

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DS-L20-935-DIM-UNV-LW-OF-CS-WETCC_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from BALLABS TEST NO. 20316.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUE DATE] 7-JULY-2023

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] GEN7 V13 LED 4"SHORT HEATSINK 4"SQ CAST HOUSING DOWNLIGHT

[MORE] WHITE MIXING CHAMBER & 4"CAST WHITE FLUSH w/SOLITE LENS

[MORE] ADVANCE # XI025C070V054DSMI @ 625mA

[LUMCAT] 4DS-L20-935-DIM-UNV-LW-OF-CS-WETCC

[LAMPCAT] BXRE-35E2000

[_SEARCH_SOURCE TYPE] 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	1681
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	67
Total Luminaire Watts	25
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.98
Spacing Criterion (90-270)	0.98
Spacing Criterion (Diagonal)	1.04
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	35605	38638	35269
55	26586	27278	26447
65	18981	18417	18605
75	12888	12582	12888
85	4557	3645	5468

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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	1249.748	1249.748	1249.748	1249.748	1249.748
5	1238.283	1239.102	1238.283	1239.102	1239.102
10	1208.800	1209.619	1213.714	1221.903	1223.541
15	1167.851	1176.860	1185.050	1192.420	1192.420
20	1070.394	1105.610	1127.722	1125.265	1103.153
25	906.600	962.290	1026.169	968.023	909.057
30	617.503	714.142	851.729	710.047	599.486
35	410.304	456.166	624.055	454.528	402.114
40	320.217	338.235	395.563	333.321	311.209
45	259.613	270.260	281.726	265.346	257.157
50	205.561	219.484	217.027	211.294	204.743
55	157.242	161.337	161.337	160.518	156.423
60	115.475	117.932	117.113	117.113	115.475
65	82.716	83.535	80.259	82.716	81.078
70	54.871	58.147	54.052	55.690	54.871
75	34.397	34.397	33.578	33.578	34.397
80	18.017	17.198	17.198	18.017	18.836
85	4.095	4.095	3.276	3.276	4.914
90	0.000	0.000	0.000	0.819	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	448.98	N.A.	26.70
0-30	880.38	N.A.	52.40
0-40	1196.66	N.A.	71.20
0-60	1553.06	N.A.	92.40
0-80	1673.6	N.A.	99.60
0-90	1680.54	N.A.	100.00
10-90	1562.99	N.A.	93.00
20-40	747.68	N.A.	44.50
20-50	958.91	N.A.	57.10
40-70	439.67	N.A.	26.20
60-80	120.54	N.A.	7.20
70-80	37.27	N.A.	2.20
80-90	6.93	N.A.	0.40
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	1680.54	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	117.54
10-20	331.44
20-30	431.40
30-40	316.28
40-50	211.23
50-60	145.16
60-70	83.27
70-80	37.27
80-90	6.93
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 RW	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	98	98	98	98	95	95	95	95	91	91	91	87	87	87	84	84	84	82
1	92	89	86	84	89	87	85	82	84	82	80	80	79	77	78	76	75	74
2	86	80	76	73	84	79	75	72	76	73	70	74	71	69	71	69	67	66
3	80	73	68	64	78	72	67	63	70	66	62	68	64	61	66	63	60	59
4	75	67	61	57	73	66	61	57	64	60	56	62	58	55	61	57	55	53
5	70	62	56	51	68	61	55	51	59	54	51	58	53	50	56	53	50	48
6	66	57	51	47	64	56	51	46	55	50	46	54	49	46	52	48	45	44
7	62	53	47	43	61	52	46	42	51	46	42	50	45	42	49	45	42	40
8	58	49	43	39	57	49	43	39	48	43	39	47	42	39	46	42	39	37
9	55	46	40	36	54	45	40	36	44	40	36	44	39	36	43	39	36	34
10	52	43	37	34	51	43	37	34	42	37	34	41	37	33	40	36	33	32

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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	22.1	23.4	22.4	23.7	24.0	22.0	23.3	22.4	23.6	23.9
	3H	23.1	24.3	23.5	24.6	25.0	23.0	24.2	23.4	24.5	24.9
	4H	23.4	24.5	23.8	24.9	25.2	23.4	24.4	23.8	24.8	25.2
	6H	23.6	24.6	24.0	25.0	25.4	23.6	24.5	24.0	24.9	25.3
	8H	23.6	24.6	24.1	25.0	25.4	23.6	24.5	24.0	24.9	25.3
	12H	23.6	24.5	24.0	24.9	25.3	23.6	24.5	24.0	24.9	25.3

