



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CSDI-L12-835U-L12-835D-XXX-DIM1-UNV-LW-WHU-RW-WHD-WM_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13537338.13 and #13257153.16

[TESTLAB]

[ISSUE DATE] 8-FEB-2021

[MANUFAC] H E Williams Inc

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

[MORE]

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

[MORE] wide 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	2779
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	99
Total Luminaire Watts	28.2
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	2152	2194	2106
55	1111	885	1087
65	602	405	604
75	208	138	210
85	33	23	33

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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	1501.827	1501.827	1501.827	1501.827	1501.827	1501.827	1501.827	1501.827	1501.827
2.5	1499.406	1505.862	1498.599	1492.950	1491.336	1492.950	1498.599	1505.862	1499.406
5.0	1484.880	1491.336	1484.880	1478.424	1476.810	1478.424	1484.880	1491.336	1484.880
7.5	1463.898	1469.547	1463.091	1457.442	1454.214	1457.442	1463.091	1469.547	1463.898
10.0	1435.653	1442.109	1435.653	1429.197	1426.776	1429.197	1435.653	1442.109	1435.653
12.5	1396.917	1404.180	1397.724	1392.075	1388.847	1392.075	1397.724	1404.180	1396.917
15.0	1344.462	1352.532	1347.690	1342.041	1337.199	1342.041	1347.690	1352.532	1344.462
17.5	1275.060	1283.937	1281.516	1275.867	1269.411	1275.867	1281.516	1283.937	1275.060
20.0	1182.255	1194.360	1197.588	1189.518	1178.220	1189.518	1197.588	1194.360	1182.255
22.5	1061.205	1078.959	1091.871	1076.538	1057.977	1076.538	1091.871	1078.959	1061.205
25.0	908.682	938.541	965.172	937.734	907.068	937.734	965.172	938.541	908.682
27.5	738.324	778.755	818.298	776.818	734.773	776.818	818.298	778.755	738.324
30.0	571.275	614.450	659.965	607.671	560.300	607.671	659.965	614.450	571.275
32.5	414.717	459.829	508.006	450.467	397.367	450.467	508.006	459.829	414.717
35.0	277.366	329.740	375.336	318.039	263.808	318.039	375.336	329.740	277.366
37.5	184.319	225.395	273.734	217.002	174.715	217.002	273.734	225.395	184.319
40.0	129.443	156.719	201.346	149.941	123.148	149.941	201.346	156.719	129.443
42.5	99.907	114.917	149.779	110.398	95.952	110.398	149.779	114.917	99.907
45.0	82.475	91.352	112.254	88.609	80.700	88.609	112.254	91.352	82.475
47.5	70.612	76.504	87.640	75.212	69.483	75.212	87.640	76.504	70.612
50.0	61.171	65.690	71.258	64.883	60.202	64.883	71.258	65.690	61.171
52.5	53.181	56.974	59.557	56.248	52.294	56.248	59.557	56.974	53.181
55.0	46.483	49.388	50.195	48.743	45.515	48.743	50.195	49.388	46.483
57.5	40.834	42.771	42.367	42.206	40.108	42.206	42.367	42.771	40.834
60.0	35.911	36.880	35.589	36.557	35.508	36.557	35.589	36.880	35.911
62.5	31.069	31.473	29.778	31.392	31.069	31.392	29.778	31.473	31.069
65.0	26.550	26.470	24.533	26.550	26.631	26.550	24.533	26.470	26.550
67.5	22.112	21.789	19.933	21.950	22.192	21.950	19.933	21.789	22.112
70.0	17.835	17.431	15.817	17.673	17.996	17.673	15.817	17.431	17.835
72.5	13.558	13.315	12.024	13.477	13.800	13.477	12.024	13.315	13.558
75.0	9.361	9.442	8.635	9.603	9.442	9.603	8.635	9.442	9.361
77.5	4.761	5.568	5.730	5.649	5.165	5.649	5.730	5.568	4.761
80.0	3.470	3.470	3.551	3.389	3.389	3.389	3.551	3.470	3.470
82.5	2.421	2.421	2.340	2.340	2.340	2.340	2.340	2.421	2.421
85.0	1.453	1.453	1.453	1.453	1.453	1.453	1.453	1.453	1.453
87.5	0.646	0.646	0.646	0.646	0.646	0.646	0.646	0.646	0.646
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	58.698	54.400	54.400
130.0	58.944	64.654	67.479	65.944	62.382	65.944	64.654	58.944	58.944
132.5	65.821	72.820	76.382	73.496	69.382	73.496	72.820	65.821	65.821

