



IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4DS-L20-835-DIM-UNV-OW-OF-CG_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GN FROM BALLABS TEST NO. 20310.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 02-26-2024
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC -CARTHAGE, MO
 [LUMINAIRE] GEN7 V13 LED 4"SHORT HEATSINK 4"SQ CAST HOUSING DOWLIGHT
 [MORE] WHITE MIXING CHAMBER & 4"SEMI-SPEC TRIM w/FROST FILM
 [LUMCAT] 4DS-L20-835-DIM-UNV-OW-OF-CG
 [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	1817
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	73
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	19746	25538	19878
55	4057	5356	3570
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>
0	2335.320	2335.320	2335.320	2335.320	2335.320
5	2269.090	2260.452	2247.974	2247.974	2236.455
10	2074.240	2048.324	2020.489	2019.529	2017.609
15	1848.675	1793.964	1728.694	1752.690	1809.321
20	1619.270	1527.125	1458.975	1506.008	1575.117
25	1329.395	1267.005	1208.454	1232.450	1311.158
30	906.100	934.896	975.210	943.535	917.619
35	505.842	581.670	717.969	583.590	477.046
40	242.843	291.795	416.576	298.514	250.521
45	143.978	145.898	186.211	138.219	144.938
50	80.628	77.748	72.949	73.909	72.949
55	23.996	29.755	31.675	28.796	21.117
60	0.960	2.880	9.599	2.880	0.000
65	0.000	0.000	0.000	0.000	0.000
70	0.000	0.000	0.000	0.000	0.000
75	0.000	0.000	0.000	0.000	0.000
80	0.000	0.000	0.000	0.000	0.000
85	0.000	0.000	0.000	0.000	0.000
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	705.98	N.A.	38.90
0-30	1275.7	N.A.	70.20
0-40	1653.08	N.A.	91.00
0-60	1815.8	N.A.	99.90
0-80	1816.76	N.A.	100.00
0-90	1816.76	N.A.	100.00
10-90	1608.6	N.A.	88.50
20-40	947.10	N.A.	52.10
20-50	1079.87	N.A.	59.40
40-70	163.68	N.A.	9.00
60-80	0.96	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	1816.76	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	208.16
10-20	497.82
20-30	569.72
30-40	377.38
40-50	132.77
50-60	29.95
60-70	0.96
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	52	60	56	52	60	55	52	51

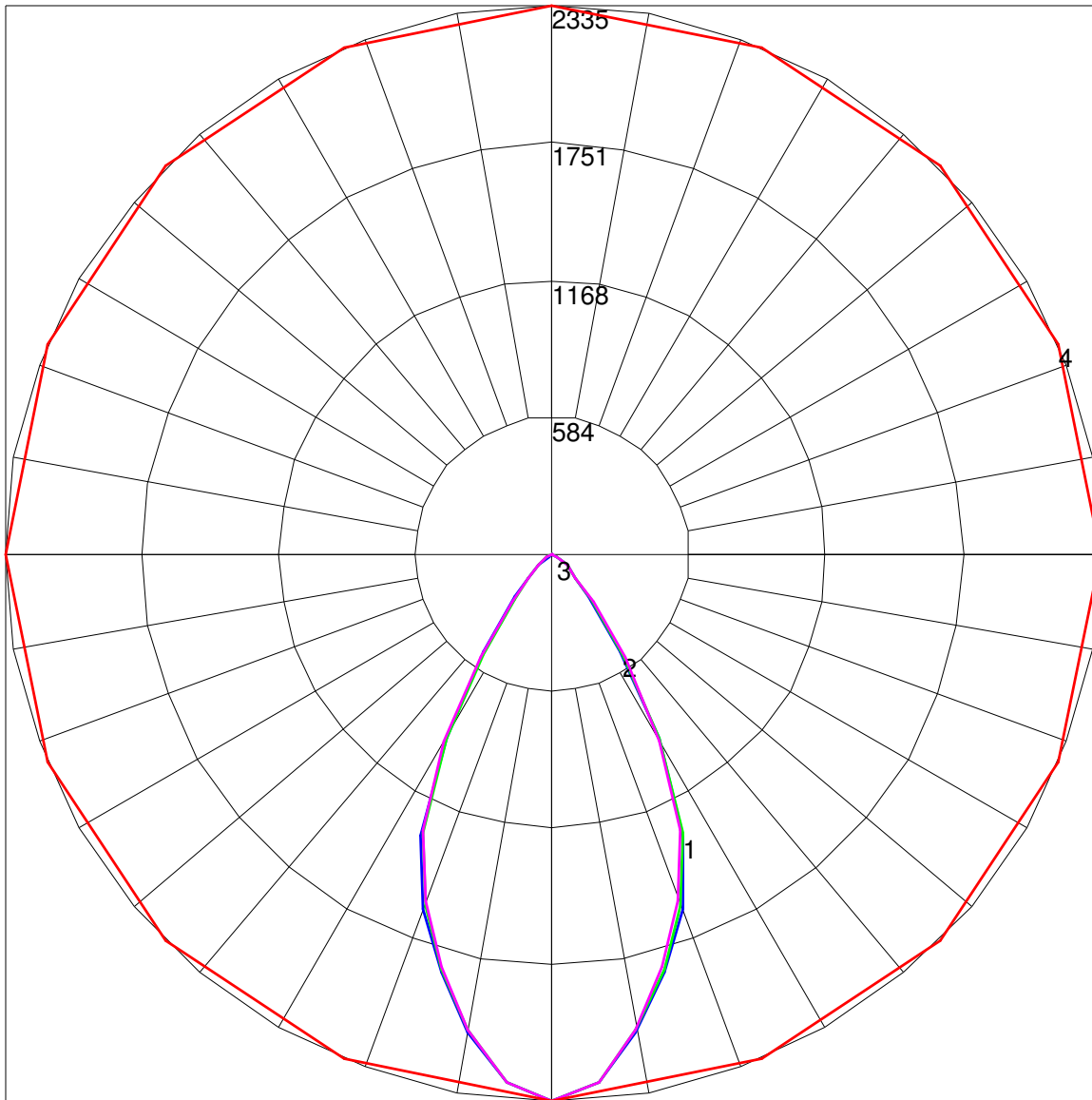
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UGR TABLE - CORRECTED

