



IES INDOOR REPORT

PHOTOMETRIC FILENAME : DIG-S22-L48-930-AD-(L35)-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]GEN FROM BALLABS TEST NO. 19231.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUE DATE] 10-04-2022

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836

[LUMINAIRE] 2x2'RECESSED LED TROFFER

[MORE] WITH FROST ACRYLIC DIFFUSER

[LUMCAT] DIG-S22-L48-930-AD-(L35)-DIM-UNV

[LAMPCAT] HLM 90 CRI, 3000K CCT

[_SEARCH_SOURCETYPE] LED

[_SEARCH_APPLICATION] Indoor, Architectural, Classroom, Commercial, Educational, Office, Direct, Indirect

[_SEARCH_MOUNTING] Ceiling, Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2967
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	104
Total Luminaire Watts	28.6
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.10
Spacing Criterion (90-270)	1.18
Spacing Criterion (Diagonal)	1.38
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.92 ft
Luminous Width (90-270)	1.92 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2674	2960	3138
55	2323	2719	2965
65	2093	2716	3252
75	1714	2327	2094
85	1435	1588	1741

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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	1078.411	1078.411	1078.411	1078.411	1078.411
5	1065.638	1065.334	1065.334	1065.942	1065.942
10	1055.602	1056.211	1057.731	1060.468	1061.685
15	1013.938	1015.458	1021.237	1025.798	1027.319
20	994.474	995.386	1005.422	1013.938	1016.675
25	894.418	900.805	914.794	926.047	931.217
30	759.693	814.435	877.996	858.228	836.940
35	760.910	775.811	802.574	825.079	832.986
40	694.307	712.858	748.745	775.811	784.935
45	648.081	672.715	717.420	750.265	760.605
50	551.370	577.221	624.968	657.813	667.849
55	456.789	485.072	534.644	570.834	582.999
60	367.986	397.181	446.449	490.546	505.752
65	303.208	335.445	393.532	449.490	471.083
70	226.874	260.327	323.584	344.873	318.718
75	152.060	183.385	206.498	187.338	185.818
80	94.277	119.215	117.999	110.700	109.483
85	42.881	49.268	47.443	49.268	52.005
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	391.90	N.A.	13.20
0-30	814.70	N.A.	27.50
0-40	1313.48	N.A.	44.30
0-60	2324.69	N.A.	78.40
0-80	2909.92	N.A.	98.10
0-90	2966.86	N.A.	100.00
10-90	2865.25	N.A.	96.60
20-40	921.58	N.A.	31.10
20-50	1459.53	N.A.	49.20
40-70	1389.17	N.A.	46.80
60-80	585.23	N.A.	19.70
70-80	207.28	N.A.	7.00
80-90	56.93	N.A.	1.90
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	2966.86	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	101.61
10-20	290.29
20-30	422.81
30-40	498.78
40-50	537.95
50-60	473.26
60-70	377.95
70-80	207.28
80-90	56.93
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	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	83	78	96	88	82	77	85	80	75	82	77	73	79	75	72	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	29	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	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	14.8	16.4	15.1	16.7	17.0	16.2	17.8	16.5	18.1	18.4
	3H	16.5	18.0	16.9	18.3	18.7	18.3	19.8	18.7	20.1	20.5
	4H	17.1	18.5	17.5	18.9	19.3	18.8	20.2	19.2	20.6	21.0
	6H	17.6	18.9	18.0	19.3	19.7	19.2	20.5	19.6	20.9	21.2
	8H	17.8	19.0	18.2	19.4	19.8	19.3	20.5	19.7	20.9	21.3
	12H	17.9	19.0	18.3	19.4	19.9	19.4	20.6	19.8	21.0	21.4

