



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4PS-L11-8TW-DIM-UNV-LW-OF-WH 4000K\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST]GEN FROM BALLABS TEST NO. 20339.0  
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
 [ISSUEDATE] 13-DEC-2019  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO  
 [LUMINAIRE] GEN7 V18 LED 4" TALL HEATSINK 4" SQ FORMED HOUSING DOWNLIGHT  
 [MORE] 4" CAST SHALLOW WHITE FLUSH TRIM w/SOLITE LENS  
 [LUMCAT] 4PS-L11-8TW-DIM-UNV-LW-OF-WH 4000k  
 [\_SEARCH\_SOURCETYPE] LED  
 [\_SEARCH\_APPLICATION] Indoor, Classroom, Commercial, Office, Direct, Downlight  
 [\_SEARCH\_MOUNTING] Recessed

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1156
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	79
Total Luminaire Watts	14.6
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.18
Spacing Criterion (Diagonal)	1.24
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	25692	39597	24806
55	18140	20372	17427
65	13405	13212	13083
75	9261	9155	9155
85	4062	3750	3126

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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>	650.460	650.460	650.460	650.460	650.460
<b>5</b>	650.180	647.933	646.809	646.528	646.528
<b>10</b>	642.596	638.945	638.384	636.137	635.294
<b>15</b>	626.869	622.656	623.779	621.813	621.813
<b>20</b>	610.860	606.647	604.400	606.366	607.490
<b>25</b>	586.145	585.302	587.549	584.740	579.966
<b>30</b>	526.322	540.646	555.531	536.714	511.437
<b>35</b>	416.508	458.075	495.428	451.896	404.712
<b>40</b>	292.932	326.634	402.184	332.813	275.238
<b>45</b>	187.330	212.326	288.719	214.012	180.871
<b>50</b>	137.900	147.449	183.960	148.853	134.249
<b>55</b>	107.287	109.814	120.487	112.061	103.074
<b>60</b>	78.639	80.886	83.133	80.886	78.920
<b>65</b>	58.418	57.294	57.575	59.260	57.014
<b>70</b>	39.881	39.881	38.196	40.162	39.039
<b>75</b>	24.715	24.996	24.434	24.154	24.434
<b>80</b>	13.200	13.200	12.919	12.077	12.919
<b>85</b>	3.651	2.809	3.370	2.809	2.809
<b>90</b>	0.000	0.000	0.000	0.000	0.000

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Zone	Lumens	%Lamp	%Fixt
0-20	237.67	N.A.	20.60
0-30	504.80	N.A.	43.70
0-40	782.75	N.A.	67.70
0-60	1065.62	N.A.	92.20
0-80	1150.75	N.A.	99.60
0-90	1155.9	N.A.	100.00
10-90	1094.4	N.A.	94.70
20-40	545.08	N.A.	47.20
20-50	725.55	N.A.	62.80
40-70	341.29	N.A.	29.50
60-80	85.14	N.A.	7.40
70-80	26.71	N.A.	2.30
80-90	5.15	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	1155.9	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	61.50
10-20	176.17
20-30	267.13
30-40	277.95
40-50	180.47
50-60	102.40
60-70	58.42
70-80	26.71
80-90	5.15
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	68	68	68	68	67	67	67	67	64	64	64	61	61	61	59	59	59	57
1	64	62	60	58	62	61	59	57	58	57	55	56	55	54	54	53	52	51
2	59	56	53	50	58	55	52	49	53	50	48	51	49	47	49	48	46	45
3	55	50	47	44	54	50	46	43	48	45	43	46	44	42	45	43	41	40
4	51	46	42	38	50	45	41	38	44	40	38	42	40	37	41	39	37	36
5	48	42	37	34	47	41	37	34	40	36	34	39	36	33	38	35	33	32
6	45	38	34	31	44	38	34	31	37	33	30	36	33	30	35	32	30	29
7	42	35	31	28	41	35	31	28	34	30	28	33	30	27	32	29	27	26
8	39	32	28	25	38	32	28	25	31	28	25	31	27	25	30	27	25	24
9	37	30	26	23	36	30	26	23	29	26	23	29	25	23	28	25	23	22
10	35	28	24	21	34	28	24	21	27	24	21	27	23	21	26	23	21	20

