



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DS-L13-9DW-DIM-UNV-AWW-OF-WH_3000K_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM BALLABS TEST NO. 20326.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 12-18-2023
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] 4"SQ CAST HOUSING LED DOWNLIGHT
 [LUMINAIRE] WHITE WALLWASH w/SOLITE LENS
 [LUMINAIRE] 0-10V DIMMING DRIVER
 [LUMCAT] 4DS-L13-9DW-DIM-UNV-AWW-OF-WH 3000K
 [LAMPCAT] LAMP CODE : BXRE-35E-2000
 [_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	906
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	39
Total Luminaire Watts	23.4
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.80
Spacing Criterion (90-270)	0.86
Spacing Criterion (Diagonal)	0.90
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	24359	24597	19678
55	21324	20248	14379
65	17524	15400	8497
75	12356	8671	3469
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>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>
0	812.854	812.854	812.854	812.854	812.854	812.854	812.854	812.854	812.854
5	817.483	815.747	816.326	818.640	815.747	811.697	807.648	800.705	799.548
10	794.341	794.920	807.069	812.276	805.912	797.812	795.498	788.556	786.241
15	730.123	741.115	773.513	778.720	763.678	765.414	769.464	749.793	738.801
20	582.015	623.671	694.831	667.640	642.762	664.747	696.567	660.697	628.299
25	373.739	418.866	532.261	463.992	426.387	483.084	568.709	534.575	502.176
30	258.031	282.330	346.548	299.107	271.337	299.107	425.230	372.004	299.107
35	218.690	229.682	239.517	228.525	215.797	219.847	277.701	218.111	189.762
40	198.441	200.755	202.490	193.812	178.192	174.720	172.985	145.215	132.487
45	177.613	177.034	179.349	160.835	143.479	132.487	119.180	102.402	87.360
50	152.157	151.579	151.579	132.487	112.816	95.460	85.625	68.268	64.218
55	126.123	126.701	119.759	107.031	85.046	65.954	55.540	45.126	41.655
60	100.088	100.088	91.989	78.682	59.590	46.284	34.713	27.192	24.299
65	76.368	74.632	67.111	52.648	37.027	27.770	19.670	15.042	11.571
70	53.226	52.069	42.234	31.820	20.828	15.621	9.835	6.364	7.521
75	32.977	31.241	23.142	15.042	9.257	5.785	1.736	3.471	3.471
80	17.935	15.042	10.414	5.207	1.736	1.736	0.000	0.000	1.736
85	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
90	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4DS-L13-9DW-DIM-UNV-AWW-OF-WH_3000K_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	286.25	N.A.	31.60
0-30	507.71	N.A.	56.00
0-40	656.98	N.A.	72.50
0-60	846.30	N.A.	93.40
0-80	904.54	N.A.	99.80
0-90	906.03	N.A.	100.00
10-90	828.98	N.A.	91.50
20-40	370.73	N.A.	40.90
20-50	482.33	N.A.	53.20
40-70	232.12	N.A.	25.60
60-80	58.23	N.A.	6.40
70-80	15.44	N.A.	1.70
80-90	1.49	N.A.	0.20
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	906.03	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	77.05
10-20	209.19
20-30	221.46
30-40	149.27
40-50	111.60
50-60	77.73
60-70	42.80
70-80	15.44
80-90	1.49
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	92	91
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	85	83	81
3	98	90	84	80	96	89	83	79	86	82	78	84	80	76	81	78	75	73
4	92	83	76	71	90	82	76	71	80	74	70	77	73	69	76	72	68	67
5	87	77	70	65	85	76	69	64	74	68	64	72	67	63	70	66	62	61
6	82	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	62	57	53	52
8	73	62	55	50	71	61	55	50	60	54	50	59	54	50	58	53	49	48
9	69	58	51	47	68	57	51	47	56	51	46	55	50	46	55	50	46	45
10	65	55	48	44	64	54	48	44	53	47	43	52	47	43	52	47	43	42

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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	22.2	23.5	22.5	23.8	24.1	19.3	20.6	19.7	20.9	21.2
	3H	23.5	24.6	23.9	25.0	25.3	20.0	21.1	20.4	21.4	21.8
	4H	23.9	25.0	24.3	25.3	25.7	20.1	21.1	20.5	21.4	21.8
	6H	24.1	25.1	24.6	25.5	25.9	20.0	21.0	20.4	21.3	21.7
	8H	24.2	25.1	24.6	25.5	25.9	20.0	20.9	20.4	21.3	21.7
	12H	24.1	25.0	24.6	25.4	25.8	19.9	20.8	20.4	21.2	21.6

