



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DS-L30-840-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-L30-840-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	2539
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	71
Total Luminaire Watts	36
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	66645	68051	66043
55	53207	51722	52711
65	34930	34259	34594
75	14259	15356	14808
85	4886	4886	6515

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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	1844.222	1844.222	1844.222	1844.222	1844.222
5	1816.412	1816.412	1810.557	1809.094	1810.557
10	1732.983	1735.910	1735.910	1731.519	1732.983
15	1599.789	1601.253	1602.716	1605.644	1599.789
20	1427.076	1428.540	1435.858	1430.004	1424.149
25	1207.526	1216.308	1244.118	1228.017	1201.671
30	966.021	987.976	1034.813	990.903	958.703
35	753.789	778.671	819.654	783.062	749.398
40	598.640	617.668	630.841	613.277	591.322
45	485.938	494.720	496.183	491.792	481.547
50	396.654	399.581	390.799	390.799	390.799
55	314.689	314.689	305.907	308.834	311.761
60	228.332	228.332	221.014	228.332	232.723
65	152.221	153.685	149.294	150.758	150.758
70	73.183	77.574	84.893	80.502	67.329
75	38.055	40.983	40.983	39.519	39.519
80	19.028	20.491	19.028	20.491	20.491
85	4.391	5.855	4.391	5.855	5.855
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	618.41	N.A.	24.40
0-30	1177.28	N.A.	46.40
0-40	1672.15	N.A.	65.90
0-60	2333.24	N.A.	91.90
0-80	2530.36	N.A.	99.70
0-90	2538.67	N.A.	100.00
10-90	2368.09	N.A.	93.30
20-40	1053.74	N.A.	41.50
20-50	1437.39	N.A.	56.60
40-70	811.21	N.A.	32.00
60-80	197.12	N.A.	7.80
70-80	47.00	N.A.	1.90
80-90	8.31	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	2538.67	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	170.58
10-20	447.82
20-30	558.88
30-40	494.87
40-50	383.64
50-60	277.45
60-70	150.12
70-80	47.00
80-90	8.31
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	111	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89
2	104	97	92	88	101	95	91	86	92	88	85	89	86	83	86	83	81	79
3	96	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	76	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	53	49	59	53	49	57	52	48	47
8	69	57	50	45	68	57	50	45	56	49	45	54	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