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	5.9	6.9	6.3	7.2	7.5	5.6	6.6	5.9	6.9	7.2
	3H	5.7	6.6	6.1	6.9	7.3	5.4	6.3	5.8	6.6	7.0
	4H	5.6	6.4	6.0	6.8	7.2	5.3	6.1	5.7	6.4	6.8
	6H	5.5	6.3	5.9	6.6	7.0	5.2	5.9	5.6	6.3	6.7
	8H	5.5	6.2	5.9	6.5	7.0	5.1	5.8	5.6	6.2	6.6
	12H	5.4	6.1	5.8	6.4	6.9	5.1	5.7	5.5	6.1	6.5
4H	2H	5.6	6.4	6.0	6.8	7.2	5.3	6.1	5.7	6.4	6.8
	3H	5.4	6.1	5.8	6.5	6.9	5.1	5.7	5.5	6.1	6.5
	4H	5.3	5.9	5.7	6.3	6.8	5.0	5.5	5.4	6.0	6.4
	6H	5.2	5.7	5.7	6.1	6.6	4.9	5.3	5.3	5.8	6.3
	8H	5.1	5.6	5.6	6.0	6.5	4.8	5.2	5.3	5.7	6.2
	12H	5.0	5.4	5.5	5.9	6.4	4.7	5.1	5.2	5.6	6.1
8H	4H	5.1	5.6	5.6	6.0	6.5	4.8	5.2	5.3	5.7	6.2
	6H	5.0	5.4	5.5	5.9	6.3	4.6	5.0	5.1	5.5	6.0
	8H	4.9	5.2	5.4	5.8	6.3	4.6	4.9	5.1	5.4	5.9
	12H	4.9	5.1	5.4	5.6	6.2	4.5	4.8	5.0	5.3	5.9
12H	4H	5.0	5.4	5.5	5.9	6.4	4.7	5.1	5.2	5.6	6.1
	6H	4.9	5.2	5.4	5.7	6.3	4.6	4.9	5.1	5.4	5.9
	8H	4.9	5.1	5.4	5.6	6.2	4.5	4.8	5.0	5.3	5.9

Maximum UGR = 7.5

POLAR GRAPH



Maximum Candela = 2335.32 Located At Horizontal Angle = 0, Vertical Angle = 0

1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)

2 - Vertical Plane Through Horizontal Angles (5 - 185)

3 - Vertical Plane Through Horizontal Angles (10 - 190)

4 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)