

## IES INDOOR REPORT

PHOTOMETRIC FILENAME : DIG-S22-L24-835-WPR-EM10W-DIM-UNV (EMER MODE).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] 08-22-2023

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 2x2'RECESSED LED TROFFER

[MORE] WITH WHITE PERFORATED ROUND

[LUMCAT] DIG-S22-L24-835-WPR-EM10W-DIM-UNV (EMER MODE)

[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	1037
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	104
Total Luminaire Watts	10
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	935	1035	1097
55	812	951	1037
65	732	950	1137
75	599	814	732
85	502	555	609

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	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
<b>0</b>	377.032	377.032	377.032	377.032	377.032
<b>5</b>	372.566	372.460	372.460	372.672	372.672
<b>10</b>	369.057	369.270	369.801	370.758	371.184
<b>15</b>	354.491	355.022	357.042	358.637	359.169
<b>20</b>	347.686	348.005	351.513	354.491	355.447
<b>25</b>	312.704	314.937	319.828	323.762	325.570
<b>30</b>	265.602	284.741	306.963	300.052	292.609
<b>35</b>	266.027	271.237	280.594	288.462	291.227
<b>40</b>	242.742	249.228	261.774	271.237	274.427
<b>45</b>	226.580	235.193	250.823	262.306	265.921
<b>50</b>	192.769	201.807	218.500	229.983	233.492
<b>55</b>	159.702	169.590	186.921	199.574	203.827
<b>60</b>	128.654	138.862	156.086	171.504	176.820
<b>65</b>	106.007	117.277	137.586	157.150	164.699
<b>70</b>	79.319	91.015	113.131	120.574	111.430
<b>75</b>	53.163	64.115	72.195	65.497	64.965
<b>80</b>	32.961	41.680	41.254	38.703	38.277
<b>85</b>	14.992	17.225	16.587	17.225	18.182
<b>90</b>	0.000	0.000	0.000	0.000	0.000

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Zone	Lumens	%Lamp	%Fixt
0-20	137.01	N.A.	13.20
0-30	284.83	N.A.	27.50
0-40	459.22	N.A.	44.30
0-60	812.75	N.A.	78.40
0-80	1017.36	N.A.	98.10
0-90	1037.27	N.A.	100.00
10-90	1001.74	N.A.	96.60
20-40	322.20	N.A.	31.10
20-50	510.28	N.A.	49.20
40-70	485.68	N.A.	46.80
60-80	204.61	N.A.	19.70
70-80	72.47	N.A.	7.00
80-90	19.91	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	1037.27	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	35.52
10-20	101.49
20-30	147.82
30-40	174.38
40-50	188.08
50-60	165.46
60-70	132.14
70-80	72.47
80-90	19.91
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	89	82	77	85	80	75	82	77	73	79	75	72	69
3	90	79	71	65	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	36	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	11.1	12.7	11.4	13.0	13.3	12.5	14.1	12.8	14.4	14.7
	3H	12.8	14.3	13.2	14.6	15.0	14.6	16.1	15.0	16.4	16.8
	4H	13.4	14.8	13.8	15.2	15.6	15.1	16.5	15.5	16.9	17.3
	6H	13.9	15.2	14.3	15.6	16.0	15.5	16.8	15.9	17.2	17.5
	8H	14.0	15.3	14.5	15.7	16.1	15.6	16.8	16.0	17.2	17.6
	12H	14.2	15.3	14.6	15.7	16.2	15.7	16.9	16.1	17.3	17.7