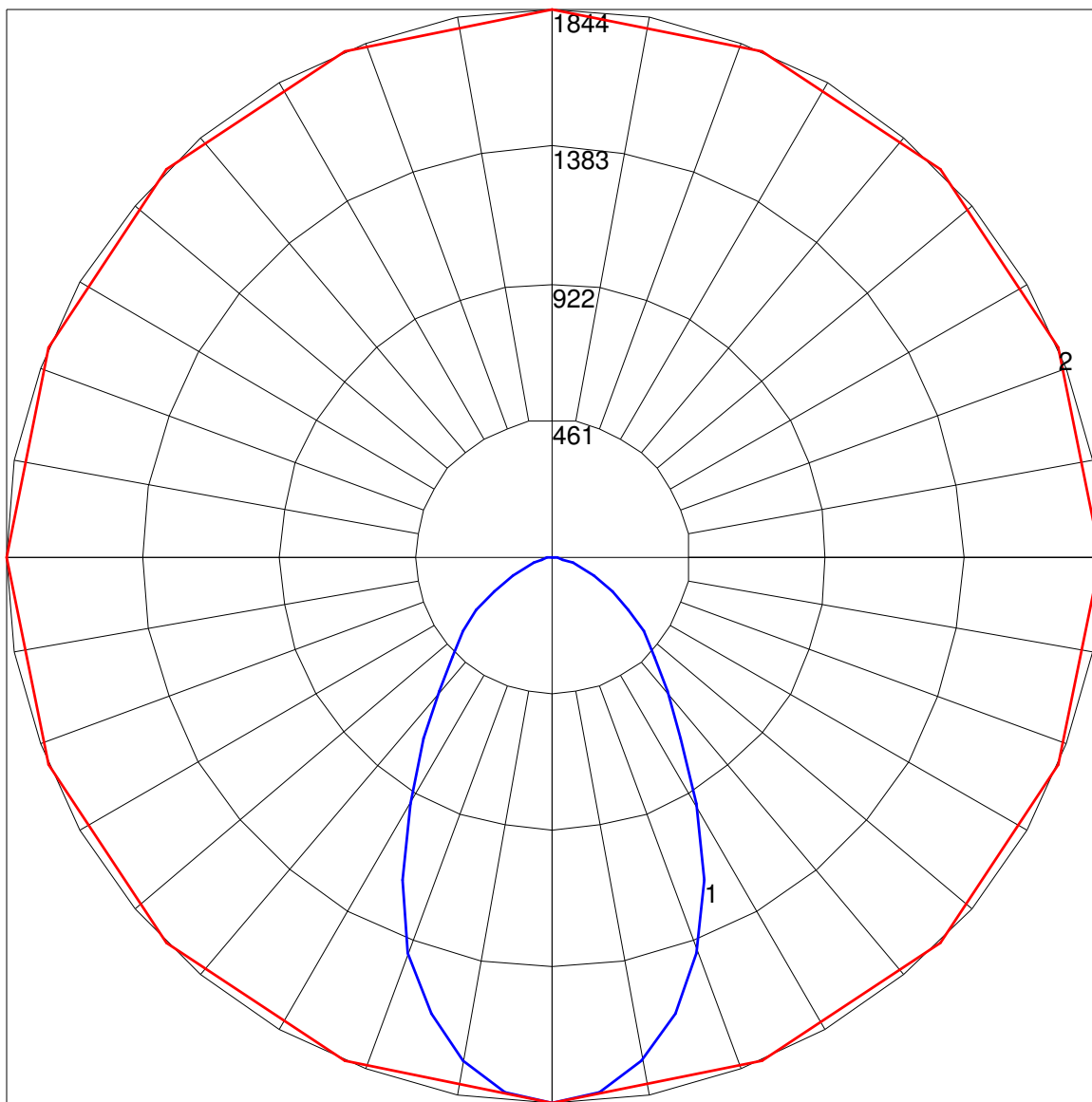
X=2H	Y=2H	24.5	25.8	24.8	26.1	26.5	24.4	25.8	24.8	26.1	26.4
	3H	25.1	26.3	25.5	26.6	27.0	25.0	26.2	25.4	26.6	26.9
	4H	25.2	26.3	25.6	26.7	27.1	25.1	26.3	25.5	26.6	27.0
	6H	25.2	26.3	25.6	26.6	27.0	25.2	26.2	25.6	26.6	27.0
	8H	25.2	26.2	25.7	26.6	27.0	25.2	26.1	25.6	26.5	26.9
	12H	25.2	26.1	25.6	26.5	26.9	25.1	26.1	25.6	26.5	26.9

UGR Viewed Endwise

4H	2H	24.7	25.9	25.1	26.2	26.6	24.7	25.8	25.1	26.2	26.6
	3H	25.5	26.4	25.9	26.8	27.2	25.5	26.4	25.9	26.8	27.2
	4H	25.6	26.4	26.0	26.9	27.3	25.6	26.4	26.0	26.8	27.3
	6H	25.7	26.4	26.2	26.9	27.3	25.7	26.4	26.1	26.8	27.3
	8H	25.7	26.3	26.2	26.8	27.3	25.7	26.3	26.1	26.8	27.2
	12H	25.7	26.2	26.2	26.7	27.2	25.6	26.2	26.1	26.7	27.2
8H	4H	25.6	26.3	26.1	26.7	27.2	25.6	26.2	26.0	26.7	27.1
	6H	25.7	26.3	26.2	26.8	27.2	25.7	26.2	26.2	26.7	27.2
	8H	25.7	26.2	26.2	26.7	27.2	25.7	26.2	26.2	26.7	27.2
	12H	25.7	26.1	26.2	26.6	27.2	25.7	26.1	26.2	26.6	27.2
12H	4H	25.6	26.2	26.1	26.7	27.1	25.6	26.1	26.0	26.6	27.1
	6H	25.7	26.2	26.2	26.6	27.2	25.6	26.1	26.2	26.6	27.1
	8H	25.7	26.1	26.2	26.6	27.2	25.7	26.1	26.2	26.6	27.2

Maximum UGR = 27.3

POLAR GRAPH



Maximum Candela = 1844.222 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.)