



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CSDI-P12-835U-P12-835D-XXX-POE PR-LW-WHU-OS-CSD-WM_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13537338.13 & #13257153.24

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 20-APR-2021

[MANUFAC] H E Williams Inc

[LUMCAT] 4CSDI-P12-835U-P12-835D-xxx-PoE PR-LW-WHU-OC-CSD-WM

[LUMINAIRE] White formed aluminum housing, wide distribution reflector

[MORE] trims, frosted lens enclosures

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

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

[OTHER] 24.8 C, 120 V, 0.1986 A, 23.46 W, 0.983 PF, 60 Hz

[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	2412
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	105
Total Luminaire Watts	23
Ballast Factor	1.00
CIE Type	Semi-Indirect
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	3426	2257	3556
55	1356	981	1401
65	31	139	31
75	8	6	8
85	2	1	2

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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	1349.075	1349.075	1349.075	1349.075	1349.075	1349.075	1349.075	1349.075	1349.075
2.5	1334.549	1331.825	1331.825	1333.641	1335.457	1333.641	1331.825	1331.825	1334.549
5.0	1288.248	1285.525	1284.617	1284.617	1286.433	1284.617	1284.617	1285.525	1288.248
7.5	1219.251	1217.435	1214.712	1213.804	1214.712	1213.804	1214.712	1217.435	1219.251
10.0	1133.005	1133.005	1130.281	1127.558	1126.650	1127.558	1130.281	1133.005	1133.005
12.5	1033.141	1034.048	1033.141	1027.693	1024.062	1027.693	1033.141	1034.048	1033.141
15.0	926.014	929.645	929.645	923.290	917.843	923.290	929.645	929.645	926.014
17.5	823.698	828.691	831.324	825.332	821.428	825.332	831.324	828.691	823.698
20.0	728.555	734.093	735.999	730.461	725.559	730.461	735.999	734.093	728.555
22.5	632.957	638.949	637.678	632.413	625.513	632.413	637.678	638.949	632.957
25.0	532.549	540.447	538.631	531.641	523.288	531.641	538.631	540.447	532.549
27.5	438.767	449.117	449.570	441.037	431.776	441.037	449.570	449.117	438.767
30.0	357.423	368.317	374.037	363.143	354.336	363.143	374.037	368.317	357.423
32.5	292.057	300.319	309.761	298.594	292.602	298.594	309.761	300.319	292.057
35.0	242.398	246.574	255.562	247.300	245.484	247.300	255.562	246.574	242.398
37.5	204.903	204.812	209.352	207.082	209.715	207.082	209.352	204.812	204.903
40.0	175.670	171.494	170.314	174.944	181.208	174.944	170.314	171.494	175.670
42.5	151.612	144.985	139.174	149.161	157.241	149.161	139.174	144.985	151.612
45.0	131.276	123.378	115.479	127.826	136.269	127.826	115.479	123.378	131.276
47.5	112.393	104.857	96.959	109.034	116.569	109.034	96.959	104.857	112.393
