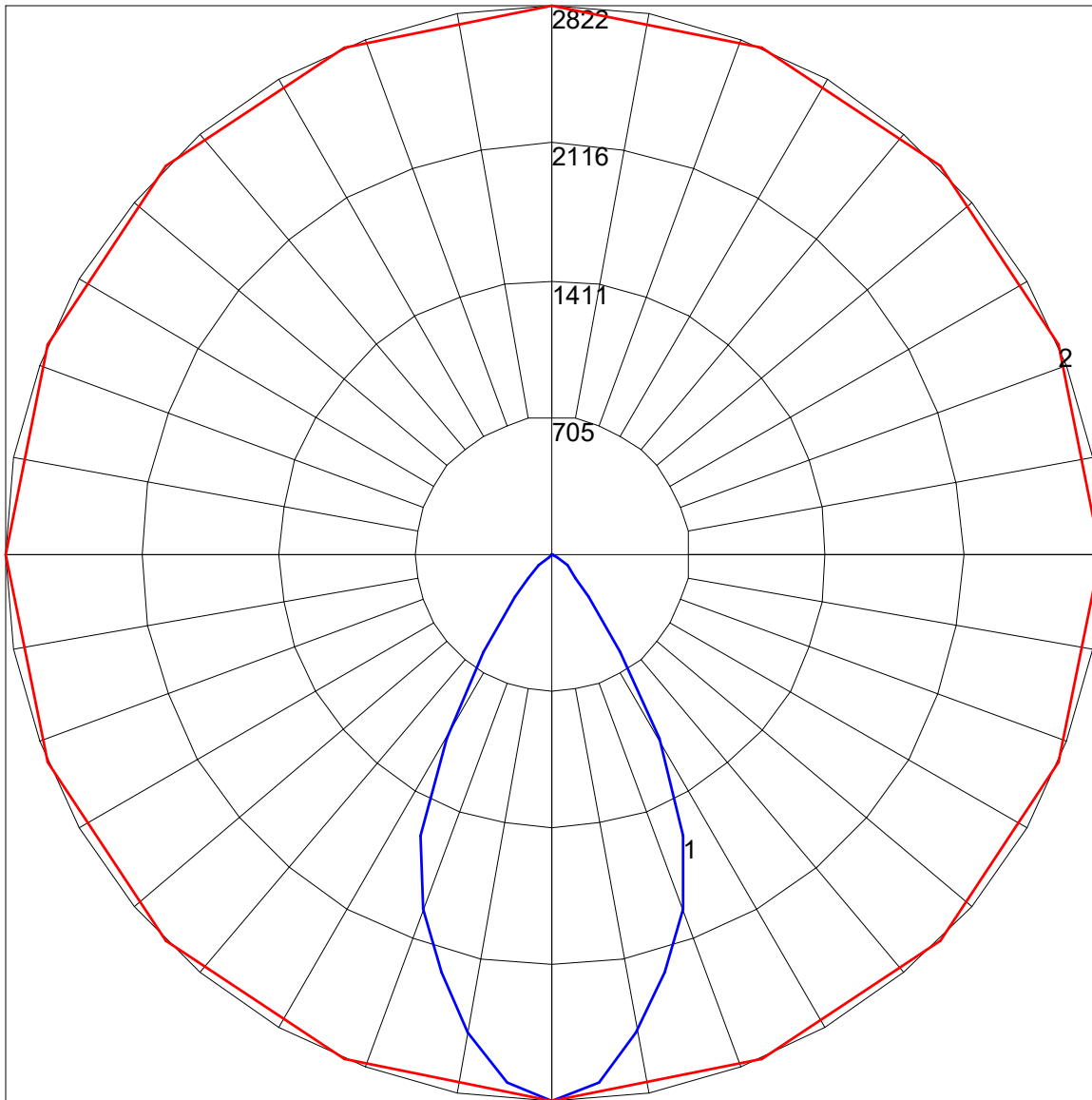
X=2H	Y=2H	6.5	7.5	6.9	7.8	8.1	6.2	7.2	6.5	7.5	7.8
	3H	6.3	7.2	6.7	7.5	7.9	6.0	6.9	6.4	7.2	7.6
	4H	6.2	7.0	6.6	7.4	7.8	5.9	6.7	6.3	7.0	7.4
	6H	6.1	6.9	6.5	7.2	7.6	5.8	6.5	6.2	6.9	7.3
	8H	6.1	6.8	6.5	7.1	7.6	5.7	6.4	6.2	6.8	7.2
	12H	6.0	6.7	6.4	7.0	7.5	5.7	6.3	6.1	6.7	7.1

UGR Viewed Endwise

4H	2H	6.2	7.0	6.6	7.4	7.8	5.9	6.7	6.3	7.0	7.4
	3H	6.0	6.7	6.4	7.1	7.5	5.7	6.3	6.1	6.7	7.1
	4H	5.9	6.5	6.3	6.9	7.4	5.6	6.1	6.0	6.6	7.0
	6H	5.8	6.3	6.3	6.7	7.2	5.5	5.9	5.9	6.4	6.9
	8H	5.7	6.2	6.2	6.6	7.1	5.4	5.8	5.9	6.3	6.8
	12H	5.6	6.0	6.1	6.5	7.0	5.3	5.7	5.8	6.2	6.7
8H	4H	5.7	6.2	6.2	6.6	7.1	5.4	5.8	5.9	6.3	6.8
	6H	5.6	6.0	6.1	6.5	6.9	5.2	5.6	5.7	6.1	6.6
	8H	5.5	5.8	6.0	6.4	6.9	5.2	5.5	5.7	6.0	6.5
	12H	5.5	5.7	6.0	6.2	6.8	5.1	5.4	5.6	5.9	6.5
12H	4H	5.6	6.0	6.1	6.5	7.0	5.3	5.7	5.8	6.2	6.7
	6H	5.5	5.8	6.0	6.3	6.9	5.2	5.5	5.7	6.0	6.5
	8H	5.5	5.7	6.0	6.2	6.8	5.1	5.4	5.6	5.9	6.5

Maximum UGR = 8.1

POLAR GRAPH



Maximum Candela = 2821.794 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.)