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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	514.55	N.A.	18.50
0-30	933.94	N.A.	33.60
0-40	1146.42	N.A.	41.20
0-60	1267.27	N.A.	45.60
0-80	1303.28	N.A.	46.90
0-90	1304.97	N.A.	47.00
10-90	1164.9	N.A.	41.90
20-40	631.87	N.A.	22.70
20-50	708.60	N.A.	25.50
40-70	146.81	N.A.	5.30
60-80	36.01	N.A.	1.30
70-80	10.05	N.A.	0.40
80-90	1.69	N.A.	0.10
90-110	23.89	N.A.	0.90
90-120	59.88	N.A.	2.20
90-130	108.92	N.A.	3.90
90-150	336.45	N.A.	12.10
90-180	1474.45	N.A.	53.00
110-180	1450.57	N.A.	52.20
0-180	2779.42	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	140.07
10-20	374.48
20-30	419.39
30-40	212.48
40-50	76.73
50-60	44.12
60-70	25.97
70-80	10.05
80-90	1.69
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	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	106	106	106	106	98	98	98	98	82	82	82	67	67	67	53	53	53	47
1	99	96	92	90	91	88	86	83	74	73	71	62	61	60	50	50	49	44
2	92	86	81	77	85	80	76	72	68	65	63	57	55	54	47	46	45	40
3	86	78	72	67	79	73	68	63	62	59	56	53	50	48	44	43	41	37
4	80	71	65	60	74	66	61	56	57	53	50	49	46	44	41	40	38	35
5	75	65	58	53	69	61	55	51	53	49	45	46	43	40	39	37	35	32
6	70	60	53	48	65	56	50	46	49	45	41	43	39	37	37	34	33	30
7	66	55	48	44	61	52	46	42	46	41	38	40	37	34	35	32	31	28
8	62	51	44	40	57	48	42	38	43	38	35	38	34	32	33	30	29	26
9	58	48	41	37	54	45	39	35	40	36	32	35	32	30	31	29	27	25
10	55	44	38	34	51	42	36	33	38	33	30	33	30	28	29	27	25	24

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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	3.6	3.6	3.6	3.6	4.9	3.6	3.6	3.6	3.6	4.8
	3H	3.6	3.6	3.7	4.2	5.6	3.6	3.6	3.6	4.2	5.5
	4H	3.6	3.6	3.8	4.3	5.6	3.6	3.6	3.7	4.2	5.6
	6H	3.6	3.6	3.7	4.2	5.6	3.6	3.6	3.6	4.1	5.5
	8H	3.6	3.6	3.7	4.1	5.5	3.6	3.6	3.6	4.1	5.4
	12H	3.6	3.6	3.6	4.0	5.4	3.6	3.6	3.6	4.0	5.4

UGR Viewed Endwise

4H	2H	3.6	3.6	3.6	3.6	4.9	3.6	3.6	3.6	3.6	4.8
	3H	3.6	3.6	3.8	4.3	5.7	3.6	3.6	3.8	4.3	5.6
	4H	3.6	3.6	4.0	4.4	5.8	3.6	3.6	3.9	4.4	5.7
	6H	3.6	3.6	3.9	4.3	5.7	3.6	3.6	3.9	4.3	5.7
	8H	3.6	3.6	3.9	4.2	5.6	3.6	3.6	3.9	4.2	5.6
	12H	3.6	3.6	3.9	4.1	5.5	3.6	3.6	3.8	4.1	5.5

8H	4H	3.6	3.6	3.9	4.2	5.6	3.6	3.6	3.9	4.2	5.6
	6H	3.6	3.6	3.9	4.2	5.6	3.6	3.6	3.8	4.1	5.5
	8H	3.6	3.6	3.9	4.1	5.5	3.6	3.6	3.8	4.1	5.5
	12H	3.6	3.6	3.8	4.0	5.5	3.6	3.6	3.8	4.0	5.4