UGR Viewed Endwise

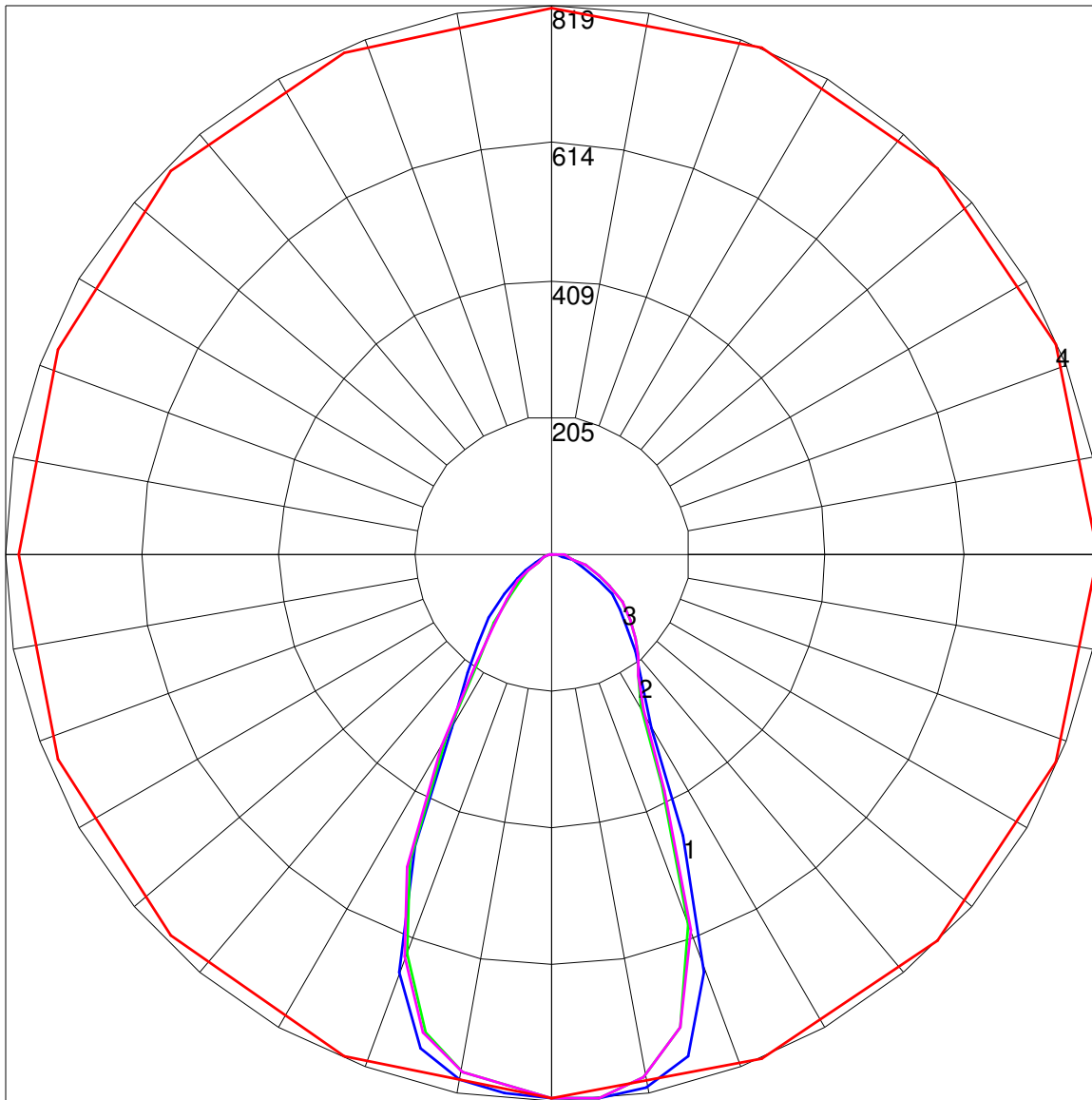
4H	2H	22.5	23.5	22.9	23.9	24.3	19.8	20.8	20.2	21.2	21.6
	3H	24.0	24.8	24.4	25.2	25.7	20.6	21.4	21.0	21.8	22.2
	4H	24.5	25.2	24.9	25.7	26.1	20.7	21.4	21.1	21.8	22.3
	6H	24.8	25.5	25.3	25.9	26.4	20.7	21.3	21.1	21.8	22.2
	8H	24.8	25.4	25.3	25.9	26.4	20.6	21.2	21.1	21.7	22.1
	12H	24.8	25.3	25.3	25.8	26.3	20.5	21.1	21.0	21.6	22.0

8H	4H	24.5	25.1	24.9	25.5	26.0	20.8	21.4	21.2	21.8	22.3
	6H	24.8	25.3	25.3	25.8	26.3	20.8	21.3	21.3	21.8	22.2
	8H	24.9	25.3	25.4	25.9	26.4	20.7	21.2	21.2	21.7	22.2
	12H	24.9	25.3	25.4	25.8	26.3	20.7	21.1	21.2	21.6	22.1

12H	4H	24.4	25.0	24.9	25.5	25.9	20.7	21.3	21.2	21.8	22.2
	6H	24.8	25.3	25.3	25.7	26.3	20.8	21.2	21.3	21.7	22.2
	8H	24.9	25.3	25.4	25.8	26.3	20.7	21.1	21.2	21.6	22.2

Maximum UGR = 26.4

POLAR GRAPH



Maximum Candela = 818.64 Located At Horizontal Angle = 67.5, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (67.5 - 247.5) (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 (5) (Through Max. Cd.)