



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : DIG-S24-L50-840-AD-(L30)-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] 22-NOV-2019

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2x4'RECESSED WHITE LUMINAIRE w/A-SHAPED

[MORE] CENTER REFL, FROST ACRYLIC LINEAR RIBBED DIFFUSER

[LUMCAT] DIG-S24-L50-840-AD-(L30)-DIM-UNV

[LAMPCAT] HLM 80 CRI 4000K CCT

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3214
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	139
Total Luminaire Watts	23.1
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	1458	1614	1711
55	1267	1483	1617
65	1141	1481	1773
75	934	1269	1142
85	783	866	949

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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>	1168.188	1168.188	1168.188	1168.188	1168.188
<b>5</b>	1154.352	1154.022	1154.022	1154.681	1154.681
<b>10</b>	1143.480	1144.139	1145.786	1148.751	1150.069
<b>15</b>	1098.347	1099.994	1106.254	1111.195	1112.843
<b>20</b>	1077.263	1078.252	1089.123	1098.347	1101.312
<b>25</b>	968.878	975.796	990.950	1003.140	1008.740
<b>30</b>	822.937	882.236	951.088	929.675	906.614
<b>35</b>	824.255	840.397	869.388	893.766	902.332
<b>40</b>	752.108	772.203	811.077	840.397	850.280
<b>45</b>	702.033	728.718	777.145	812.724	823.925
<b>50</b>	597.272	625.274	676.996	712.575	723.447
<b>55</b>	494.816	525.454	579.153	618.356	631.533
<b>60</b>	398.620	430.246	483.615	531.384	547.856
<b>65</b>	328.450	363.370	426.293	486.910	510.300
<b>70</b>	245.761	281.999	350.522	373.583	345.251
<b>75</b>	164.719	198.651	223.689	202.934	201.287
<b>80</b>	102.126	129.140	127.822	119.916	118.598
<b>85</b>	46.451	53.369	51.392	53.369	56.334
<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	424.52	N.A.	13.20
0-30	882.53	N.A.	27.50
0-40	1422.83	N.A.	44.30
0-60	2518.22	N.A.	78.40
0-80	3152.17	N.A.	98.10
0-90	3213.85	N.A.	100.00
10-90	3103.78	N.A.	96.60
20-40	998.31	N.A.	31.10
20-50	1581.04	N.A.	49.20
40-70	1504.81	N.A.	46.80
60-80	633.95	N.A.	19.70
70-80	224.53	N.A.	7.00
80-90	61.67	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	3213.85	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	110.07
10-20	314.45
20-30	458.01
30-40	540.30
40-50	582.73
50-60	512.66
60-70	409.42
70-80	224.53
80-90	61.67
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	12.7	14.3	13.0	14.6	15.0	14.1	15.7	14.4	16.0	16.4
	3H	14.4	15.9	14.8	16.3	16.6	16.2	17.7	16.6	18.1	18.4
	4H	15.0	16.5	15.4	16.8	17.2	16.8	18.2	17.2	18.5	18.9
	6H	15.5	16.8	15.9	17.2	17.6	17.1	18.4	17.5	18.8	19.2
	8H	15.7	16.9	16.1	17.3	17.7	17.2	18.5	17.6	18.9	19.3
	12H	15.8	17.0	16.2	17.3	17.8	17.3	18.5	17.7	18.9	19.3

