



IES INDOOR REPORT

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13537338.13 & #13257153.20

[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-RM-WHD-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	2751
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	120
Total Luminaire Watts	23
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	2775	2417	2786
55	1263	1057	1284
65	681	459	675
75	235	155	230
85	36	26	38

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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	3190.414	3190.414	3190.414	3190.414	3190.414	3190.414	3190.414	3190.414	3190.414
2.5	3147.039	3134.188	3139.007	3149.449	3155.072	3149.449	3139.007	3134.188	3147.039
5.0	3013.704	3001.655	3008.081	3016.114	3017.720	3016.114	3008.081	3001.655	3013.704
7.5	2812.094	2806.472	2813.701	2813.701	2812.094	2813.701	2813.701	2806.472	2812.094
10.0	2521.326	2522.130	2535.784	2526.949	2520.523	2526.949	2535.784	2522.130	2521.326
12.5	2109.271	2115.697	2135.778	2128.549	2114.894	2128.549	2135.778	2115.697	2109.271
15.0	1604.846	1624.926	1653.039	1647.416	1625.729	1647.416	1653.039	1624.926	1604.846
17.5	1123.713	1161.465	1199.216	1188.774	1158.252	1188.774	1199.216	1161.465	1123.713
20.0	772.382	815.274	861.058	839.371	807.242	839.371	861.058	815.274	772.382
22.5	569.888	603.383	650.131	617.359	589.728	617.359	650.131	603.383	569.888
25.0	455.027	481.775	523.382	486.674	459.285	486.674	523.382	481.775	455.027
27.5	372.375	399.846	439.846	400.650	371.251	400.650	439.846	399.846	372.375
30.0	300.326	329.804	372.616	330.367	302.173	330.367	372.616	329.804	300.326
32.5	242.012	267.635	311.491	269.803	245.466	269.803	311.491	267.635	242.012
35.0	196.549	217.594	256.551	220.887	201.529	220.887	256.551	217.594	196.549
37.5	168.034	179.923	209.723	184.019	169.962	184.019	209.723	179.923	168.034
40.0	145.946	153.738	173.015	155.745	146.268	155.745	173.015	153.738	145.946
42.5	125.384	132.933	144.902	133.576	125.544	133.576	144.902	132.933	125.384
45.0	106.347	114.380	123.697	114.540	106.748	114.540	123.697	114.380	106.347
47.5	89.239	97.110	105.062	97.351	89.720	97.351	105.062	97.110	89.239
50.0	74.218	81.447	87.953	81.848	75.022	81.848	87.953	81.447	74.218
52.5	62.089	68.033	72.853	68.596	63.053	68.596	72.853	68.033	62.089
55.0	52.853	56.869	60.001	57.591	53.736	57.591	60.001	56.869	52.853
57.5	45.864	48.113	49.479	48.595	46.506	48.595	49.479	48.113	45.864
60.0	40.402	41.125	40.884	41.366	40.402	41.366	40.884	41.125	40.402
62.5	35.182	35.182	33.816	35.101	35.020	35.101	33.816	35.182	35.182
65.0	30.041	29.639	27.791	29.478	29.800	29.478	27.791	29.639	30.041
67.5	24.981	24.498	22.571	24.257	24.740	24.257	22.571	24.498	24.981
70.0	20.081	19.599	17.912	19.358	19.840	19.358	17.912	19.599	20.081
72.5	15.342	14.940	13.655	14.699	15.181	14.699	13.655	14.940	15.342
75.0	10.602	10.602	9.719	10.282	10.361	10.282	9.719	10.602	10.602
77.5	5.060	6.266	6.426	6.104	5.944	6.104	6.426	6.266	5.060
80.0	3.695	3.775	4.016	3.856	3.856	3.856	4.016	3.775	3.695
82.5	2.570	2.651	2.651	2.651	2.651	2.651	2.651	2.651	2.570
85.0	1.606	1.687	1.606	1.606	1.687	1.606	1.606	1.687	1.606
87.5	0.723	0.723	0.723	0.803	0.803	0.803	0.723	0.723	0.723
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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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	714.81	N.A.	26.00
0-30	949.55	N.A.	34.50
0-40	1093.09	N.A.	39.70
0-60	1234.63	N.A.	44.90
0-80	1274.99	N.A.	46.30
0-90	1276.88	N.A.	46.40
10-90	1004.6	N.A.	36.50
20-40	378.28	N.A.	13.70
20-50	467.62	N.A.	17.00
40-70	170.72	N.A.	6.20
60-80	40.36	N.A.	1.50
70-80	11.18	N.A.	0.40
80-90	1.89	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.	4.00
90-150	336.45	N.A.	12.20
90-180	1474.45	N.A.	53.60
110-180	1450.57	N.A.	52.70
0-180	2751.34	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	272.28
10-20	442.53
20-30	234.74
30-40	143.54
40-50	89.35
50-60	52.19
60-70	29.18
70-80	11.18
80-90	1.89
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	81	81	81	66	66	66	53	53	53	46
1	99	96	93	90	91	88	86	83	74	73	71	62	61	60	50	49	49	43
2	92	87	82	78	85	80	76	73	68	65	63	57	55	54	47	46	45	41
3	86	79	73	68	80	73	68	64	63	59	57	53	51	49	45	43	42	38
4	81	72	66	61	75	67	62	58	58	54	51	50	47	45	42	41	39	36
5	76	66	60	55	70	62	56	52	54	50	47	47	44	42	40	38	37	34
6	71	61	55	50	66	58	52	48	51	46	43	44	41	39	38	36	35	32
7	67	57	51	46	62	54	48	44	48	43	40	42	39	36	36	34	33	30
8	63	53	47	43	59	50	45	41	45	41	38	40	37	34	35	33	31	29
9	60	50	44	40	56	47	42	38	42	38	35	38	35	32	33	31	30	28
10	57	47	41	37	53	45	39	36	40	36	33	36	33	31	32	30	28	27