50.0	93.872	88.153	81.798	91.784	97.050	91.784	81.798	88.153	93.872
52.5	75.171	72.901	68.362	75.988	77.622	75.988	68.362	72.901	75.171
55.0	56.741	58.648	55.652	61.099	58.648	61.099	55.652	58.648	56.741
57.5	39.855	44.757	43.123	46.664	40.672	46.664	43.123	44.757	39.855
60.0	23.150	30.595	30.867	31.412	22.787	31.412	30.867	30.595	23.150
62.5	8.806	15.434	19.065	14.980	7.898	14.980	19.065	15.434	8.806
65.0	1.362	3.995	8.443	3.450	1.362	3.450	8.443	3.995	1.362
67.5	0.999	0.908	2.270	0.908	0.999	0.908	2.270	0.908	0.999
70.0	0.726	0.635	0.817	0.726	0.726	0.726	0.817	0.635	0.726
72.5	0.545	0.454	0.454	0.545	0.545	0.545	0.454	0.454	0.545
75.0	0.363	0.363	0.363	0.363	0.363	0.363	0.363	0.363	0.363
77.5	0.272	0.272	0.272	0.272	0.272	0.272	0.272	0.272	0.272
80.0	0.182	0.182	0.182	0.182	0.182	0.182	0.182	0.182	0.182
82.5	0.091	0.091	0.091	0.091	0.182	0.091	0.091	0.091	0.091
85.0	0.091	0.091	0.091	0.091	0.091	0.091	0.091	0.091	0.091
87.5	0.091	0.091	0.091	0.091	0.091	0.091	0.091	0.091	0.091
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	49.980	47.217	
125.0	50.716	54.155	55.444	56.120	53.971	56.120	54.155	50.716	
127.5	54.400	58.698	60.847	60.356	57.777	60.356	58.698	54.400	
130.0	58.944	64.654	67.479	65.944	62.382	65.944	64.654	58.944	
132.5	65.821	72.820	76.382	73.496	69.382	73.496	72.820	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	375.20	N.A.	15.60
0-30	620.29	N.A.	25.70
0-40	778.99	N.A.	32.30
0-60	928.92	N.A.	38.50
0-80	937.82	N.A.	38.90
0-90	937.92	N.A.	38.90
10-90	820.19	N.A.	34.00
20-40	403.79	N.A.	16.70
20-50	501.64	N.A.	20.80
40-70	158.41	N.A.	6.60
60-80	8.90	N.A.	0.40
70-80	0.42	N.A.	0.00
80-90	0.10	N.A.	0.00
90-110	23.89	N.A.	1.00
90-120	59.88	N.A.	2.50
90-130	108.92	N.A.	4.50
90-150	336.45	N.A.	13.90
90-180	1474.45	N.A.	61.10
110-180	1450.57	N.A.	60.10
0-180	2412.37	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	117.73
10-20	257.47
20-30	245.09
30-40	158.70
40-50	97.85
50-60	52.09
60-70	8.48
70-80	0.42
80-90	0.10
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	105	105	105	105	95	95	95	95	77	77	77	61	61	61	46	46	46	39
1	97	93	90	87	88	85	83	80	70	68	67	56	55	54	43	43	42	36
2	90	84	79	74	82	77	73	69	64	61	58	52	50	48	40	39	38	33
3	83	75	69	64	76	69	64	60	58	54	51	47	45	43	38	36	35	31
4	77	68	62	57	71	63	57	53	53	49	46	44	41	39	35	34	32	28
5	72	62	55	50	66	57	52	47	49	44	41	41	38	35	33	31	30	26
6	67	57	50	45	61	53	47	42	45	41	37	38	35	32	31	29	27	25
7	63	52	45	40	58	48	43	38	42	37	34	35	32	30	29	27	26	23
8	59	48	41	37	54	45	39	35	39	34	31	33	30	27	27	25	24	22
9	55	45	38	34	51	42	36	32	36	32	29	31	28	25	26	24	22	20
10	52	41	35	31	48	39	33	29	34	30	27	29	26	24	25	23	21	19

