



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DS-P22-835-POE PR-OW-OF-CS\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 20310.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 10/27/2022

[MANUFAC] WILLIAMS INDOOR

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

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

[MORE] WHITE MIXING CHAMBER & 4"SEMI-SPEC TRIM w/FROST FILM

[LUMCAT] 4DS-P22-835-DIM-POE PR-OW-OF-CS

[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	2067
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	83
Total Luminaire Watts	25
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.84
Spacing Criterion (90-270)	0.82
Spacing Criterion (Diagonal)	0.86
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	22463	29052	22613
55	4615	6092	4062
65	0	0	0
75	0	0	0
85	0	0	0

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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>	2656.636	2656.636	2656.636	2656.636	2656.636
<b>5</b>	2581.294	2571.467	2557.272	2557.272	2544.169
<b>10</b>	2359.635	2330.153	2298.487	2297.395	2295.212
<b>15</b>	2103.034	2040.795	1966.544	1993.842	2058.265
<b>20</b>	1842.066	1737.242	1659.715	1713.219	1791.837
<b>25</b>	1512.306	1441.332	1374.725	1402.023	1491.560
<b>30</b>	1030.771	1063.528	1109.389	1073.355	1043.874
<b>35</b>	575.441	661.702	816.755	663.886	542.683
<b>40</b>	276.255	331.943	473.892	339.586	284.991
<b>45</b>	163.788	165.972	211.832	157.236	164.880
<b>50</b>	91.721	88.445	82.986	84.078	82.986
<b>55</b>	27.298	33.849	36.033	32.758	24.022
<b>60</b>	1.092	3.276	10.919	3.276	0.000
<b>65</b>	0.000	0.000	0.000	0.000	0.000
<b>70</b>	0.000	0.000	0.000	0.000	0.000
<b>75</b>	0.000	0.000	0.000	0.000	0.000
<b>80</b>	0.000	0.000	0.000	0.000	0.000
<b>85</b>	0.000	0.000	0.000	0.000	0.000
<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	803.12	N.A.	38.90
0-30	1451.22	N.A.	70.20
0-40	1880.53	N.A.	91.00
0-60	2065.63	N.A.	99.90
0-80	2066.73	N.A.	100.00
0-90	2066.73	N.A.	100.00
10-90	1829.92	N.A.	88.50
20-40	1077.41	N.A.	52.10
20-50	1228.44	N.A.	59.40
40-70	186.20	N.A.	9.00
60-80	1.09	N.A.	0.10
70-80	0.00	N.A.	0.00
80-90	0.00	N.A.	0.00
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	2066.73	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	236.80
10-20	566.32
20-30	648.10
30-40	429.31
40-50	151.03
50-60	34.07
60-70	1.09
70-80	0.00
80-90	0.00
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	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	94
2	108	103	99	96	106	101	98	95	98	95	93	95	93	91	92	90	89	87
3	102	96	91	87	100	95	90	86	92	88	85	90	86	84	87	85	82	81
4	97	90	84	80	95	89	83	80	86	82	79	84	81	78	83	79	77	75
5	92	84	78	74	91	83	78	74	81	77	73	80	75	72	78	74	72	70
6	88	79	73	69	86	78	72	68	77	72	68	75	71	67	74	70	67	65
7	83	74	68	64	82	73	68	64	72	67	63	71	66	63	70	66	63	61
8	79	70	64	60	78	69	64	60	68	63	59	67	62	59	66	62	59	57
9	76	66	60	56	74	65	60	56	64	59	56	64	59	56	63	58	55	54
10	72	62	57	53	71	62	56	53	61	56	53	60	56	52	60	55	52	51

