



IES INDOOR REPORT

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM BALLABS TEST NO. 20316.0
 [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
 [MORE] WHITE MIXING CHAMBER & 4"CAST WHITE FLUSH w/SOLITE LENS
 [MORE] 0-10V DIMMING DRIVER
 [LUMCAT] 4DS-L13-9DW-DIM-UNV-LW-OF-WH 3000K
 [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	1193
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	51
Total Luminaire Watts	23.4
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	25276	27429	25037
55	18873	19365	18775
65	13474	13074	13208
75	9149	8932	9149
85	3235	2588	3881

IES INDOOR REPORT
 PHOTOMETRIC FILENAME : 4DS-L13-9DW-DIM-UNV-LW-OF-WH_3000K_.IES

CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0	887.192	887.192	887.192	887.192	887.192
5	879.053	879.634	879.053	879.634	879.634
10	858.123	858.704	861.611	867.425	868.588
15	829.054	835.449	841.263	846.495	846.495
20	759.869	784.868	800.566	798.822	783.124
25	643.592	683.126	728.474	687.196	645.336
30	438.364	506.967	604.639	504.060	425.573
35	291.273	323.831	443.015	322.668	285.460
40	227.321	240.112	280.808	236.623	220.926
45	184.299	191.857	199.996	188.368	182.555
50	145.927	155.811	154.067	149.997	145.346
55	111.626	114.533	114.533	113.951	111.044
60	81.975	83.719	83.138	83.138	81.975
65	58.720	59.301	56.976	58.720	57.557
70	38.953	41.278	38.371	39.534	38.953
75	24.418	24.418	23.837	23.837	24.418
80	12.790	12.209	12.209	12.790	13.372
85	2.907	2.907	2.326	2.326	3.488
90	0.000	0.000	0.000	0.581	0.000

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

Zone	Lumens	%Lamp	%Fixt
0-20	318.73	N.A.	26.70
0-30	624.98	N.A.	52.40
0-40	849.51	N.A.	71.20
0-60	1102.51	N.A.	92.40
0-80	1188.08	N.A.	99.60
0-90	1193.01	N.A.	100.00
10-90	1109.56	N.A.	93.00
20-40	530.77	N.A.	44.50
20-50	680.73	N.A.	57.10
40-70	312.12	N.A.	26.20
60-80	85.57	N.A.	7.20
70-80	26.46	N.A.	2.20
80-90	4.92	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	1193.01	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	83.44
10-20	235.29
20-30	306.25
30-40	224.53
40-50	149.95
50-60	103.05
60-70	59.11
70-80	26.46
80-90	4.92
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

IES INDOOR REPORT
 PHOTOMETRIC FILENAME : 4DS-L13-9DW-DIM-UNV-LW-OF-WH_3000K_.IES

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	108	105	102	109	106	103	101	102	100	97	98	96	94	95	93	92	90
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	84	82	80
3	97	89	83	78	95	88	82	77	85	80	76	83	78	75	80	77	74	72
4	91	82	75	70	89	80	74	69	78	73	68	76	71	67	74	70	67	65
5	85	75	68	63	84	74	67	62	72	66	62	70	65	61	69	64	61	59
6	80	69	62	57	78	68	62	57	67	61	56	65	60	56	64	59	55	54
7	75	64	57	52	74	64	57	52	62	56	52	61	55	51	60	55	51	49
8	71	60	53	48	70	59	52	48	58	52	47	57	51	47	56	51	47	45
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	44	42
10	64	52	46	41	62	52	45	41	51	45	41	50	45	41	49	44	41	39