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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	3.7	4.4	5.7	3.6	3.6	3.8	4.5	5.8
	3H	3.6	4.1	4.5	5.1	6.4	3.6	4.1	4.5	5.1	6.5
	4H	3.6	4.1	4.6	5.1	6.5	3.6	4.1	4.6	5.2	6.5
	6H	3.6	4.0	4.5	5.0	6.4	3.6	4.0	4.6	5.1	6.4
	8H	3.6	3.9	4.5	5.0	6.3	3.6	4.0	4.5	5.0	6.4
	12H	3.6	3.8	4.4	4.9	6.3	3.6	3.9	4.5	4.9	6.3

UGR Viewed Endwise

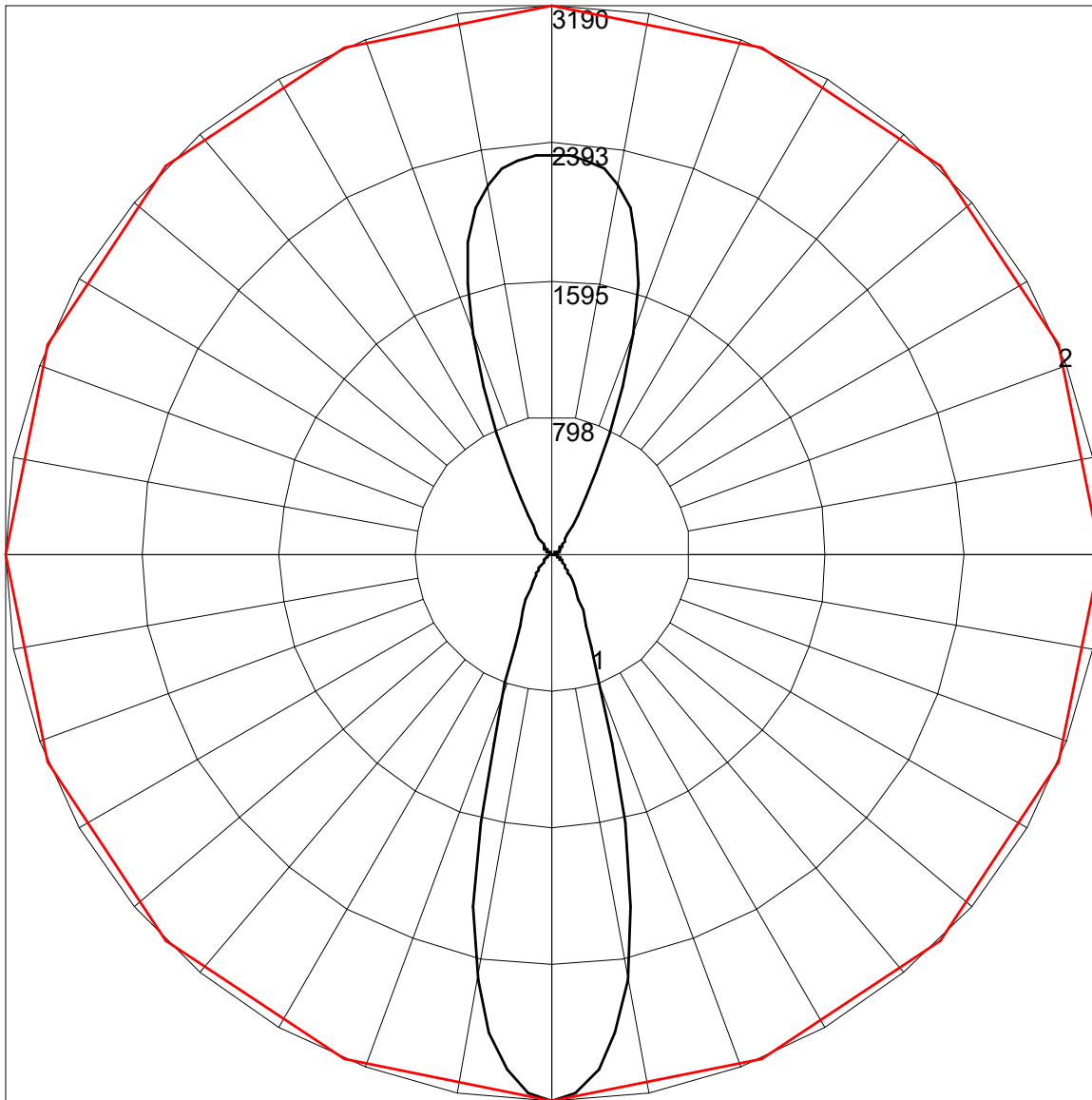
4H	2H	3.6	3.6	3.9	4.4	5.8	3.6	3.6	3.9	4.5	5.8
	3H	3.6	4.1	4.7	5.1	6.5	3.7	4.1	4.7	5.2	6.6
	4H	3.8	4.2	4.8	5.2	6.6	3.8	4.2	4.8	5.2	6.6
	6H	3.7	4.1	4.8	5.1	6.5	3.7	4.1	4.8	5.2	6.6
	8H	3.7	4.0	4.7	5.1	6.5	3.7	4.0	4.8	5.1	6.5
	12H	3.6	3.9	4.7	5.0	6.4	3.6	3.9	4.7	5.0	6.4
8H	4H	3.7	4.0	4.7	5.1	6.5	3.7	4.0	4.8	5.1	6.5
	6H	3.6	3.9	4.7	5.0	6.4	3.7	3.9	4.8	5.0	6.4
	8H	3.6	3.9	4.7	4.9	6.4	3.6	3.9	4.7	5.0	6.4
	12H	3.6	3.8	4.7	4.8	6.3	3.6	3.8	4.7	4.9	6.3
12H	4H	3.6	3.9	4.7	5.0	6.4	3.6	3.9	4.7	5.0	6.4
	6H	3.6	3.8	4.7	4.9	6.3	3.6	3.8	4.7	4.9	6.4
	8H	3.6	3.8	4.7	4.8	6.3	3.6	3.8	4.7	4.9	6.3

Maximum UGR = 6.6

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POLAR GRAPH



Maximum Candela = 3190.414 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.)