



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DS-L30-830-DIM-UNV-RW-OF-BL\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 20321.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 12-22-2022

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 4"SHORT HEATSINK 4"SQ CAST HOUSING DOWNLIGHT

[MORE] WHITE MIXING CHAMBER & 4"CAST WHITE REGRESS TRIM

[LUMCAT] 4DS-L30-830-DIM-UNV-RW-OF-BL

[LAMPCAT] BXRE-35E2000

[\_SEARCH\_SOURCETYPE] LED

[\_SEARCH\_APPLICATION] Indoor, Classroom, Office, Downlight

[\_SEARCH\_MOUNTING] Recessed

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2289
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	64
Total Luminaire Watts	36
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.02
Spacing Criterion (90-270)	1.02
Spacing Criterion (Diagonal)	1.06
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.33 ft
Luminous Width (90-270)	0.33 ft
Luminous Height	0.00 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	42823	47758	42664
55	32971	31794	32382
65	21309	19977	20776
75	9569	10438	10003
85	5166	3874	5166

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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>	1746.930	1746.930	1746.930	1746.930	1746.930
<b>5</b>	1736.483	1736.483	1735.323	1737.644	1742.287
<b>10</b>	1703.982	1701.661	1709.786	1720.233	1727.197
<b>15</b>	1656.392	1655.231	1663.356	1677.285	1685.410
<b>20</b>	1593.711	1591.390	1601.836	1601.836	1592.550
<b>25</b>	1396.383	1438.170	1500.851	1450.939	1391.740
<b>30</b>	915.833	1042.354	1310.488	1135.214	915.833
<b>35</b>	521.177	585.018	962.263	661.628	522.338
<b>40</b>	374.923	403.941	550.196	429.478	385.369
<b>45</b>	312.242	321.528	348.225	333.136	311.081
<b>50</b>	255.365	260.008	258.847	255.365	247.240
<b>55</b>	195.006	199.649	188.042	191.524	191.524
<b>60</b>	141.612	141.612	133.486	136.969	139.290
<b>65</b>	92.860	94.021	87.056	90.539	90.539
<b>70</b>	46.430	51.073	51.073	49.912	47.591
<b>75</b>	25.537	25.537	27.858	25.537	26.697
<b>80</b>	16.251	16.251	11.608	13.929	13.929
<b>85</b>	4.643	3.482	3.482	3.482	4.643
<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	634.42	N.A.	27.70
0-30	1275.91	N.A.	55.70
0-40	1726.02	N.A.	75.40
0-60	2161.03	N.A.	94.40
0-80	2283.00	N.A.	99.70
0-90	2288.92	N.A.	100.00
10-90	2123.89	N.A.	92.80
20-40	1091.6	N.A.	47.70
20-50	1352.31	N.A.	59.10
40-70	526.27	N.A.	23.00
60-80	121.96	N.A.	5.30
70-80	30.70	N.A.	1.30
80-90	5.92	N.A.	0.30
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	2288.92	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	165.03
10-20	469.39
20-30	641.48
30-40	450.12
40-50	260.71
50-60	174.30
60-70	91.26
70-80	30.70
80-90	5.92
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	112	109	106	103	110	107	104	101	102	100	98	99	97	95	95	94	93	91
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	82
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74
4	92	83	77	72	90	82	76	71	80	74	70	78	73	69	76	72	69	67
5	87	77	70	65	85	76	69	64	74	68	64	72	67	63	70	66	63	61
6	81	71	64	59	80	70	64	59	69	63	58	67	62	58	66	61	57	56
7	77	66	59	54	75	65	59	54	64	58	54	63	57	53	61	57	53	51
8	72	61	55	50	71	61	54	50	60	54	49	59	53	49	58	53	49	47
9	69	57	51	46	67	57	50	46	56	50	46	55	50	46	54	49	46	44
10	65	54	47	43	64	53	47	43	53	47	43	52	46	43	51	46	42	41

