



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CSDI-L12-835U-L12-835D-XXX-DIM1-UNV-LW-WHU-RS-WHD-WM\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13537338.13 and #13257153.26

[TESTLAB]

[ISSUE DATE] 8-FEB-2021

[MANUFAC] H E Williams Inc

[LUMCAT] 4CSDI-L12-835U-L12-835D-xxx-DIM1-UNV-LW-WHU-RS-WHD-WM

[MORE]

[LUMINAIRE] White formed aluminum housing, wide distrib white painted flush prismatic lens trim up,

[MORE] narrow spot distrib white painted regressed prismatic lens trim down

[LAMP] Two white LEDs (one up/one down)

[BALLAST] (2) ERP PHB30W-0700-42 Drivers

[OTHER]

[OTHER] This test was performed using the calibrated photodetector met

[MORE] hod of absolute photometry.

[\_ CONVERT] Photometric web converted from original test data

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2947
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	86
Total Luminaire Watts	34.2861
Ballast Factor	1.00
CIE Type	General Diffuse
Spacing Criterion (0-180)	N.A.
Spacing Criterion (90-270)	N.A.
Spacing Criterion (Diagonal)	N.A.
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	0.33 ft
Luminous Width (90-270)	0.33 ft
Luminous Height	1.42 ft

### LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2088	1896	2062
55	956	793	932
65	476	347	499
75	155	128	178
85	22	32	45

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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>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>
0.0	14350.000	14350.000	14350.000	14350.000	14350.000	14350.000	14350.000	14350.000	14350.000
2.5	13020.000	13030.000	13030.000	13040.000	13020.000	13040.000	13030.000	13030.000	13020.000
5.0	9911.000	9920.000	9793.000	9664.000	9611.000	9664.000	9793.000	9920.000	9911.000
7.5	6389.000	6394.000	6164.000	5929.000	5852.000	5929.000	6164.000	6394.000	6389.000
10.0	3626.000	3621.000	3384.000	3167.000	3094.000	3167.000	3384.000	3621.000	3626.000
12.5	1910.000	1917.000	1762.000	1630.000	1572.000	1630.000	1762.000	1917.000	1910.000
15.0	1064.000	1070.000	1003.000	929.000	894.000	929.000	1003.000	1070.000	1064.000
17.5	682.000	693.000	671.000	633.000	609.000	633.000	671.000	693.000	682.000
20.0	500.000	518.000	522.000	492.000	468.000	492.000	522.000	518.000	500.000
22.5	398.000	417.000	433.000	403.000	380.000	403.000	433.000	417.000	398.000
25.0	324.000	348.000	368.000	338.000	316.000	338.000	368.000	348.000	324.000
27.5	271.000	291.000	316.000	284.000	263.000	284.000	316.000	291.000	271.000
30.0	221.000	244.000	273.000	236.000	213.000	236.000	273.000	244.000	221.000
32.5	183.000	201.000	234.000	194.000	176.000	194.000	234.000	201.000	183.000
35.0	153.000	168.000	197.000	161.000	147.000	161.000	197.000	168.000	153.000
37.5	131.000	142.000	164.000	137.000	130.000	137.000	164.000	142.000	131.000
40.0	113.000	121.000	137.000	119.000	112.000	119.000	137.000	121.000	113.000
42.5	95.000	104.000	115.000	102.000	94.000	102.000	115.000	104.000	95.000
45.0	80.000	88.000	97.000	87.000	79.000	87.000	97.000	88.000	80.000
47.5	66.000	73.000	80.000	72.000	65.000	72.000	80.000	73.000	66.000
50.0	55.000	61.000	67.000	60.000	54.000	60.000	67.000	61.000	55.000
52.5	46.000	51.000	55.000	50.000	45.000	50.000	55.000	51.000	46.000
55.0	40.000	43.000	45.000	42.000	39.000	42.000	45.000	43.000	40.000
57.5	34.000	36.000	36.000	35.000	34.000	35.000	36.000	36.000	34.000
60.0	30.000	31.000	30.000	30.000	30.000	30.000	30.000	31.000	30.000
62.5	25.000	26.000	25.000	26.000	26.000	26.000	25.000	26.000	25.000
65.0	21.000	22.000	21.000	22.000	22.000	22.000	21.000	22.000	21.000
67.5	17.000	18.000	17.000	18.000	18.000	18.000	17.000	18.000	17.000
70.0	14.000	14.000	13.000	15.000	15.000	15.000	13.000	14.000	14.000
72.5	11.000	11.000	10.000	11.000	11.000	11.000	10.000	11.000	11.000
75.0	7.000	8.000	8.000	8.000	8.000	8.000	8.000	8.000	7.000
77.5	4.000	4.000	5.000	5.000	4.000	5.000	5.000	4.000	4.000
80.0	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000
82.5	2.000	2.000	2.000	2.000	3.000	2.000	2.000	2.000	2.000
85.0	1.000	1.000	2.000	2.000	2.000	2.000	2.000	1.000	1.000
87.5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92.5	0.737	1.474	2.272	3.868	3.868	3.868	2.272	1.474	0.737
95.0	2.395	3.193	3.868	5.526	5.649	5.526	3.868	3.193	2.395
97.5	5.465	5.833	6.263	7.982	8.166	7.982	6.263	5.833	5.465
100.0	8.596	9.087	9.456	11.236	11.482	11.236	9.456	9.087	8.596
102.5	12.280	12.894	13.078	14.982	15.289	14.982	13.078	12.894	12.280
105.0	16.210	16.885	17.008	19.157	19.280	19.157	17.008	16.885	16.210
107.5	20.323	21.183	21.367	23.639	23.578	23.639	21.367	21.183	20.323
110.0	24.683	25.727	25.911	28.305	28.244	28.305	25.911	25.727	24.683
112.5	29.349	30.516	30.639	33.340	33.156	33.340	30.639	30.516	29.349
115.0	34.016	35.612	35.796	38.375	37.945	38.375	35.796	35.612	34.016
117.5	38.436	40.524	40.892	43.410	42.612	43.410	40.892	40.524	38.436
120.0	43.041	45.313	45.866	48.015	46.971	48.015	45.866	45.313	43.041
122.5	47.217	49.980	50.716	52.190	50.655	52.190	50.716	49.980	47.217
125.0	50.716	54.155	55.444	56.120	53.971	56.120	55.444	54.155	50.716
127.5	54.400	58.698	60.847	60.356	57.777	60.356	60.847	58.698	54.400
130.0	58.944	64.654	67.479	65.944	62.382	65.944	67.479	64.654	58.944
132.5	65.821	72.820	76.382	73.496	69.382	73.496	76.382	72.820	65.821

