



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : DIG-S22-L48-840-WPR-(L40)-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 19230.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 29-OCT-2020

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2x2' RECESSED LED LUMINAIRE w/A-SHAPED

[MORE] CENTER REFL, FROST ACRYLIC INTERNAL LENS & PERF BASKET

[MORE] w/WHITE ACRYLIC OVERLAY

[LUMCAT] DIG-S22-L48-840-WPR-(L40)-DIM-UNV

[LAMPCAT] HLM 80 CRI 4000K CCT

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3156
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	96
Total Luminaire Watts	33
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.16
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.40
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.90 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	2697	3161	3564
55	2308	3134	3790
65	1976	3451	4716
75	1551	2962	2485
85	1259	1402	1516

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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>	1069.068	1069.068	1069.068	1069.068	1069.068
<b>5</b>	1059.983	1059.570	1059.983	1059.983	1060.809
<b>10</b>	1041.402	1042.228	1045.118	1047.596	1049.247
<b>15</b>	1013.323	1014.974	1021.168	1026.949	1030.666
<b>20</b>	962.120	966.662	978.637	991.438	998.044
<b>25</b>	887.380	893.987	911.743	929.498	938.583
<b>30</b>	816.357	811.814	879.121	932.802	930.324
<b>35</b>	751.114	765.566	803.969	842.784	860.127
<b>40</b>	681.329	704.453	756.069	808.511	830.396
<b>45</b>	631.778	664.812	740.378	807.685	834.938
<b>50</b>	535.979	578.511	666.877	742.030	771.760
<b>55</b>	438.528	491.796	595.441	682.981	720.145
<b>60</b>	347.272	411.688	522.765	625.584	669.767
<b>65</b>	276.661	353.465	483.124	609.067	660.270
<b>70</b>	201.095	280.377	411.275	477.756	455.458
<b>75</b>	132.962	203.160	253.950	208.528	213.070
<b>80</b>	80.934	125.117	111.077	120.162	123.052
<b>85</b>	36.338	35.925	40.467	42.944	43.770
<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	388.20	N.A.	12.30
0-30	812.62	N.A.	25.70
0-40	1320.22	N.A.	41.80
0-60	2405.48	N.A.	76.20
0-80	3102.93	N.A.	98.30
0-90	3155.81	N.A.	100.00
10-90	3055.05	N.A.	96.80
20-40	932.02	N.A.	29.50
20-50	1490.68	N.A.	47.20
40-70	1543.29	N.A.	48.90
60-80	697.45	N.A.	22.10
70-80	239.43	N.A.	7.60
80-90	52.87	N.A.	1.70
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	3155.81	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	100.76
10-20	287.44
20-30	424.42
30-40	507.60
40-50	558.66
50-60	526.60
60-70	458.02
70-80	239.43
80-90	52.87
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	108	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	68
3	89	78	70	63	87	77	69	63	74	67	61	71	65	60	68	63	59	57
4	81	69	60	53	79	68	59	53	65	58	52	63	56	51	61	55	50	48
5	75	61	52	45	73	60	52	45	58	51	45	56	49	44	54	48	44	41
6	69	55	46	39	67	54	46	39	52	45	39	51	44	39	49	43	38	36
7	64	50	41	35	62	49	41	35	48	40	34	46	39	34	45	39	34	32
8	59	46	37	31	58	45	37	31	43	36	31	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

