



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : DIG-S24-L64-835-AD-(L60)-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

[ISSUEDATE] 06-12-2023

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2x4'RECESSED LED TROFFER

[MORE] WITH FROST ACRYLIC DIFFUSER

[LUMCAT] DIG-S24-L64-835-AD-(L60)-DIM-UNV

[LAMPCAT] HLM 80 CRI, 3500K 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	5990
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	133
Total Luminaire Watts	44.9
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)	3.91 ft
Luminous Width (90-270)	1.88 ft
Luminous Height	0.00 ft

### LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2717	3008	3189
55	2361	2763	3013
65	2127	2760	3304
75	1742	2365	2128
85	1458	1614	1769

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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>
<b>0</b>	2177.177	2177.177	2177.177	2177.177	2177.177
<b>5</b>	2151.390	2150.776	2150.776	2152.004	2152.004
<b>10</b>	2131.128	2132.356	2135.426	2140.952	2143.408
<b>15</b>	2047.013	2050.083	2061.749	2070.958	2074.028
<b>20</b>	2007.718	2009.560	2029.822	2047.013	2052.539
<b>25</b>	1805.718	1818.612	1846.855	1869.573	1880.010
<b>30</b>	1533.725	1644.241	1772.564	1732.655	1689.676
<b>35</b>	1536.181	1566.266	1620.296	1665.731	1681.694
<b>40</b>	1401.719	1439.172	1511.622	1566.266	1584.685
<b>45</b>	1308.394	1358.126	1448.381	1514.691	1535.567
<b>50</b>	1113.148	1165.336	1261.731	1328.041	1348.303
<b>55</b>	922.200	979.300	1079.379	1152.443	1177.002
<b>60</b>	742.917	801.859	901.324	990.352	1021.051
<b>65</b>	612.139	677.221	794.492	907.464	951.057
<b>70</b>	458.030	525.568	653.276	696.255	643.452
<b>75</b>	306.991	370.231	416.893	378.212	375.142
<b>80</b>	190.334	240.681	238.225	223.489	221.033
<b>85</b>	86.571	99.465	95.781	99.465	104.991
<b>90</b>	0.000	0.000	0.000	0.000	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	791.19	N.A.	13.20
0-30	1644.78	N.A.	27.50
0-40	2651.75	N.A.	44.30
0-60	4693.26	N.A.	78.40
0-80	5874.77	N.A.	98.10
0-90	5989.71	N.A.	100.00
10-90	5784.58	N.A.	96.60
20-40	1860.56	N.A.	31.10
20-50	2946.61	N.A.	49.20
40-70	2804.55	N.A.	46.80
60-80	1181.51	N.A.	19.70
70-80	418.47	N.A.	7.00
80-90	114.94	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	5989.71	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	205.13
10-20	586.05
20-30	853.60
30-40	1006.97
40-50	1086.05
50-60	955.46
60-70	763.04
70-80	418.47
80-90	114.94
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	18.5
	3H	16.5	18.0	16.9	18.4	18.7	18.3	19.8	18.7	20.2	20.5
	4H	17.1	18.6	17.5	18.9	19.3	18.9	20.3	19.3	20.6	21.0
	6H	17.6	18.9	18.0	19.3	19.7	19.2	20.5	19.6	20.9	21.3
	8H	17.8	19.0	18.2	19.4	19.8	19.3	20.6	19.7	21.0	21.4
	12H	17.9	19.1	18.3	19.4	19.9	19.4	20.6	19.8	21.0	21.4