### UGR Viewed Endwise

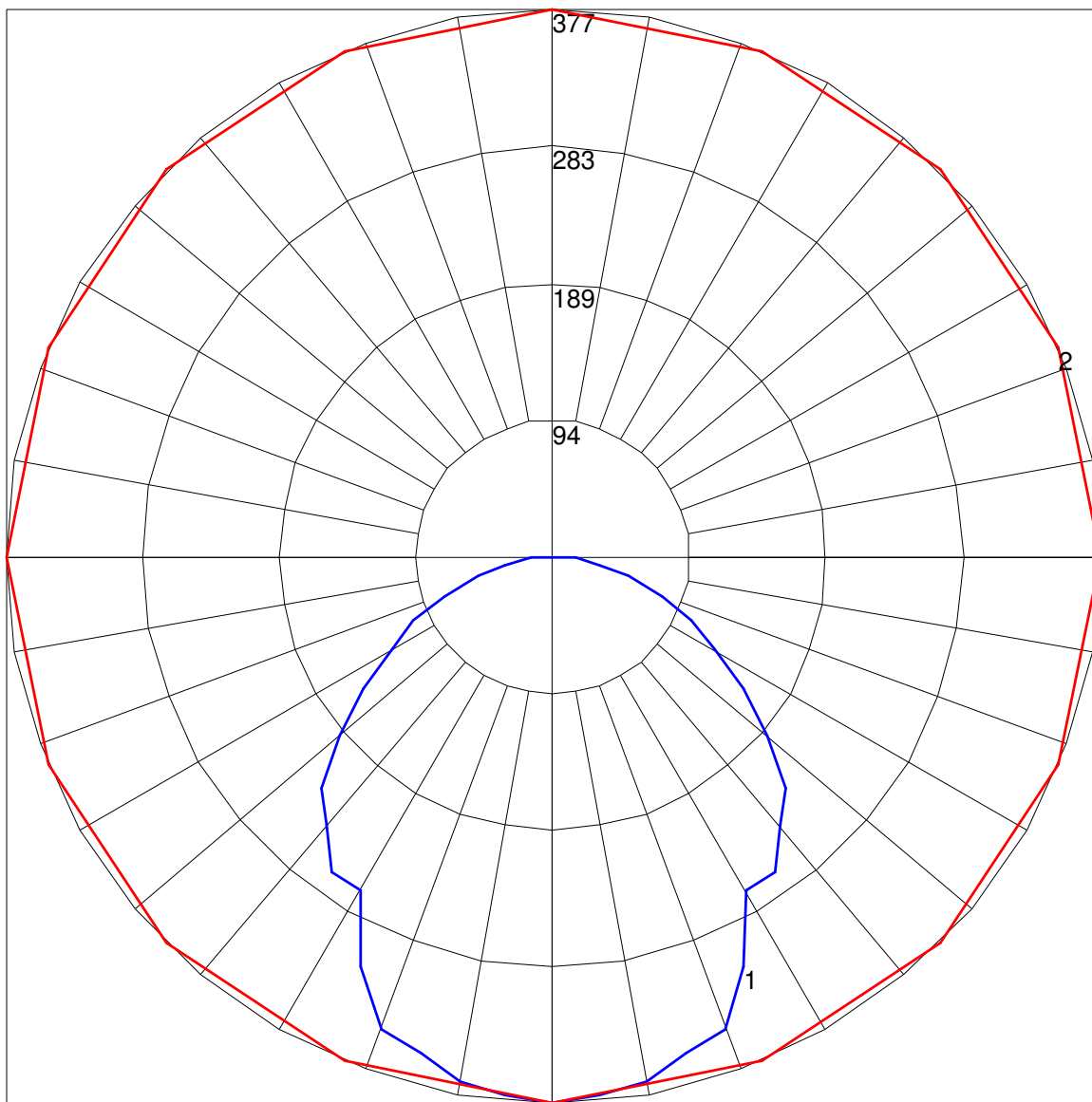
4H	2H	12.0	13.4	12.4	13.8	14.2	13.1	14.5	13.5	14.8	15.2
	3H	14.0	15.2	14.4	15.6	16.0	15.5	16.6	15.9	17.0	17.4
	4H	14.7	15.8	15.2	16.2	16.7	16.1	17.1	16.5	17.5	18.0
	6H	15.3	16.3	15.8	16.7	17.2	16.5	17.5	17.0	17.9	18.4
	8H	15.5	16.4	16.0	16.8	17.3	16.7	17.6	17.1	18.0	18.5
	12H	15.7	16.5	16.1	16.9	17.4	16.8	17.6	17.3	18.1	18.5
8H	4H	15.2	16.1	15.6	16.5	17.0	16.3	17.2	16.8	17.6	18.1
	6H	15.9	16.6	16.4	17.1	17.6	16.9	17.6	17.4	18.1	18.6
	8H	16.2	16.9	16.7	17.4	17.8	17.1	17.8	17.6	18.3	18.8
	12H	16.4	17.0	16.9	17.5	18.0	17.3	17.9	17.8	18.4	18.9
12H	4H	15.2	16.0	15.7	16.5	17.0	16.4	17.1	16.8	17.6	18.1
	6H	16.0	16.7	16.5	17.1	17.7	16.9	17.6	17.5	18.1	18.6
	8H	16.3	16.9	16.8	17.4	18.0	17.2	17.8	17.7	18.3	18.8

Maximum UGR = 18.9

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## POLAR GRAPH



Maximum Candela = 377.032 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.)