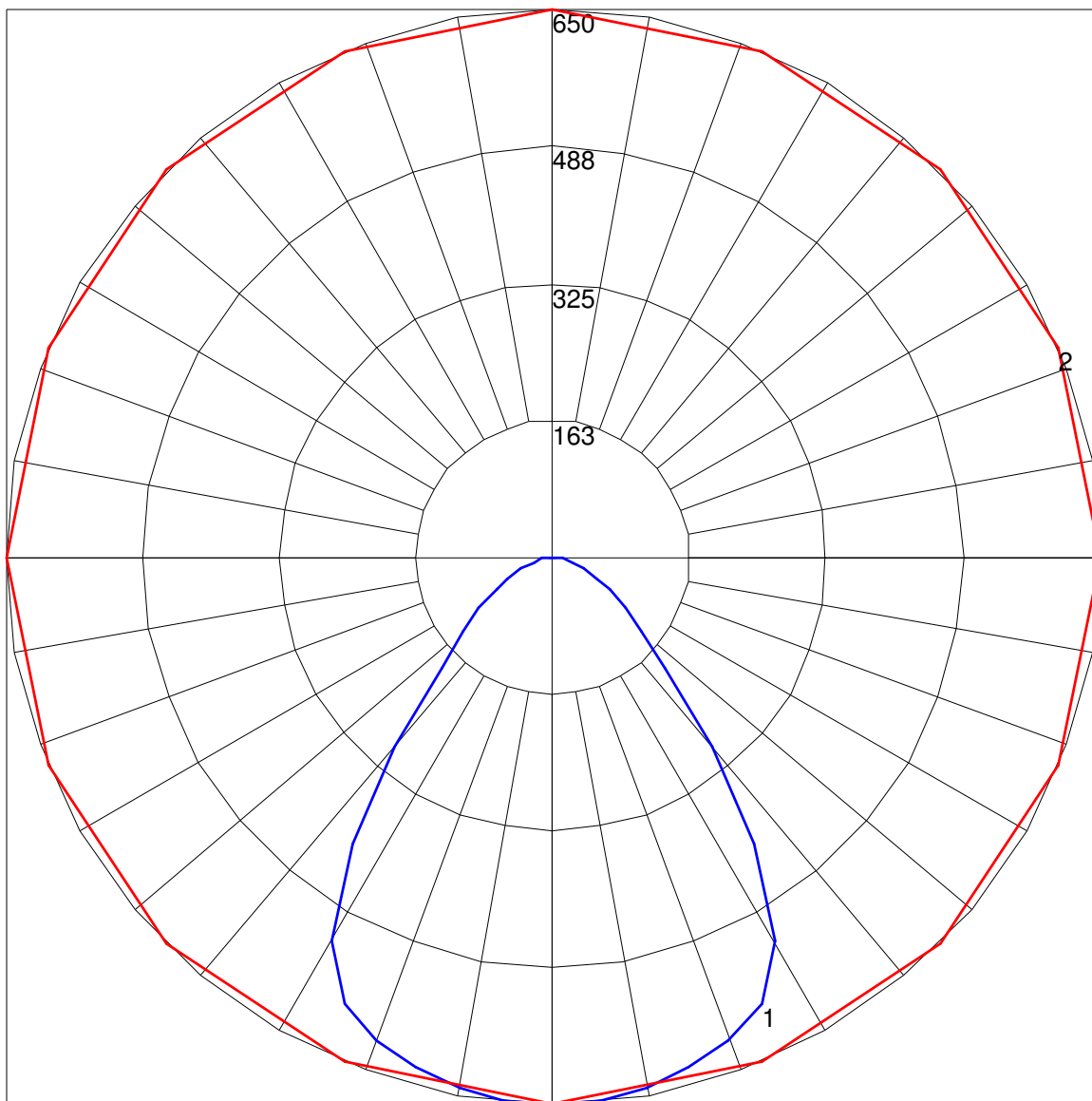
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**UGR TABLE - CORRECTED**

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	21.9	23.2	22.2	23.5	23.8	21.9	23.2	22.3	23.5	23.9
	3H	23.0	24.2	23.3	24.5	24.9	23.0	24.2	23.4	24.5	24.9
	4H	23.3	24.4	23.7	24.8	25.2	23.3	24.4	23.7	24.8	25.2
	6H	23.5	24.6	23.9	24.9	25.3	23.5	24.5	23.9	24.9	25.3
	8H	23.6	24.5	24.0	24.9	25.3	23.5	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	24.8	25.3
4H	2H	22.2	23.3	22.6	23.7	24.1	22.3	23.4	22.7	23.7	24.1
	3H	23.5	24.4	23.9	24.8	25.2	23.5	24.4	23.9	24.8	25.3
	4H	24.0	24.8	24.4	25.2	25.6	24.0	24.8	24.4	25.2	25.6
	6H	24.3	25.0	24.7	25.4	25.9	24.2	24.9	24.7	25.4	25.8
	8H	24.3	25.0	24.8	25.4	25.9	24.3	24.9	24.7	25.4	25.9
	12H	24.3	24.9	24.8	25.4	25.9	24.3	24.9	24.8	25.3	25.8
8H	4H	24.1	24.7	24.5	25.2	25.7	24.1	24.7	24.5	25.2	25.6
	6H	24.5	25.0	25.0	25.5	26.0	24.4	24.9	24.9	25.4	25.9
	8H	24.5	25.0	25.1	25.5	26.0	24.5	25.0	25.0	25.5	26.0
	12H	24.6	25.0	25.1	25.5	26.1	24.5	24.9	25.0	25.4	26.0
12H	4H	24.1	24.6	24.6	25.1	25.6	24.1	24.6	24.6	25.1	25.6
	6H	24.4	24.9	25.0	25.4	25.9	24.4	24.9	24.9	25.4	25.9
	8H	24.6	25.0	25.1	25.5	26.1	24.5	24.9	25.0	25.4	26.0

Maximum UGR = 26.1

POLAR GRAPH



Maximum Candela = 650.46 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.)