### UGR Viewed Endwise

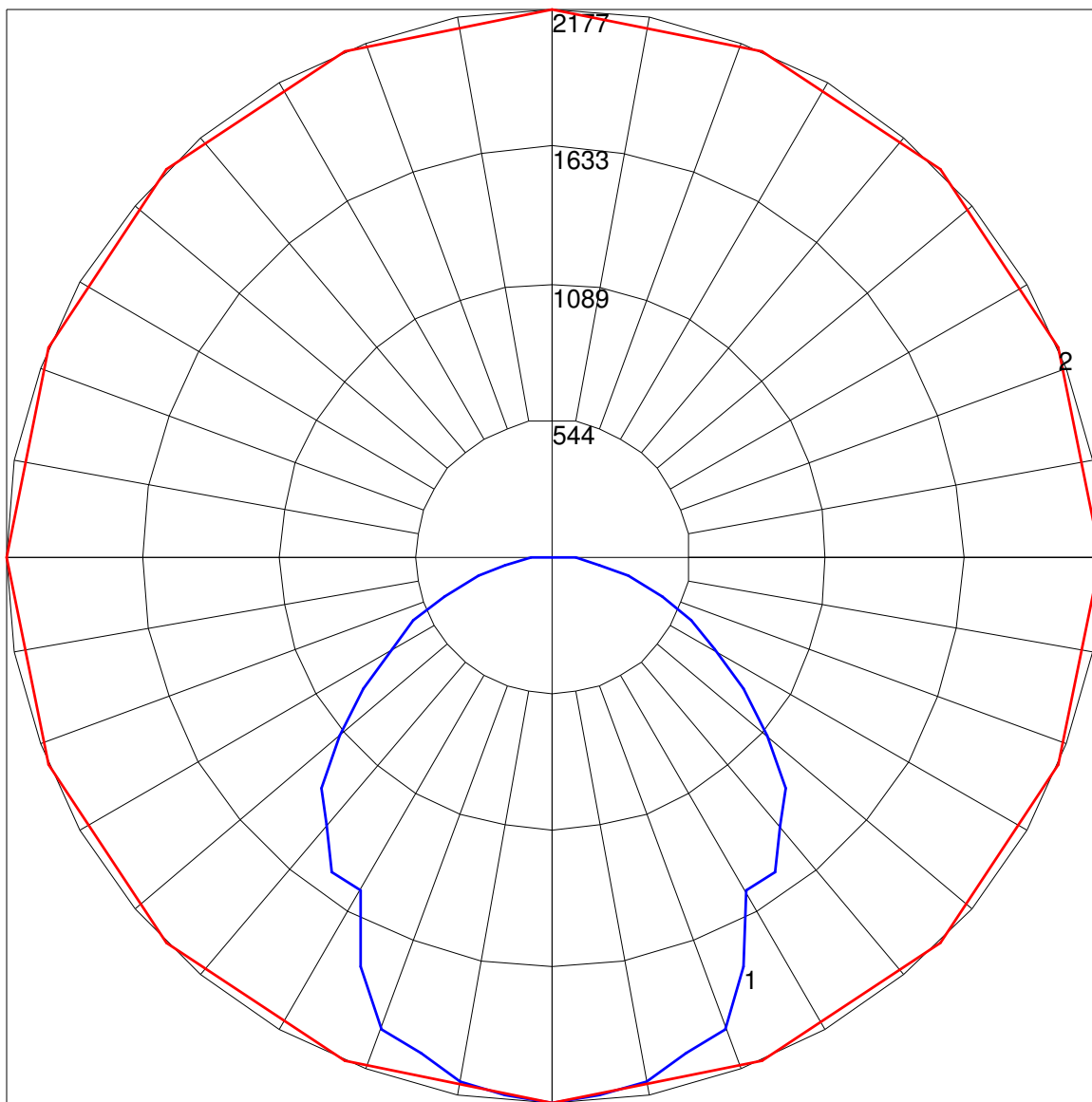
4H	2H	15.7	17.1	16.1	17.5	17.9	16.8	18.2	17.2	18.6	18.9
	3H	17.7	18.9	18.1	19.3	19.7	19.2	20.4	19.6	20.8	21.2
	4H	18.4	19.5	18.9	19.9	20.4	19.8	20.8	20.2	21.3	21.7
	6H	19.1	20.0	19.5	20.4	20.9	20.2	21.2	20.7	21.6	22.1
	8H	19.2	20.1	19.7	20.6	21.0	20.4	21.3	20.9	21.7	22.2
	12H	19.4	20.2	19.9	20.6	21.1	20.5	21.3	21.0	21.8	22.3

8H	4H	18.9	19.8	19.4	20.2	20.7	20.0	20.9	20.5	21.4	21.8
	6H	19.6	20.4	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	21.6	20.8	21.5	21.3	22.0	22.5
	12H	20.1	20.7	20.6	21.2	21.8	21.0	21.6	21.5	22.1	22.6

12H	4H	18.9	19.7	19.4	20.2	20.7	20.1	20.9	20.5	21.3	21.8
	6H	19.7	20.4	20.2	20.8	21.4	20.7	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	22.6

Maximum UGR = 22.6

POLAR GRAPH



Maximum Candela = 2177.177 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.)