UGR Viewed Endwise

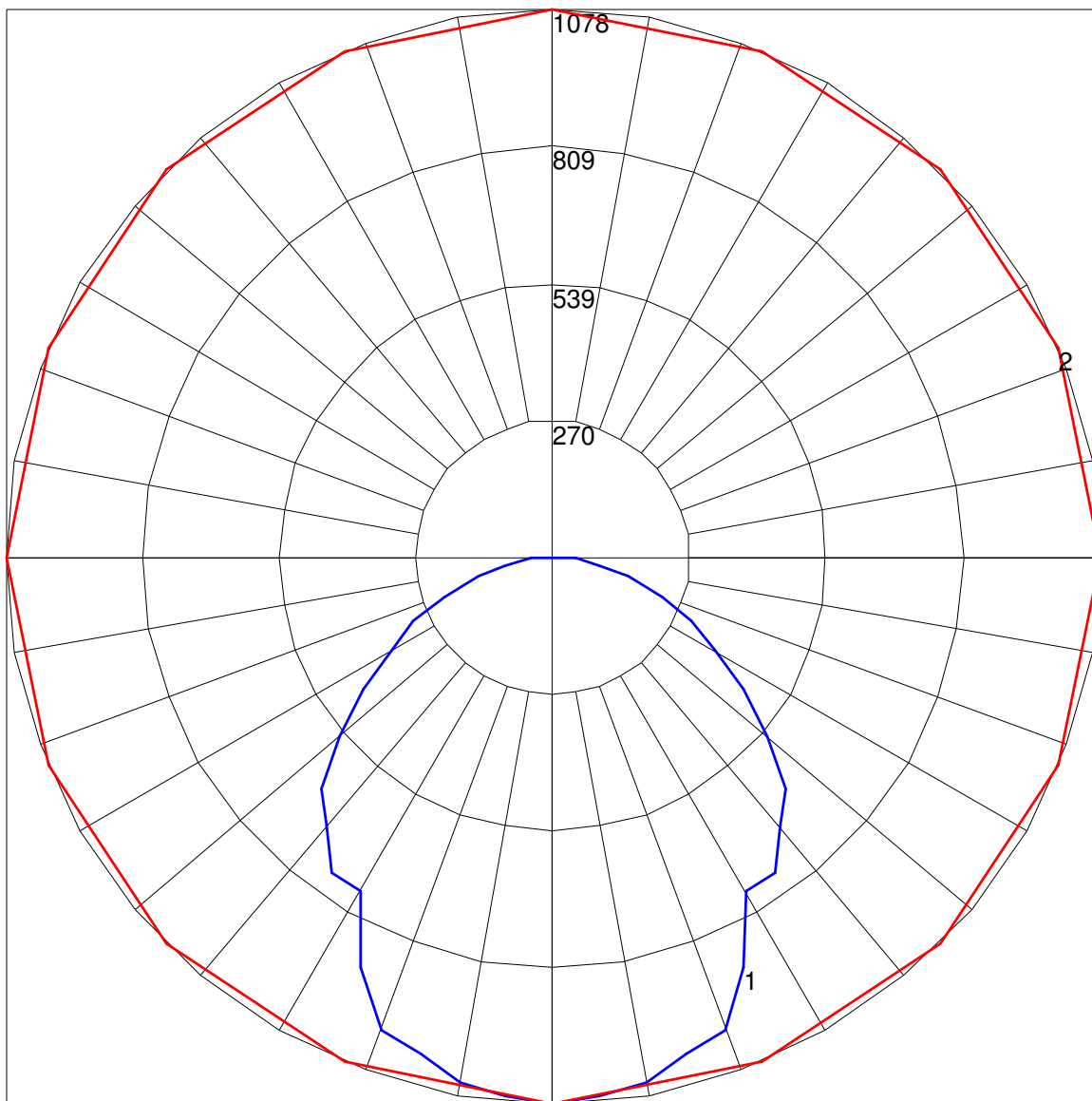
4H	2H	15.7	17.1	16.1	17.5	17.9	16.8	18.2	17.2	18.5	18.9
	3H	17.7	18.9	18.1	19.3	19.7	19.2	20.3	19.6	20.7	21.1
	4H	18.4	19.5	18.9	19.9	20.4	19.8	20.8	20.2	21.2	21.7
	6H	19.0	20.0	19.5	20.4	20.9	20.2	21.2	20.7	21.6	22.1
	8H	19.2	20.1	19.7	20.5	21.0	20.4	21.3	20.8	21.7	22.2
	12H	19.4	20.2	19.9	20.6	21.1	20.5	21.3	21.0	21.8	22.2

8H	4H	18.9	19.8	19.3	20.2	20.7	20.0	20.9	20.5	21.3	21.8
	6H	19.6	20.3	20.1	20.8	21.3	20.6	21.3	21.1	21.8	22.3
	8H	19.9	20.6	20.4	21.1	21.5	20.8	21.5	21.3	22.0	22.5
	12H	20.1	20.7	20.6	21.2	21.7	21.0	21.6	21.5	22.1	22.6

12H	4H	18.9	19.7	19.4	20.2	20.7	20.1	20.8	20.5	21.3	21.8
	6H	19.7	20.4	20.2	20.8	21.4	20.6	21.3	21.2	21.8	22.3
	8H	20.0	20.6	20.5	21.1	21.7	20.9	21.5	21.4	22.0	22.5

Maximum UGR = 22.6

POLAR GRAPH



Maximum Candela = 1078.411 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.)