



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DS-L15-840-DIM-UNV-RW-OF-WH-AD\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-1995  
 [TEST] GEN FROM BALLABS TEST NO. 20325.0  
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
 [ISSUEDATE] 13-MAY-2020  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO  
 [LUMINAIRE] 4"SQ CAST HOUSING DOWNLIGHT  
 [LUMINAIRE] WITH 4"CAST WHITE REGRESS/DIFFUSE LENS  
 [LUMCAT] 4DS-L15-840-DIM-UNV-RW-OF-WH-AD  
 [LAMPCAT]LAMP CODE : 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	1246
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	72
Total Luminaire Watts	17.4
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.92
Spacing Criterion (90-270)	0.92
Spacing Criterion (Diagonal)	1.00
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	32719	33409	32423
55	26121	25392	25878
65	17149	16819	16984
75	7000	7539	7269
85	2399	2399	3198

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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>	905.397	905.397	905.397	905.397	905.397
<b>5</b>	891.744	891.744	888.870	888.151	888.870
<b>10</b>	850.786	852.223	852.223	850.067	850.786
<b>15</b>	785.396	786.114	786.833	788.270	785.396
<b>20</b>	700.605	701.323	704.916	702.042	699.168
<b>25</b>	592.819	597.131	610.784	602.879	589.945
<b>30</b>	474.256	485.034	508.028	486.471	470.663
<b>35</b>	370.063	382.279	402.399	384.434	367.907
<b>40</b>	293.895	303.236	309.703	301.080	290.302
<b>45</b>	238.565	242.876	243.595	241.439	236.409
<b>50</b>	194.732	196.169	191.858	191.858	191.858
<b>55</b>	154.492	154.492	150.181	151.618	153.055
<b>60</b>	112.097	112.097	108.504	112.097	114.252
<b>65</b>	74.731	75.450	73.294	74.013	74.013
<b>70</b>	35.928	38.084	41.677	39.521	33.054
<b>75</b>	18.683	20.120	20.120	19.401	19.401
<b>80</b>	9.341	10.060	9.341	10.060	10.060
<b>85</b>	2.156	2.874	2.156	2.874	2.874
<b>90</b>	0.000	0.000	0.000	0.000	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	303.60	N.A.	24.40
0-30	577.97	N.A.	46.40
0-40	820.92	N.A.	65.90
0-60	1145.47	N.A.	91.90
0-80	1242.25	N.A.	99.70
0-90	1246.33	N.A.	100.00
10-90	1162.58	N.A.	93.30
20-40	517.32	N.A.	41.50
20-50	705.67	N.A.	56.60
40-70	398.25	N.A.	32.00
60-80	96.77	N.A.	7.80
70-80	23.07	N.A.	1.90
80-90	4.08	N.A.	0.30
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	1246.33	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	83.75
10-20	219.85
20-30	274.37
30-40	242.95
40-50	188.34
50-60	136.21
60-70	73.70
70-80	23.07
80-90	4.08
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	100	102	99	97	98	96	94	94	93	91	89
2	104	97	92	88	101	96	91	87	92	88	85	89	86	83	86	83	81	79
3	97	88	82	76	94	87	81	76	84	79	74	81	77	73	79	75	72	70
4	90	80	73	67	88	79	72	67	77	71	66	74	69	65	72	68	65	63
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56
6	78	67	60	54	77	66	59	54	65	58	54	63	58	53	62	57	53	51
7	74	62	55	49	72	61	54	49	60	54	49	59	53	49	57	52	48	47
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	53	48	44	43
9	65	54	46	42	64	53	46	41	52	46	41	51	45	41	50	45	41	39
10	62	50	43	38	60	50	43	38	49	42	38	48	42	38	47	42	38	36