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**UGR TABLE - CORRECTED**

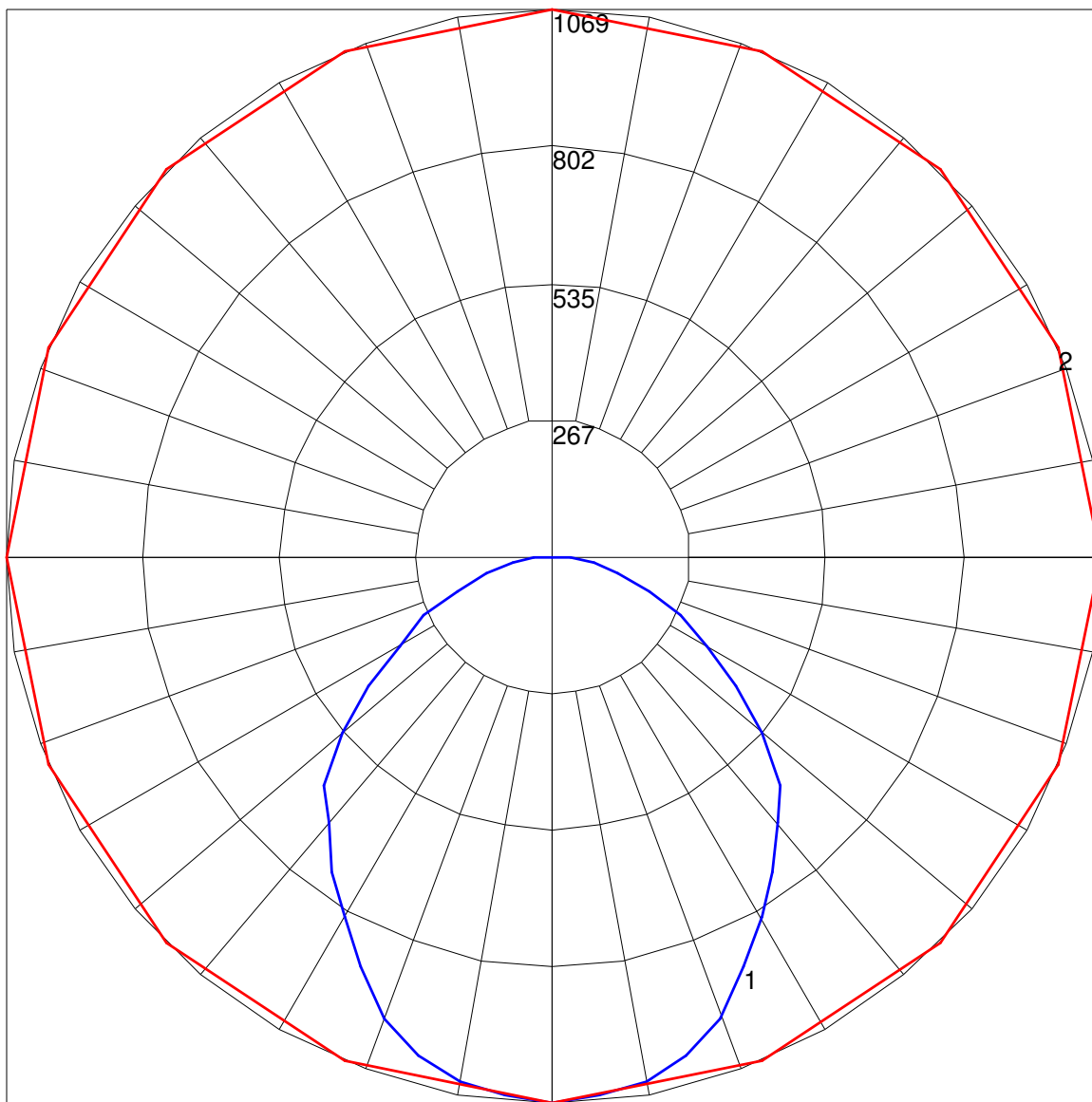
Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	14.7	16.4	15.1	16.7	17.0	17.5	19.2	17.9	19.5	19.8
	3H	16.4	17.9	16.8	18.2	18.6	20.1	21.6	20.5	22.0	22.3
	4H	17.0	18.4	17.3	18.7	19.1	20.5	22.0	20.9	22.3	22.7
	6H	17.4	18.7	17.8	19.1	19.4	20.8	22.1	21.2	22.5	22.9
	8H	17.5	18.8	17.9	19.1	19.5	20.8	22.1	21.3	22.5	22.9
	12H	17.5	18.8	18.0	19.2	19.6	20.9	22.1	21.3	22.5	22.9
4H	2H	16.1	17.5	16.5	17.9	18.2	18.1	19.6	18.5	19.9	20.3
	3H	18.0	19.2	18.4	19.6	20.0	20.9	22.1	21.3	22.5	22.9
	4H	18.7	19.8	19.1	20.2	20.7	21.4	22.5	21.8	22.9	23.3
	6H	19.2	20.2	19.7	20.6	21.1	21.7	22.7	22.2	23.1	23.6
	8H	19.4	20.3	19.8	20.7	21.2	21.8	22.7	22.3	23.2	23.6
	12H	19.4	20.3	19.9	20.7	21.2	21.9	22.7	22.4	23.2	23.6
8H	4H	19.3	20.2	19.7	20.6	21.1	21.6	22.5	22.0	22.9	23.4
	6H	19.9	20.7	20.4	21.1	21.6	22.0	22.7	22.5	23.2	23.7
	8H	20.1	20.8	20.6	21.3	21.8	22.1	22.8	22.7	23.3	23.8
	12H	20.3	20.8	20.8	21.3	21.9	22.3	22.8	22.8	23.3	23.9
12H	4H	19.3	20.1	19.8	20.6	21.1	21.6	22.4	22.1	22.9	23.3
	6H	20.0	20.7	20.5	21.1	21.6	22.0	22.7	22.5	23.2	23.7
	8H	20.2	20.8	20.7	21.3	21.9	22.2	22.8	22.7	23.3	23.8

Maximum UGR = 23.9

POLAR GRAPH



Maximum Candela = 1069.068 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.)