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**UGR TABLE - CORRECTED**

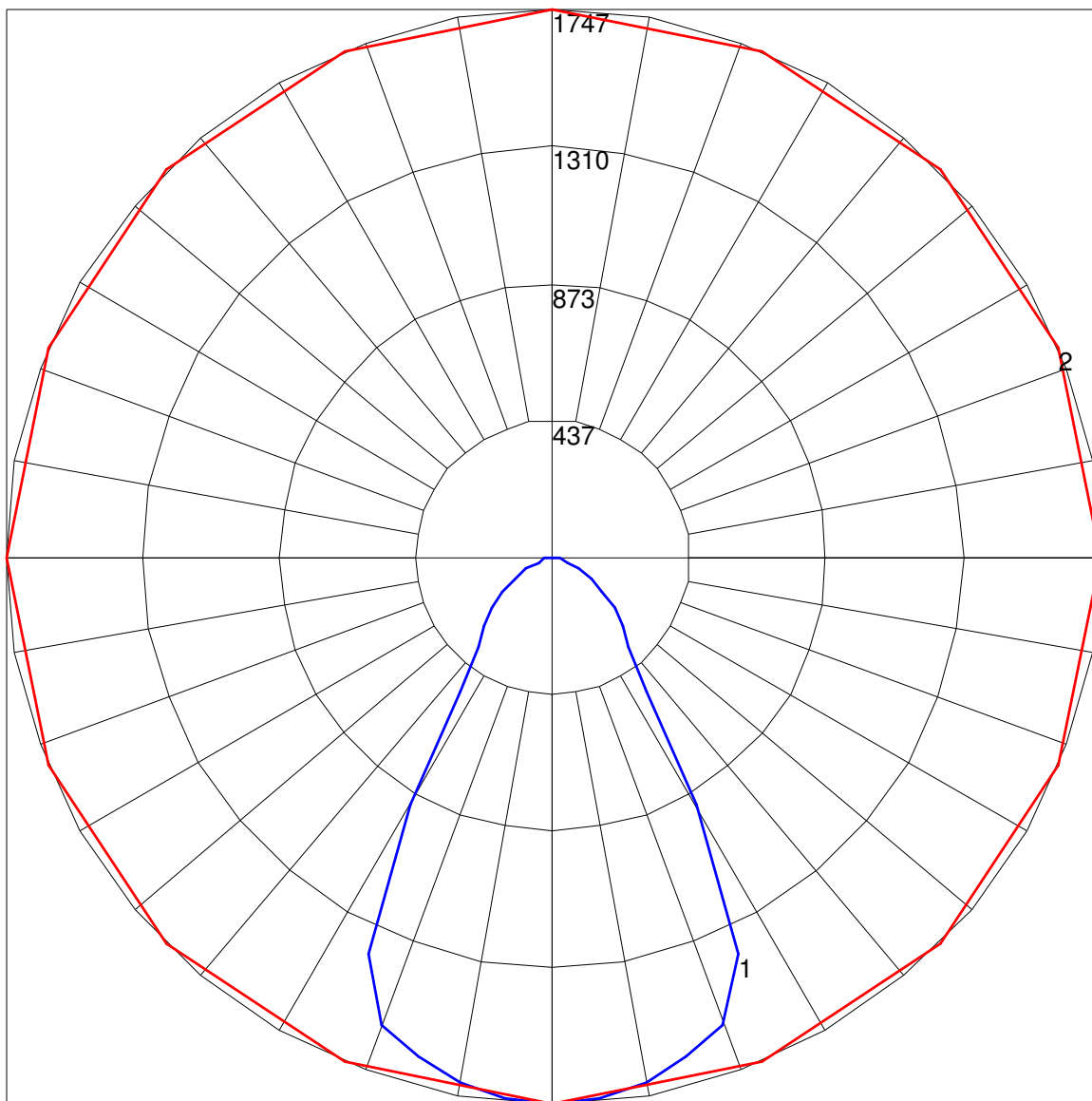
Reflectances

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	21.8	23.0	22.1	23.3	23.6	21.5	22.8	21.9	23.1	23.4
	3H	22.4	23.5	22.8	23.8	24.2	22.2	23.3	22.6	23.6	24.0
	4H	22.5	23.5	22.9	23.9	24.3	22.3	23.3	22.7	23.7	24.1
	6H	22.6	23.5	23.0	23.9	24.3	22.4	23.3	22.8	23.7	24.1
	8H	22.6	23.5	23.0	23.8	24.3	22.4	23.2	22.8	23.6	24.0
	12H	22.5	23.4	23.0	23.8	24.2	22.3	23.2	22.8	23.6	24.0
4H	2H	22.0	23.0	22.4	23.3	23.7	21.8	22.8	22.2	23.1	23.5
	3H	22.7	23.6	23.1	24.0	24.4	22.6	23.4	23.0	23.8	24.2
	4H	22.9	23.6	23.3	24.0	24.5	22.7	23.4	23.1	23.9	24.3
	6H	23.0	23.6	23.5	24.1	24.5	22.8	23.4	23.3	23.9	24.4
	8H	23.0	23.6	23.5	24.0	24.5	22.8	23.4	23.3	23.8	24.3
	12H	23.0	23.5	23.5	24.0	24.5	22.8	23.3	23.3	23.8	24.3
8H	4H	22.8	23.4	23.3	23.9	24.4	22.7	23.3	23.2	23.7	24.2
	6H	23.0	23.5	23.5	24.0	24.5	22.8	23.3	23.3	23.8	24.3
	8H	23.0	23.5	23.6	24.0	24.5	22.8	23.3	23.4	23.8	24.3
	12H	23.1	23.4	23.6	23.9	24.5	22.9	23.2	23.4	23.7	24.3
12H	4H	22.8	23.3	23.3	23.8	24.3	22.7	23.2	23.1	23.7	24.1
	6H	23.0	23.4	23.5	23.9	24.4	22.8	23.2	23.3	23.7	24.2
	8H	23.0	23.4	23.6	23.9	24.5	22.8	23.2	23.4	23.7	24.3

Maximum UGR = 24.5

POLAR GRAPH



Maximum Candela = 1746.93 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.)