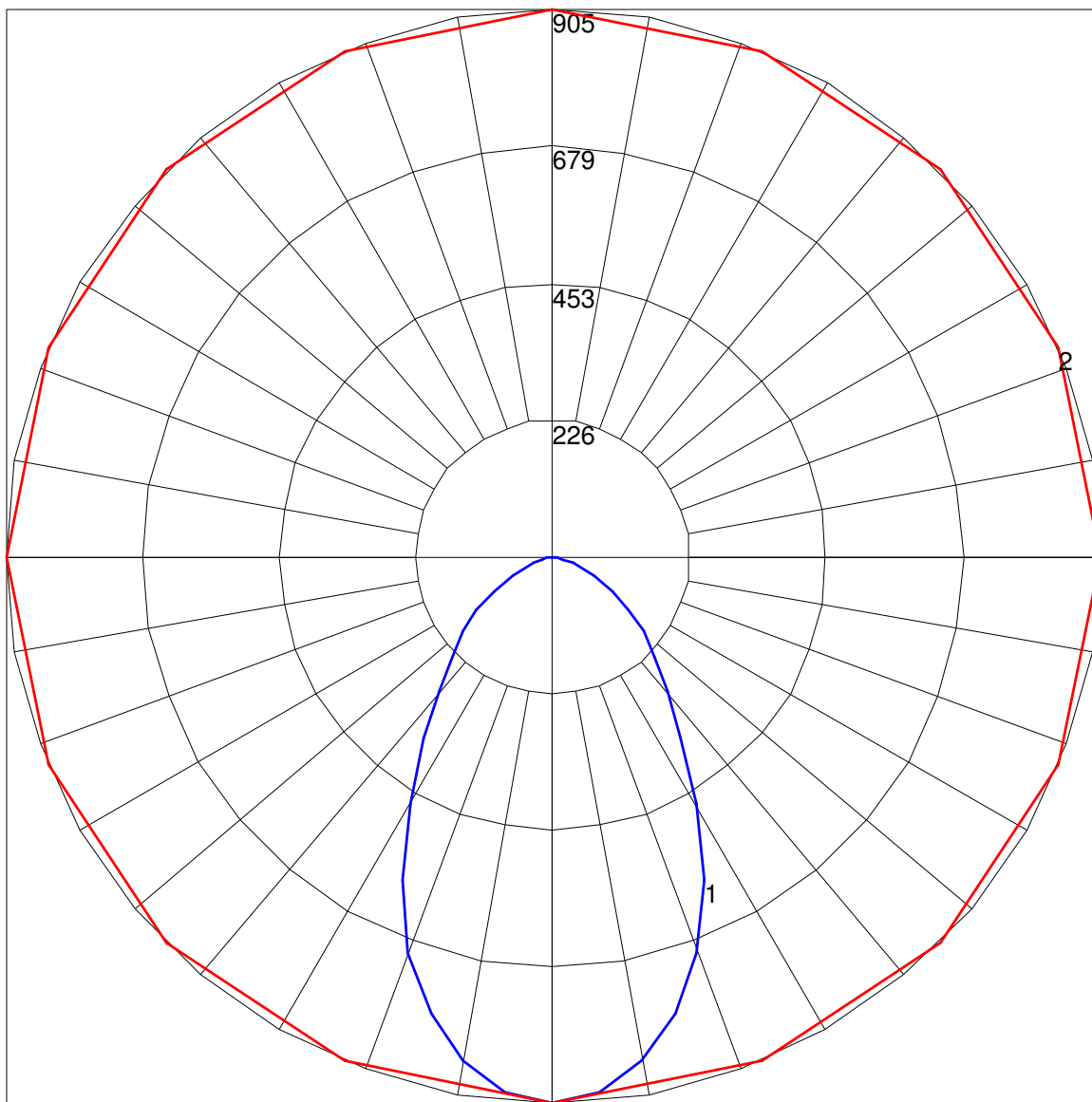
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**UGR TABLE - CORRECTED**

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	22.1	23.4	22.4	23.7	24.1	22.0	23.4	22.4	23.7	24.0
	3H	22.7	23.9	23.1	24.2	24.6	22.6	23.8	23.0	24.2	24.5
	4H	22.8	23.9	23.2	24.3	24.7	22.7	23.9	23.1	24.2	24.6
	6H	22.8	23.9	23.2	24.2	24.6	22.8	23.8	23.2	24.2	24.6
	8H	22.8	23.8	23.3	24.2	24.6	22.8	23.7	23.2	24.1	24.5
	12H	22.8	23.7	23.2	24.1	24.5	22.7	23.7	23.2	24.1	24.5
4H	2H	22.3	23.5	22.7	23.8	24.2	22.3	23.4	22.7	23.8	24.2
	3H	23.1	24.0	23.5	24.4	24.8	23.1	24.0	23.5	24.4	24.8
	4H	23.2	24.0	23.6	24.5	24.9	23.2	24.0	23.6	24.4	24.9
	6H	23.3	24.0	23.8	24.5	24.9	23.3	24.0	23.7	24.4	24.9
	8H	23.3	23.9	23.8	24.4	24.9	23.3	23.9	23.7	24.4	24.8
	12H	23.3	23.8	23.8	24.3	24.8	23.2	23.8	23.7	24.3	24.8
8H	4H	23.2	23.9	23.7	24.3	24.8	23.2	23.8	23.6	24.3	24.7
	6H	23.3	23.9	23.8	24.4	24.8	23.3	23.8	23.8	24.3	24.8
	8H	23.3	23.8	23.8	24.3	24.8	23.3	23.8	23.8	24.3	24.8
	12H	23.3	23.7	23.8	24.2	24.8	23.3	23.7	23.8	24.2	24.8
12H	4H	23.2	23.8	23.7	24.3	24.7	23.2	23.7	23.6	24.2	24.7
	6H	23.3	23.8	23.8	24.2	24.8	23.2	23.7	23.8	24.2	24.7
	8H	23.3	23.7	23.8	24.2	24.8	23.3	23.7	23.8	24.2	24.8

Maximum UGR = 24.9

POLAR GRAPH



Maximum Candela = 905.397 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.)