



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : DIG-S24-L50-835-WPR-(L32)-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] 12-02-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2x4'RECESSED LED TROFFER

[MORE] WITH WHITE PERFORATED DIFFUSER

[LUMCAT] DIG-S24-L50-835-WPR-(L32)-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	2506
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	109
Total Luminaire Watts	22.9
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	1137	1258	1334
55	988	1156	1261
65	890	1155	1383
75	729	990	890
85	610	675	740

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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>	910.903	910.903	910.903	910.903	910.903
<b>5</b>	900.114	899.857	899.857	900.371	900.371
<b>10</b>	891.637	892.151	893.435	895.747	896.775
<b>15</b>	856.444	857.729	862.609	866.463	867.747
<b>20</b>	840.004	840.774	849.252	856.444	858.756
<b>25</b>	755.490	760.884	772.701	782.205	786.572
<b>30</b>	641.691	687.930	741.618	724.921	706.939
<b>35</b>	642.718	655.306	677.911	696.921	703.600
<b>40</b>	586.461	602.131	632.443	655.306	663.012
<b>45</b>	547.415	568.223	605.984	633.728	642.462
<b>50</b>	465.727	487.562	527.892	555.636	564.113
<b>55</b>	385.837	409.727	451.598	482.167	492.443
<b>60</b>	310.827	335.488	377.103	414.350	427.195
<b>65</b>	256.111	283.341	332.405	379.671	397.910
<b>70</b>	191.634	219.891	273.322	291.304	269.212
<b>75</b>	128.441	154.900	174.423	158.239	156.955
<b>80</b>	79.633	100.698	99.670	93.505	92.477
<b>85</b>	36.220	41.615	40.074	41.615	43.927
<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	331.02	N.A.	13.20
0-30	688.16	N.A.	27.50
0-40	1109.46	N.A.	44.30
0-60	1963.6	N.A.	78.40
0-80	2457.93	N.A.	98.10
0-90	2506.02	N.A.	100.00
10-90	2420.19	N.A.	96.60
20-40	778.44	N.A.	31.10
20-50	1232.83	N.A.	49.20
40-70	1173.39	N.A.	46.80
60-80	494.33	N.A.	19.70
70-80	175.08	N.A.	7.00
80-90	48.09	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	2506.02	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	85.83
10-20	245.20
20-30	357.13
30-40	421.30
40-50	454.39
50-60	399.75
60-70	319.25
70-80	175.08
80-90	48.09
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	84	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	11.8	13.4	12.1	13.7	14.0	13.2	14.8	13.5	15.1	15.5
	3H	13.5	15.0	13.9	15.4	15.7	15.3	16.8	15.7	17.2	17.5
	4H	14.1	15.6	14.5	15.9	16.3	15.9	17.3	16.2	17.6	18.0
	6H	14.6	15.9	15.0	16.3	16.7	16.2	17.5	16.6	17.9	18.3
	8H	14.8	16.0	15.2	16.4	16.8	16.3	17.6	16.7	18.0	18.3
	12H	14.9	16.1	15.3	16.4	16.9	16.4	17.6	16.8	18.0	18.4