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**CANDELA TABULATION - (Cont.)**

135.0	76.443	84.425	89.521	84.548	80.373	84.548	89.521	84.425	76.443
137.5	92.223	101.433	110.766	100.205	96.214	100.205	110.766	101.433	92.223
140.0	114.572	127.282	146.193	122.800	117.765	122.800	146.193	127.282	114.572
142.5	146.992	167.315	207.348	158.473	149.263	158.473	207.348	167.315	146.992
145.0	195.436	230.004	302.825	215.944	195.436	215.944	302.825	230.004	195.436
147.5	269.669	325.297	437.414	308.228	264.941	308.228	437.414	325.297	269.669
150.0	382.031	464.307	605.097	447.053	376.566	447.053	605.097	464.307	382.031
152.5	551.925	652.682	791.446	632.420	544.864	632.420	791.446	652.682	551.925
155.0	785.920	879.248	992.224	863.898	777.938	863.898	992.224	879.248	785.920
157.5	1072.658	1138.970	1212.036	1130.374	1059.150	1130.374	1212.036	1138.970	1072.658
160.0	1377.816	1410.358	1457.636	1417.112	1371.062	1417.112	1457.636	1410.358	1377.816
162.5	1649.204	1668.238	1692.798	1679.904	1655.958	1679.904	1692.798	1668.238	1649.204
165.0	1881.296	1888.050	1900.330	1896.032	1884.366	1896.032	1900.330	1888.050	1881.296
167.5	2064.882	2059.970	2071.022	2069.180	2064.268	2069.180	2071.022	2059.970	2064.882
170.0	2199.348	2193.208	2192.594	2190.138	2188.296	2190.138	2192.594	2193.208	2199.348
172.5	2276.712	2273.028	2269.344	2263.818	2261.976	2263.818	2269.344	2273.028	2276.712
175.0	2312.938	2310.482	2308.026	2306.184	2304.956	2306.184	2308.026	2310.482	2312.938
177.5	2313.552	2318.464	2320.306	2323.376	2324.604	2323.376	2320.306	2318.464	2313.552
180.0	2322.000	2322.000	2322.000	2322.000	2322.000	2322.000	2322.000	2322.000	2322.000

