



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DS-L15-840-DIM-UNV-RW-OF-WH_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM BALLABS TEST NO. 20321.0
 [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
 [MORE] WITH 4"CAST WHITE REGRESS w/SOLITE LENS
 [LUMCAT] 4DS-L15-840-DIM-UNV-RW-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	1467
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	84
Total Luminaire Watts	17.4
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.02
Spacing Criterion (90-270)	1.02
Spacing Criterion (Diagonal)	1.06
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	27445	30608	27343
55	21131	20376	20753
65	13656	12803	13315
75	6132	6690	6411
85	3311	2484	3311

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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>
0	1119.592	1119.592	1119.592	1119.592	1119.592
5	1112.897	1112.897	1112.153	1113.640	1116.616
10	1092.067	1090.579	1095.786	1102.482	1106.945
15	1061.566	1060.822	1066.030	1074.957	1080.164
20	1021.395	1019.907	1026.602	1026.602	1020.651
25	894.929	921.710	961.882	929.893	891.954
30	586.949	668.035	839.880	727.549	586.949
35	334.018	374.933	616.705	424.031	334.762
40	240.284	258.882	352.616	275.248	246.980
45	200.113	206.064	223.174	213.504	199.369
50	163.661	166.637	165.893	163.661	158.454
55	124.978	127.953	120.514	122.746	122.746
60	90.758	90.758	85.550	87.782	89.270
65	59.513	60.257	55.794	58.025	58.025
70	29.757	32.732	32.732	31.988	30.501
75	16.366	16.366	17.854	16.366	17.110
80	10.415	10.415	7.439	8.927	8.927
85	2.976	2.232	2.232	2.232	2.976
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	406.60	N.A.	27.70
0-30	817.72	N.A.	55.70
0-40	1106.19	N.A.	75.40
0-60	1384.99	N.A.	94.40
0-80	1463.15	N.A.	99.70
0-90	1466.95	N.A.	100.00
10-90	1361.18	N.A.	92.80
20-40	699.60	N.A.	47.70
20-50	866.68	N.A.	59.10
40-70	337.28	N.A.	23.00
60-80	78.17	N.A.	5.30
70-80	19.68	N.A.	1.30
80-90	3.80	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	1466.95	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	105.77
10-20	300.83
20-30	411.12
30-40	288.48
40-50	167.08
50-60	111.71
60-70	58.49
70-80	19.68
80-90	3.80
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	93	91
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	82
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74
4	92	83	77	72	90	82	76	71	80	74	70	78	73	69	76	72	69	67
5	87	77	70	65	85	76	69	64	74	68	64	72	67	63	70	66	63	61
6	81	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	61	57	53	51
8	72	61	55	50	71	61	54	50	60	54	49	59	53	49	58	53	49	47
9	69	57	51	46	67	57	50	46	56	50	46	55	50	46	54	49	46	44
10	65	54	47	43	64	53	47	43	53	47	43	52	46	43	51	46	42	41

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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	20.2	21.4	20.5	21.7	22.0	19.9	21.2	20.3	21.5	21.8
	3H	20.8	21.9	21.2	22.2	22.6	20.6	21.7	21.0	22.0	22.4
	4H	20.9	21.9	21.3	22.3	22.7	20.7	21.7	21.1	22.1	22.5
	6H	21.0	21.9	21.4	22.3	22.7	20.8	21.7	21.2	22.1	22.5
	8H	21.0	21.9	21.4	22.2	22.7	20.8	21.6	21.2	22.0	22.4
	12H	20.9	21.8	21.4	22.2	22.6	20.7	21.6	21.2	22.0	22.4