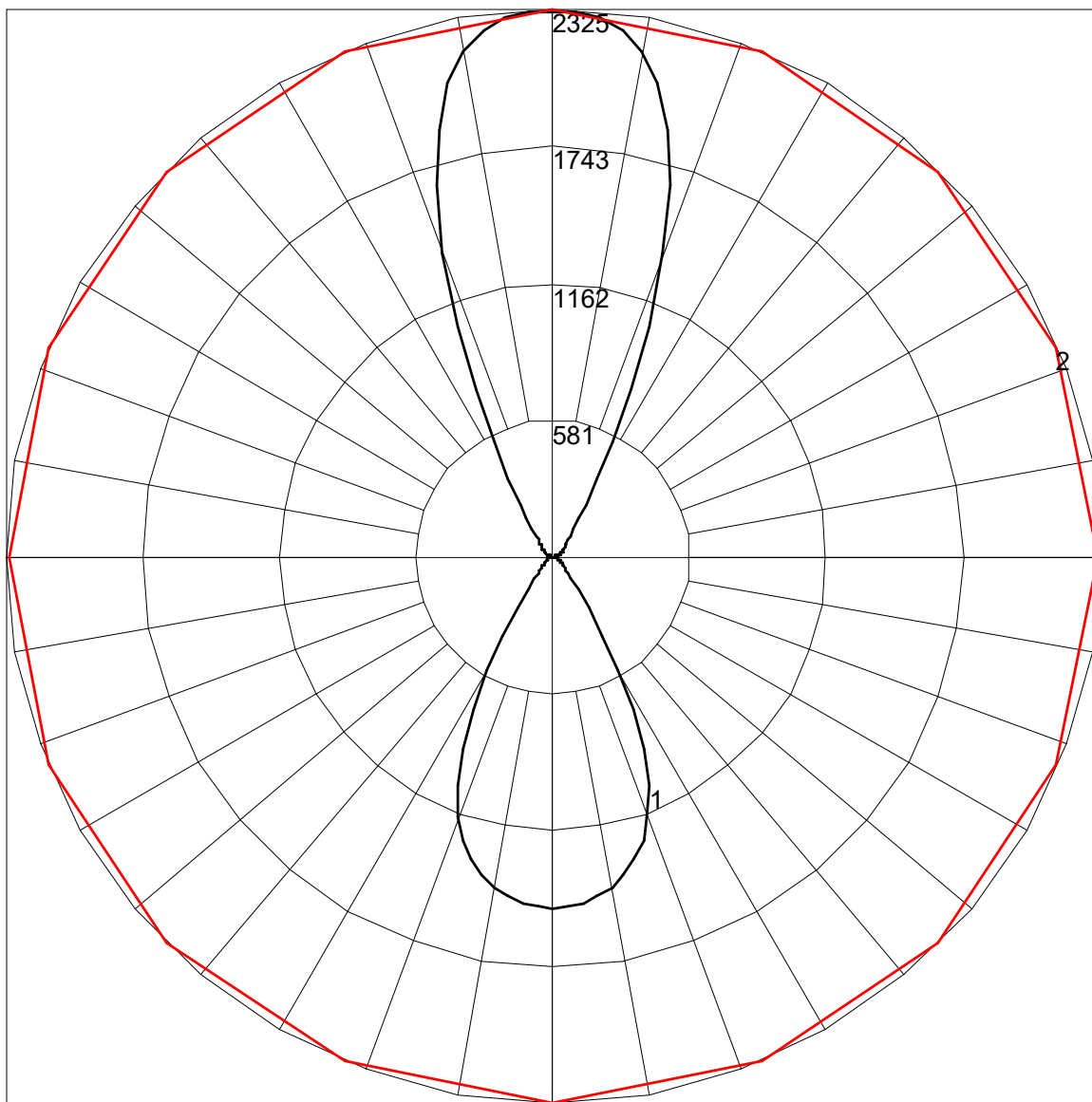
12H	4H	3.6	3.6	3.9	4.1	5.5	3.6	3.6	3.8	4.1	5.5
	6H	3.6	3.6	3.8	4.1	5.5	3.6	3.6	3.8	4.0	5.5
	8H	3.6	3.6	3.8	4.0	5.5	3.6	3.6	3.8	4.0	5.4

Maximum UGR = 5.8

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POLAR GRAPH



Maximum Candela = 2324.604 Located At Horizontal Angle = 90, Vertical Angle = 177.5

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

2 - Horizontal Cone Through Vertical Angle (177.5) (Through Max. Cd.)