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Zone	Lumens	%Lamp	%Fixt
0-20	1065.27	N.A.	36.20
0-30	1225.77	N.A.	41.60
0-40	1333.77	N.A.	45.30
0-60	1440.65	N.A.	48.90
0-80	1470.49	N.A.	49.90
0-90	1472.19	N.A.	50.00
10-90	749.18	N.A.	25.40
20-40	268.50	N.A.	9.10
20-50	336.74	N.A.	11.40
40-70	128.39	N.A.	4.40
60-80	29.84	N.A.	1.00
70-80	8.34	N.A.	0.30
80-90	1.70	N.A.	0.10
90-110	23.89	N.A.	0.80
90-120	59.88	N.A.	2.00
90-130	108.92	N.A.	3.70
90-150	336.45	N.A.	11.40
90-180	1474.45	N.A.	50.00
110-180	1450.57	N.A.	49.20
0-180	2946.64	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	723.01
10-20	342.26
20-30	160.50
30-40	107.99
40-50	68.25
50-60	38.64
60-70	21.50
70-80	8.34
80-90	1.70
90-100	4.99
100-110	18.90
110-120	35.99
120-130	49.04
130-140	68.05
140-150	159.48
150-160	405.66
160-170	515.63
170-180	216.70

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## COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC RW	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	101	97	95	92	93	90	88	86	77	76	74	65	64	63	54	53	53	48
2	95	89	85	81	88	83	80	76	72	69	67	62	60	59	52	51	50	46
3	89	82	77	73	83	77	73	69	67	64	62	58	56	55	50	49	48	44
4	84	76	71	66	79	72	67	63	63	60	57	56	53	51	48	47	46	43
5	80	71	66	61	75	67	62	59	60	56	54	53	51	49	47	45	44	41
6	76	67	61	57	71	64	59	55	57	53	51	51	48	46	45	44	42	40
7	72	63	58	53	68	60	55	52	55	51	48	49	46	44	44	42	41	39
8	69	60	54	51	65	57	52	49	52	49	46	47	45	43	43	41	40	38
9	66	57	52	48	63	55	50	47	50	47	44	46	43	41	42	40	39	37
10	64	55	50	46	60	53	48	45	49	45	42	45	42	40	41	39	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	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
	3H	3.9	3.9	3.9	3.9	4.1	3.9	3.9	3.9	4.1
	4H	3.9	3.9	3.9	3.9	4.2	3.9	3.9	3.9	4.1
	6H	3.9	3.9	3.9	3.9	4.1	3.9	3.9	3.9	4.0
	8H	3.9	3.9	3.9	3.9	4.0	3.9	3.9	3.9	4.0
	12H	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9