### UGR Viewed Endwise

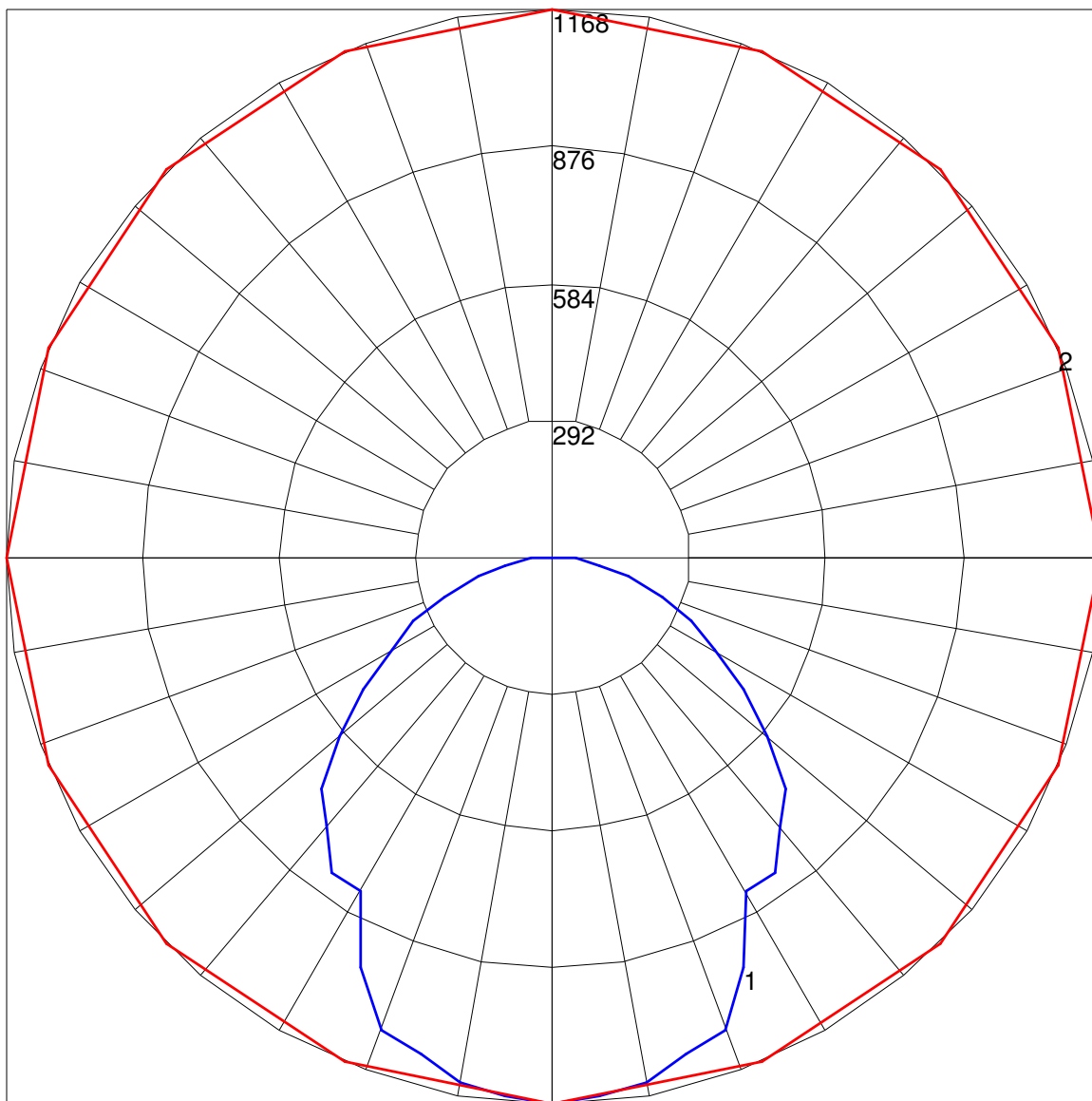
4H	2H	13.6	15.0	14.0	15.4	15.8	14.7	16.1	15.1	16.5	16.8
	3H	15.6	16.8	16.0	17.2	17.6	17.1	18.3	17.5	18.7	19.1
	4H	16.4	17.4	16.8	17.8	18.3	17.7	18.7	18.1	19.2	19.6
	6H	17.0	17.9	17.4	18.3	18.8	18.1	19.1	18.6	19.5	20.0
	8H	17.1	18.0	17.6	18.5	18.9	18.3	19.2	18.8	19.6	20.1
	12H	17.3	18.1	17.8	18.5	19.0	18.4	19.2	18.9	19.7	20.2

8H	4H	16.8	17.7	17.3	18.1	18.6	17.9	18.8	18.4	19.3	19.7
	6H	17.5	18.3	18.0	18.7	19.2	18.5	19.2	19.0	19.7	20.2
	8H	17.8	18.5	18.3	19.0	19.5	18.7	19.4	19.3	19.9	20.4
	12H	18.0	18.6	18.5	19.1	19.7	18.9	19.5	19.4	20.0	20.5

12H	4H	16.8	17.6	17.3	18.1	18.6	18.0	18.8	18.4	19.2	19.7
	6H	17.6	18.3	18.1	18.7	19.3	18.6	19.2	19.1	19.7	20.2
	8H	17.9	18.5	18.4	19.0	19.6	18.8	19.4	19.3	19.9	20.5

Maximum UGR = 20.5

POLAR GRAPH



Maximum Candela = 1168.188 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.)