### UGR Viewed Endwise

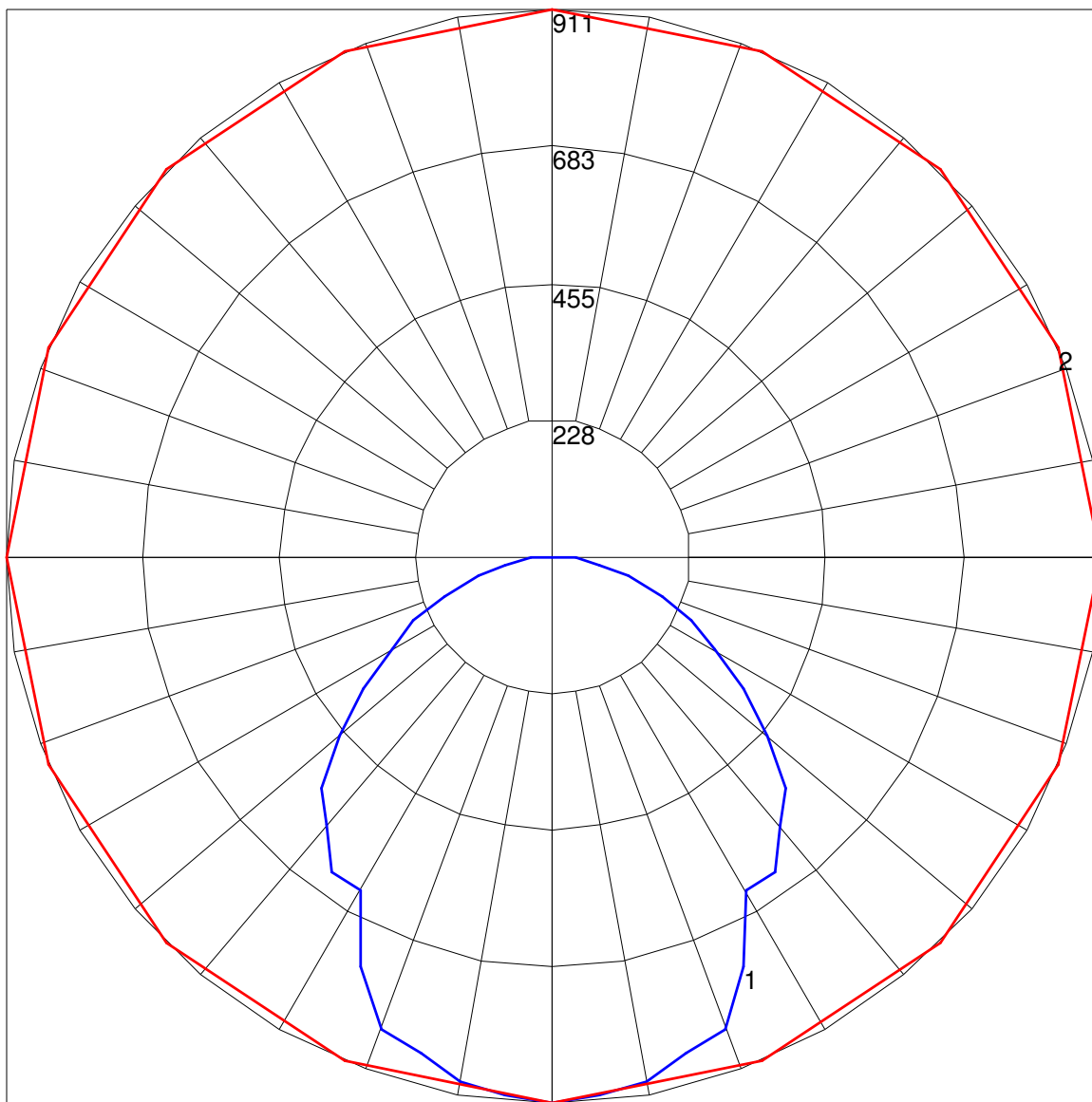
4H	2H	12.7	14.1	13.1	14.5	14.9	13.8	15.2	14.2	15.6	15.9
	3H	14.7	15.9	15.1	16.3	16.7	16.2	17.4	16.6	17.8	18.2
	4H	15.4	16.5	15.9	16.9	17.4	16.8	17.8	17.2	18.3	18.7
	6H	16.1	17.0	16.5	17.4	17.9	17.2	18.2	17.7	18.6	19.1
	8H	16.2	17.1	16.7	17.6	18.0	17.4	18.3	17.9	18.7	19.2
	12H	16.4	17.2	16.9	17.6	18.1	17.5	18.3	18.0	18.8	19.3

8H	4H	15.9	16.8	16.4	17.2	17.7	17.0	17.9	17.5	18.4	18.8
	6H	16.6	17.4	17.1	17.8	18.3	17.6	18.3	18.1	18.8	19.3
	8H	16.9	17.6	17.4	18.1	18.6	17.8	18.5	18.3	19.0	19.5
	12H	17.1	17.7	17.6	18.2	18.8	18.0	18.6	18.5	19.1	19.6

12H	4H	15.9	16.7	16.4	17.2	17.7	17.1	17.9	17.5	18.3	18.8
	6H	16.7	17.4	17.2	17.8	18.4	17.7	18.3	18.2	18.8	19.3
	8H	17.0	17.6	17.5	18.1	18.7	17.9	18.5	18.4	19.0	19.5

Maximum UGR = 19.6

POLAR GRAPH



Maximum Candela = 910.903 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.)