### UGR Viewed Endwise

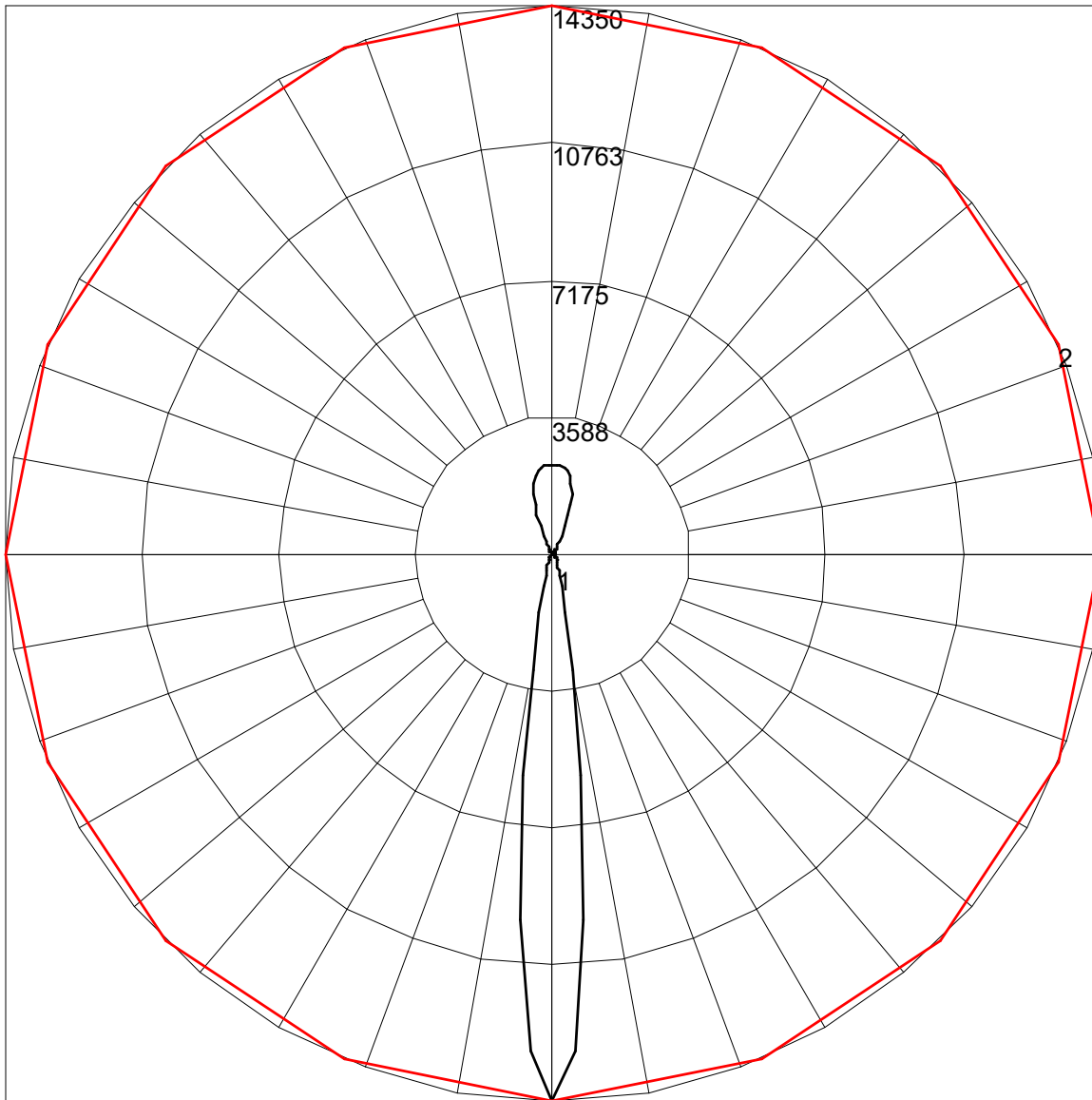
4H	2H	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
	3H	3.9	3.9	3.9	3.9	4.2	3.9	3.9	3.9	4.2
	4H	3.9	3.9	3.9	3.9	4.3	3.9	3.9	3.9	4.3
	6H	3.9	3.9	3.9	3.9	4.2	3.9	3.9	3.9	4.2
	8H	3.9	3.9	3.9	3.9	4.1	3.9	3.9	3.9	4.1
	12H	3.9	3.9	3.9	3.9	4.1	3.9	3.9	3.9	4.1
8H	4H	3.9	3.9	3.9	3.9	4.2	3.9	3.9	3.9	4.1
	6H	3.9	3.9	3.9	3.9	4.1	3.9	3.9	3.9	4.1
	8H	3.9	3.9	3.9	3.9	4.0	3.9	3.9	3.9	4.0
	12H	3.9	3.9	3.9	3.9	4.0	3.9	3.9	3.9	4.0
12H	4H	3.9	3.9	3.9	3.9	4.1	3.9	3.9	3.9	4.1
	6H	3.9	3.9	3.9	3.9	4.0	3.9	3.9	3.9	4.0
	8H	3.9	3.9	3.9	3.9	4.0	3.9	3.9	3.9	4.0

Maximum UGR = 4.3

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## POLAR GRAPH



Maximum Candela = 14350 Located At Horizontal Angle = 0, Vertical Angle = 0

# 1 - Vertical Plane Through Horizontal Angles (90 - 270)

# 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)