



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DS-L20-840-DIM-UNV-LW-OF-WH\_.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] 05-27-2021  
 [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-L20-840-DIM-UNV-LW-OF-WH  
 [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	2050
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	82
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	43432	47132	43021
55	32430	33275	32261
65	23153	22466	22695
75	15721	15347	15721
85	5558	4446	6670

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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>	1524.474	1524.474	1524.474	1524.474	1524.474
<b>5</b>	1510.488	1511.487	1510.488	1511.487	1511.487
<b>10</b>	1474.524	1475.523	1480.518	1490.508	1492.506
<b>15</b>	1424.574	1435.563	1445.553	1454.544	1454.544
<b>20</b>	1305.693	1348.650	1375.623	1372.626	1345.653
<b>25</b>	1105.893	1173.825	1251.747	1180.818	1108.890
<b>30</b>	753.246	871.128	1038.960	866.133	731.268
<b>35</b>	500.499	556.443	761.238	554.445	490.509
<b>40</b>	390.609	412.587	482.517	406.593	379.620
<b>45</b>	316.683	329.670	343.656	323.676	313.686
<b>50</b>	250.749	267.732	264.735	257.742	249.750
<b>55</b>	191.808	196.803	196.803	195.804	190.809
<b>60</b>	140.859	143.856	142.857	142.857	140.859
<b>65</b>	100.899	101.898	97.902	100.899	98.901
<b>70</b>	66.933	70.929	65.934	67.932	66.933
<b>75</b>	41.958	41.958	40.959	40.959	41.958
<b>80</b>	21.978	20.979	20.979	21.978	22.977
<b>85</b>	4.995	4.995	3.996	3.996	5.994
<b>90</b>	0.000	0.000	0.000	0.999	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	547.68	N.A.	26.70
0-30	1073.91	N.A.	52.40
0-40	1459.72	N.A.	71.20
0-60	1894.46	N.A.	92.40
0-80	2041.5	N.A.	99.60
0-90	2049.96	N.A.	100.00
10-90	1906.58	N.A.	93.00
20-40	912.03	N.A.	44.50
20-50	1169.7	N.A.	57.10
40-70	536.32	N.A.	26.20
60-80	147.04	N.A.	7.20
70-80	45.47	N.A.	2.20
80-90	8.46	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	2049.96	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	143.38
10-20	404.30
20-30	526.23
30-40	385.81
40-50	257.67
50-60	177.07
60-70	101.57
70-80	45.47
80-90	8.46
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	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

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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

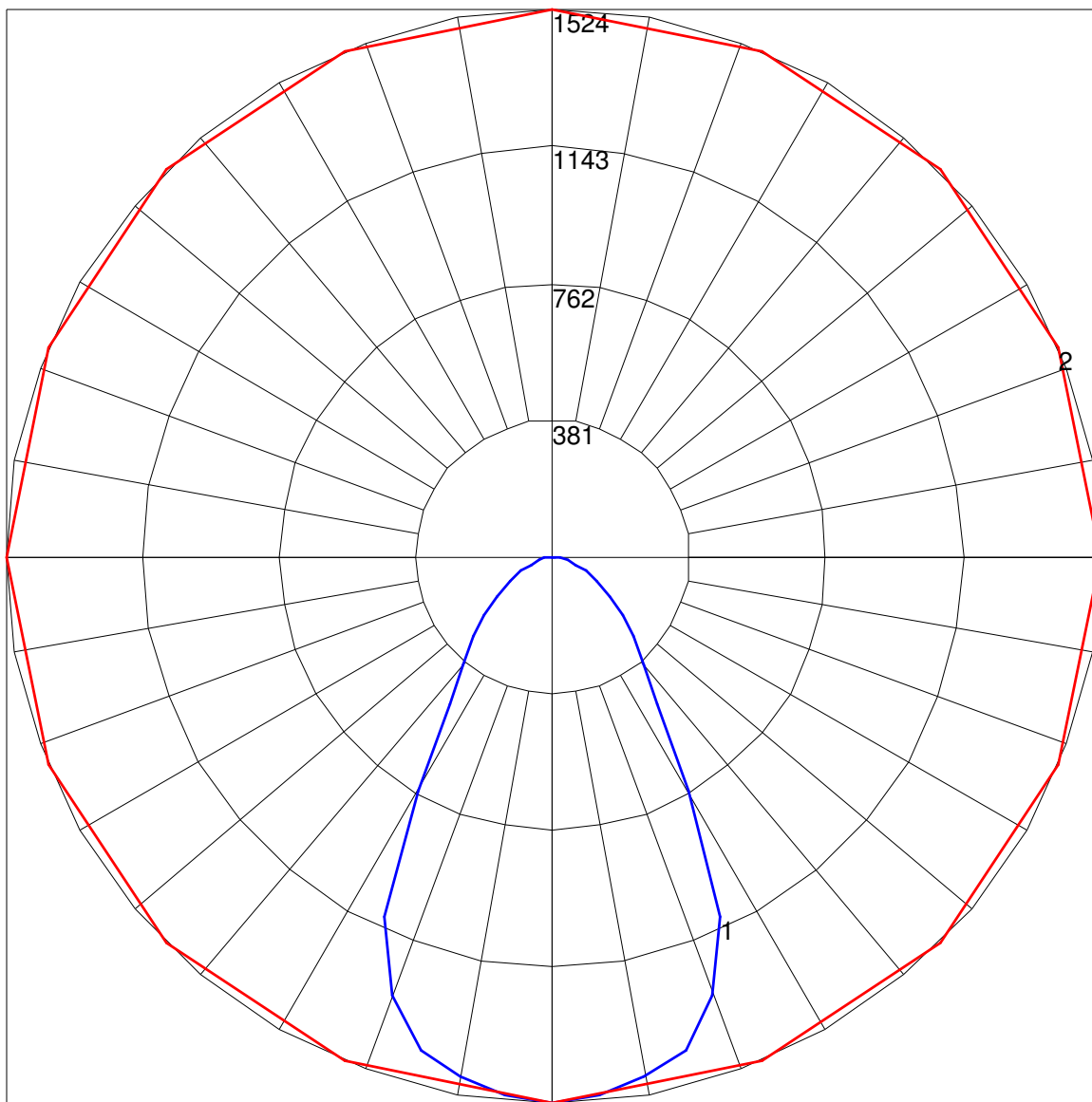
4H	2H	22.4	23.4	22.8	23.8	24.2	22.3	23.4	22.7	23.8	24.1
	3H	23.6	24.5	24.0	24.9	25.3	23.5	24.4	23.9	24.8	25.2
	4H	24.0	24.8	24.4	25.2	25.7	23.9	24.7	24.4	25.1	25.6
	6H	24.3	24.9	24.7	25.4	25.9	24.2	24.9	24.7	25.3	25.8
	8H	24.3	24.9	24.8	25.4	25.9	24.3	24.9	24.7	25.4	25.8
	12H	24.3	24.9	24.8	25.4	25.8	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 = 1524.474 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.)