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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	3.1	3.1	3.3	4.0	5.4	3.1	3.2	3.6	4.2	5.7
	3H	3.1	3.1	3.2	3.7	5.2	3.1	3.1	3.4	4.0	5.4
	4H	3.1	3.1	3.1	3.6	5.0	3.1	3.1	3.3	3.8	5.3
	6H	3.1	3.1	3.1	3.4	4.9	3.1	3.1	3.2	3.7	5.2
	8H	3.1	3.1	3.1	3.4	4.8	3.1	3.1	3.2	3.6	5.1
	12H	3.1	3.1	3.1	3.3	4.7	3.1	3.1	3.1	3.5	5.0

UGR Viewed Endwise

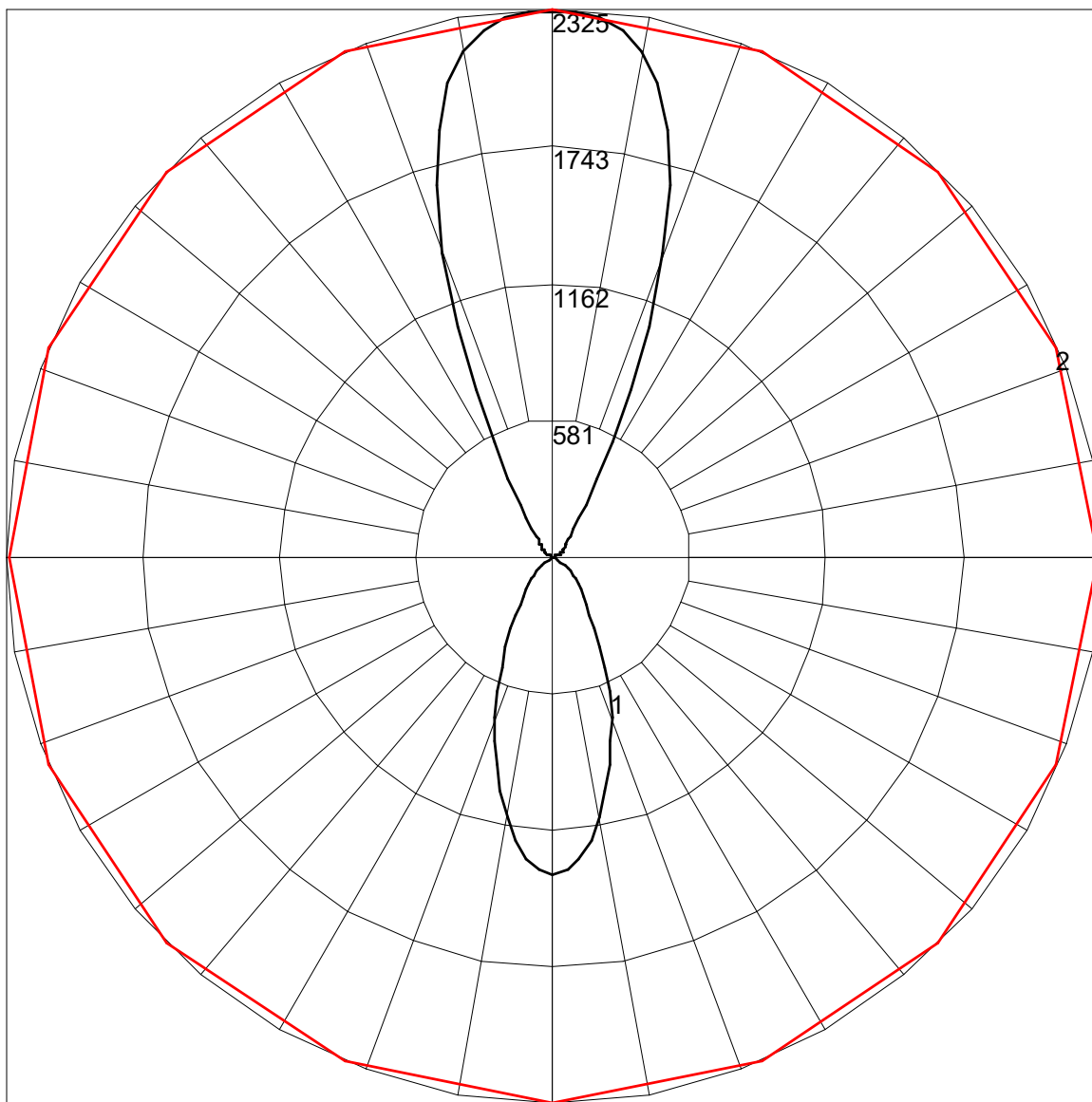
4H	2H	3.1	3.1	3.1	3.6	5.1	3.1	3.1	3.4	3.9	5.3
	3H	3.1	3.1	3.1	3.4	4.8	3.1	3.1	3.2	3.6	5.1
	4H	3.1	3.1	3.1	3.2	4.7	3.1	3.1	3.1	3.5	4.9
	6H	3.1	3.1	3.1	3.1	4.5	3.1	3.1	3.1	3.3	4.8
	8H	3.1	3.1	3.1	3.1	4.5	3.1	3.1	3.1	3.2	4.7
	12H	3.1	3.1	3.1	3.1	4.4	3.1	3.1	3.1	3.1	4.6
8H	4H	3.1	3.1	3.1	3.1	4.5	3.1	3.1	3.1	3.2	4.7
	6H	3.1	3.1	3.1	3.1	4.3	3.1	3.1	3.1	3.1	4.6
	8H	3.1	3.1	3.1	3.1	4.2	3.1	3.1	3.1	3.1	4.5
	12H	3.1	3.1	3.1	3.1	4.2	3.1	3.1	3.1	3.1	4.4
12H	4H	3.1	3.1	3.1	3.1	4.4	3.1	3.1	3.1	3.1	4.6
	6H	3.1	3.1	3.1	3.1	4.2	3.1	3.1	3.1	3.1	4.5
	8H	3.1	3.1	3.1	3.1	4.2	3.1	3.1	3.1	3.1	4.4

Maximum UGR = 5.7

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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.)