UGR Viewed Endwise

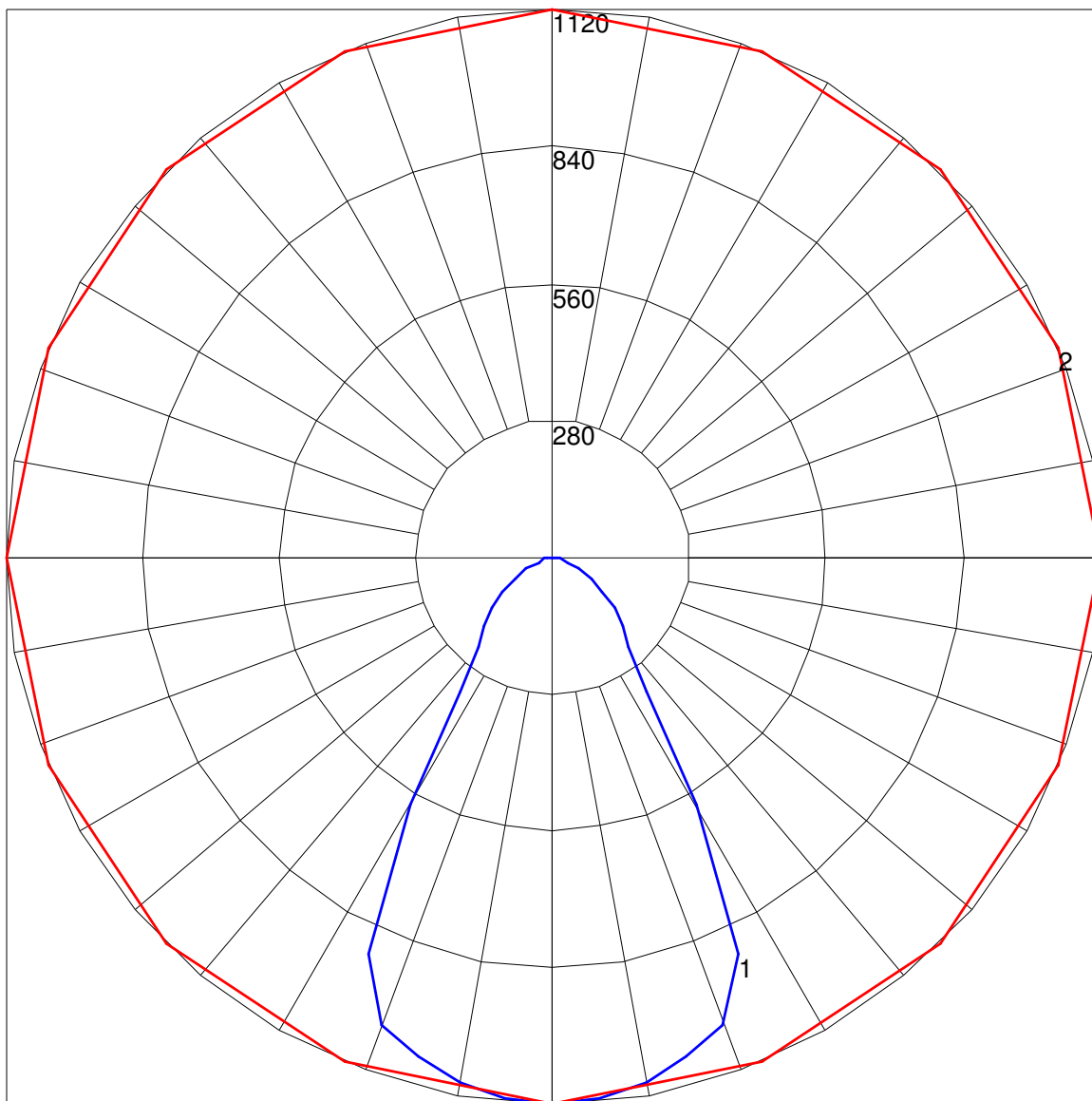
4H	2H	20.4	21.4	20.8	21.7	22.1	20.2	21.2	20.6	21.5	21.9
	3H	21.1	22.0	21.5	22.4	22.8	21.0	21.8	21.4	22.2	22.6
	4H	21.3	22.0	21.7	22.4	22.9	21.1	21.8	21.5	22.3	22.7
	6H	21.4	22.0	21.9	22.5	22.9	21.2	21.8	21.7	22.3	22.8
	8H	21.4	22.0	21.9	22.4	22.9	21.2	21.8	21.7	22.2	22.7
	12H	21.4	21.9	21.9	22.4	22.9	21.2	21.7	21.7	22.2	22.7

8H	4H	21.2	21.8	21.7	22.3	22.8	21.1	21.7	21.6	22.1	22.6
	6H	21.4	21.9	21.9	22.4	22.9	21.2	21.7	21.7	22.2	22.7
	8H	21.4	21.9	22.0	22.4	22.9	21.2	21.7	21.8	22.2	22.7
	12H	21.5	21.8	22.0	22.3	22.9	21.3	21.6	21.8	22.1	22.7

12H	4H	21.2	21.7	21.7	22.2	22.7	21.1	21.6	21.5	22.1	22.5
	6H	21.4	21.8	21.9	22.3	22.8	21.2	21.6	21.7	22.1	22.6
	8H	21.4	21.8	22.0	22.3	22.9	21.2	21.6	21.8	22.1	22.7

Maximum UGR = 22.9

POLAR GRAPH



Maximum Candela = 1119.592 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.)