IES INDOOR REPORT

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

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

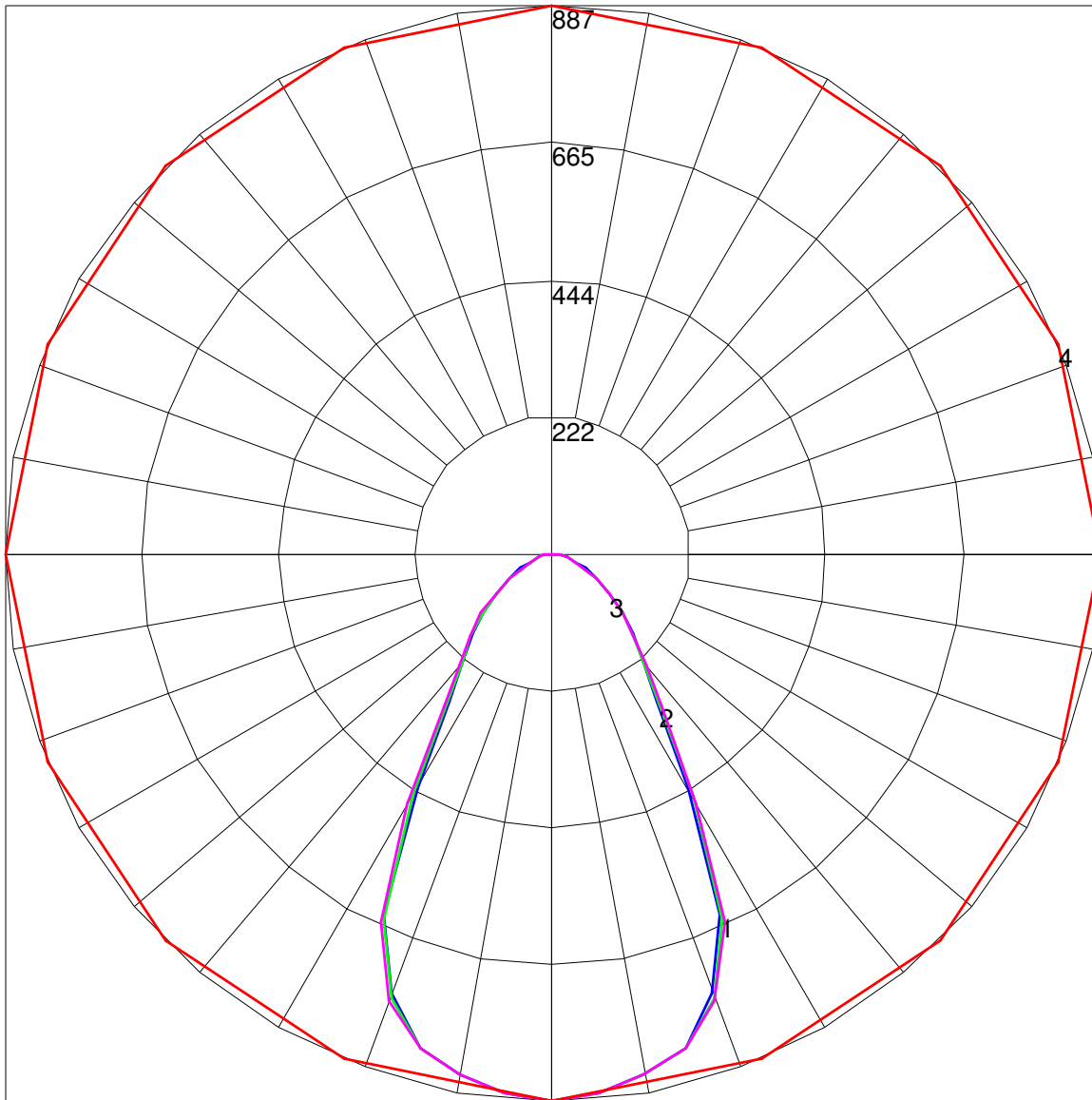
X=2H	Y=2H	20.2	21.5	20.5	21.8	22.1	20.1	21.4	20.5	21.7	22.0
	3H	21.2	22.4	21.6	22.7	23.1	21.1	22.3	21.5	22.6	23.0
	4H	21.5	22.6	21.9	23.0	23.3	21.5	22.5	21.9	22.9	23.3
	6H	21.7	22.7	22.1	23.1	23.5	21.7	22.6	22.1	23.0	23.4
	8H	21.7	22.7	22.2	23.1	23.5	21.7	22.6	22.1	23.0	23.4
	12H	21.7	22.6	22.1	23.0	23.4	21.7	22.6	22.1	23.0	23.4

UGR Viewed Endwise

4H	2H	20.5	21.5	20.9	21.9	22.3	20.4	21.5	20.8	21.9	22.2
	3H	21.7	22.6	22.1	23.0	23.4	21.6	22.5	22.0	22.9	23.3
	4H	22.1	22.9	22.5	23.3	23.8	22.0	22.8	22.5	23.2	23.7
	6H	22.4	23.1	22.8	23.5	24.0	22.3	23.0	22.8	23.4	23.9
	8H	22.4	23.0	22.9	23.5	24.0	22.4	23.0	22.8	23.5	23.9
	12H	22.4	23.0	22.9	23.5	23.9	22.4	22.9	22.9	23.4	23.9
8H	4H	22.2	22.8	22.7	23.3	23.8	22.1	22.8	22.6	23.2	23.7
	6H	22.5	23.0	23.0	23.5	24.0	22.5	23.0	23.0	23.5	24.0
	8H	22.6	23.1	23.1	23.6	24.1	22.6	23.0	23.1	23.5	24.0
	12H	22.6	23.0	23.1	23.5	24.1	22.6	23.0	23.1	23.5	24.1
12H	4H	22.2	22.7	22.7	23.2	23.7	22.1	22.7	22.6	23.2	23.6
	6H	22.5	23.0	23.0	23.4	24.0	22.5	22.9	23.0	23.4	23.9
	8H	22.6	23.0	23.1	23.5	24.1	22.6	23.0	23.1	23.5	24.1

Maximum UGR = 24.1

POLAR GRAPH



Maximum Candela = 887.192 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.)