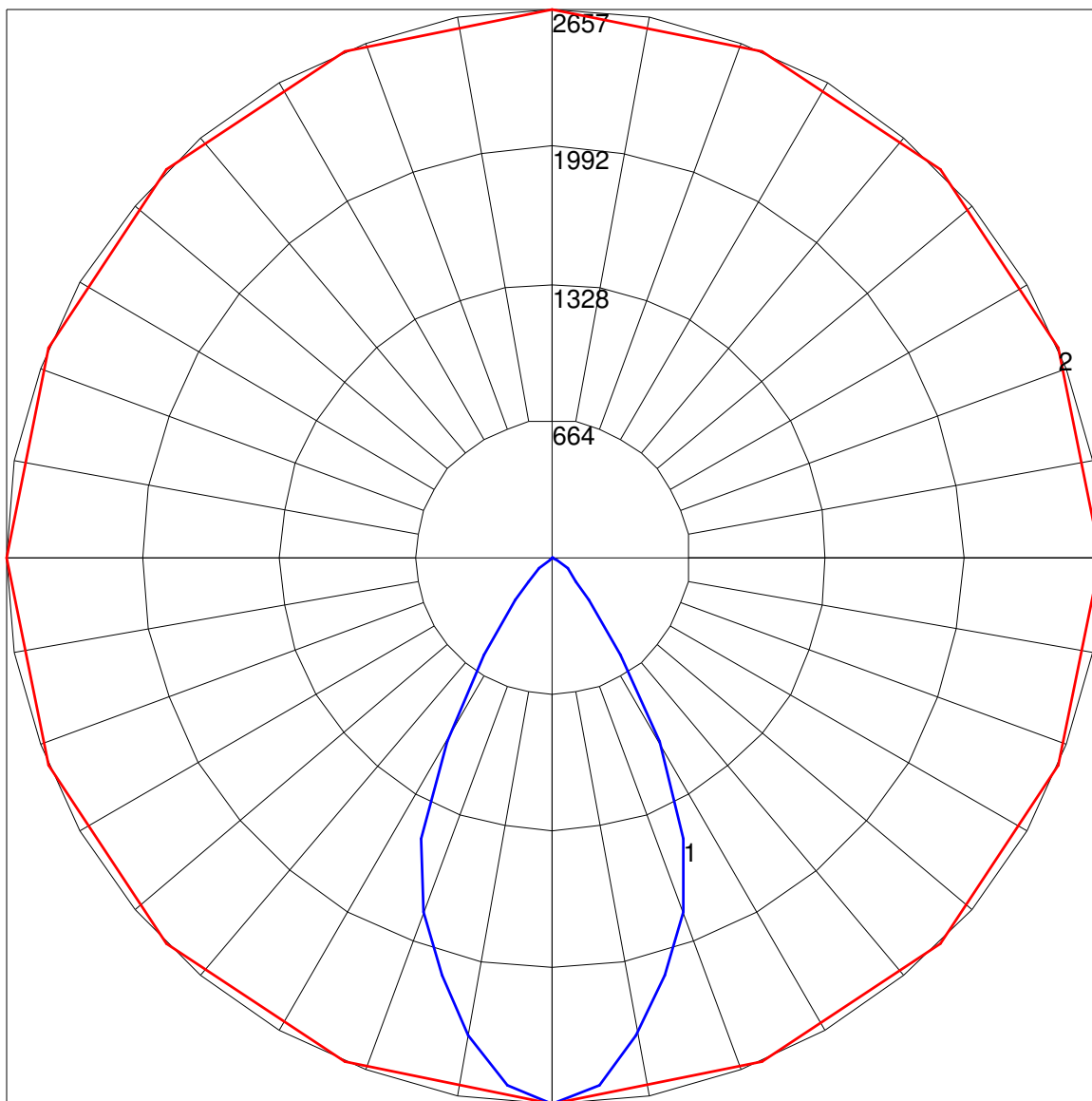
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**UGR TABLE - CORRECTED**

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	6.3	7.3	6.7	7.6	7.9	6.0	7.0	6.3	7.3	7.6
	3H	6.1	7.0	6.5	7.3	7.7	5.8	6.7	6.2	7.0	7.4
	4H	6.0	6.8	6.4	7.2	7.6	5.7	6.5	6.1	6.8	7.2
	6H	5.9	6.7	6.3	7.0	7.4	5.6	6.3	6.0	6.7	7.1
	8H	5.9	6.6	6.3	6.9	7.4	5.5	6.2	6.0	6.6	7.0
	12H	5.8	6.5	6.2	6.8	7.3	5.5	6.1	5.9	6.5	6.9
4H	2H	6.0	6.8	6.4	7.2	7.6	5.7	6.5	6.1	6.9	7.2
	3H	5.8	6.5	6.2	6.9	7.3	5.5	6.1	5.9	6.5	6.9
	4H	5.7	6.3	6.1	6.7	7.2	5.4	5.9	5.8	6.4	6.8
	6H	5.6	6.1	6.1	6.5	7.0	5.3	5.7	5.7	6.2	6.7
	8H	5.5	6.0	6.0	6.4	6.9	5.2	5.6	5.7	6.1	6.6
	12H	5.4	5.8	5.9	6.3	6.8	5.1	5.5	5.6	6.0	6.5
8H	4H	5.5	6.0	6.0	6.4	6.9	5.2	5.6	5.7	6.1	6.6
	6H	5.4	5.8	5.9	6.3	6.7	5.0	5.4	5.5	5.9	6.4
	8H	5.3	5.6	5.8	6.2	6.7	5.0	5.3	5.5	5.8	6.3
	12H	5.3	5.5	5.8	6.0	6.6	4.9	5.2	5.4	5.7	6.3
12H	4H	5.4	5.8	5.9	6.3	6.8	5.1	5.5	5.6	6.0	6.5
	6H	5.3	5.6	5.8	6.1	6.7	5.0	5.3	5.5	5.8	6.3
	8H	5.3	5.5	5.8	6.0	6.6	4.9	5.2	5.4	5.7	6.3

Maximum UGR = 7.9

POLAR GRAPH



Maximum Candela = 2656.636 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.)