UGR Viewed Endwise

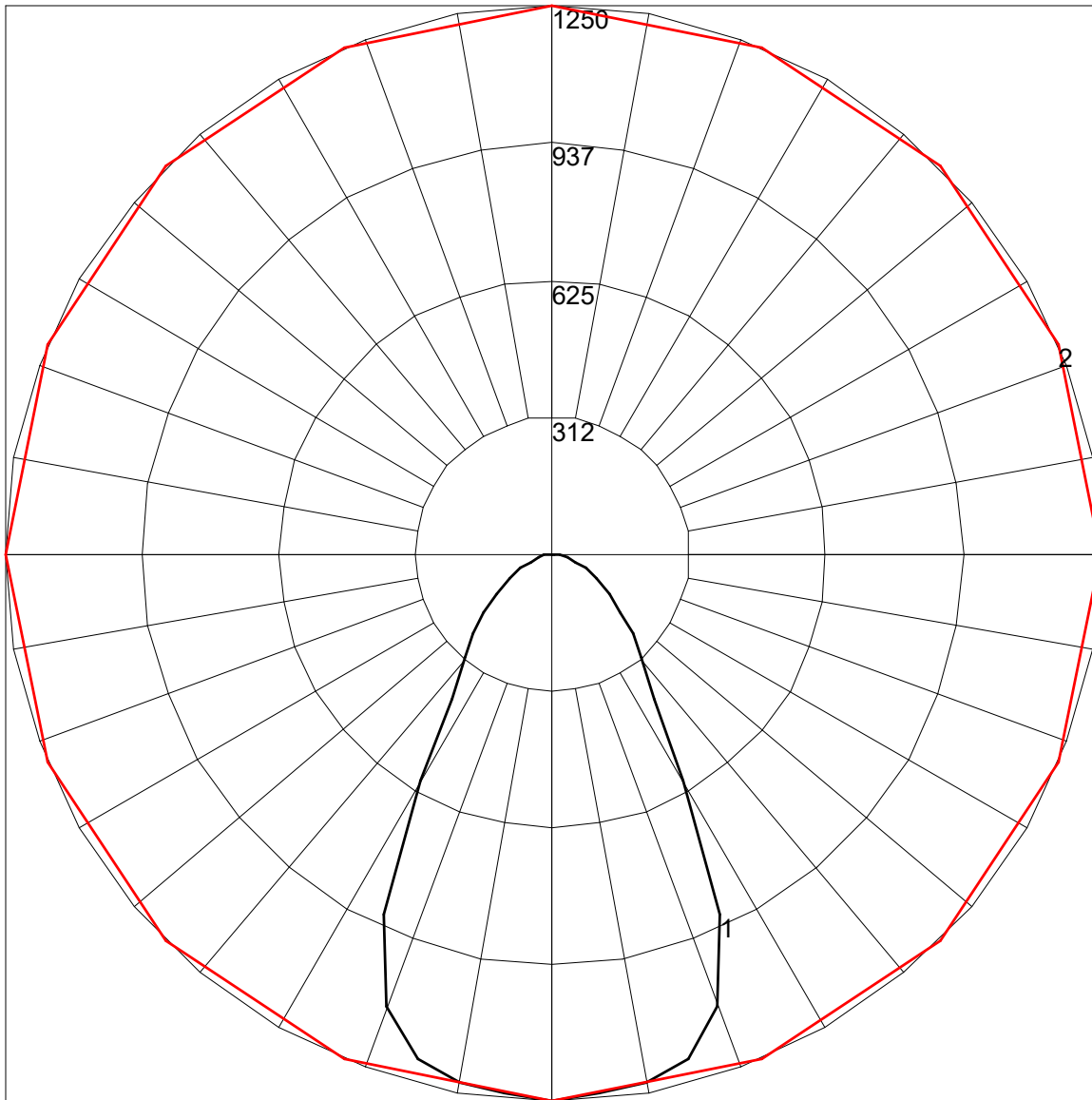
4H	2H	22.4	23.4	22.8	23.8	24.2	22.3	23.4	22.7	23.8	24.1
	3H	23.6	24.5	24.0	24.9	25.3	23.5	24.4	23.9	24.8	25.2
	4H	24.0	24.8	24.4	25.2	25.7	23.9	24.7	24.4	25.1	25.6
	6H	24.3	25.0	24.7	25.4	25.9	24.2	24.9	24.7	25.3	25.8
	8H	24.3	24.9	24.8	25.4	25.9	24.3	24.9	24.7	25.4	25.8
	12H	24.3	24.9	24.8	25.4	25.8	24.3	24.8	24.8	25.3	25.8

8H	4H	24.1	24.7	24.6	25.2	25.7	24.0	24.7	24.5	25.1	25.6
	6H	24.4	24.9	24.9	25.4	25.9	24.4	24.9	24.9	25.4	25.9
	8H	24.5	25.0	25.0	25.5	26.0	24.5	24.9	25.0	25.4	25.9
	12H	24.5	24.9	25.0	25.4	26.0	24.5	24.9	25.0	25.4	26.0

12H	4H	24.1	24.6	24.6	25.1	25.6	24.0	24.6	24.5	25.1	25.5
	6H	24.4	24.9	24.9	25.3	25.9	24.4	24.8	24.9	25.3	25.8
	8H	24.5	24.9	25.0	25.4	26.0	24.5	24.9	25.0	25.4	26.0

Maximum UGR = 26.0

POLAR GRAPH



Maximum Candela = 1249.748 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)