



IES INDOOR REPORT

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13537338.13 & #13257153.25

[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-LS-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	2844
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	124
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	1853	1625	1877
55	1004	823	1026
65	593	432	593
75	249	194	270
85	63	45	63

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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	13207.152	13207.152	13207.152	13207.152	13207.152	13207.152	13207.152	13207.152	13207.152
2.5	11796.770	11852.812	11992.916	12123.680	12161.041	12123.680	11992.916	11852.812	11796.770
5.0	8774.256	8900.350	9046.992	9151.603	9214.183	9151.603	9046.992	8900.350	8774.256
7.5	5489.281	5646.197	5744.270	5807.784	5875.034	5807.784	5744.270	5646.197	5489.281
10.0	3012.239	3147.673	3199.979	3240.142	3270.031	3240.142	3199.979	3147.673	3012.239
12.5	1582.243	1665.371	1685.920	1711.139	1701.798	1711.139	1685.920	1665.371	1582.243
15.0	900.403	943.368	958.312	960.180	946.170	960.180	958.312	943.368	900.403
17.5	594.042	621.128	638.875	622.062	601.514	622.062	638.875	621.128	594.042
20.0	438.993	462.344	488.496	467.014	438.059	467.014	488.496	462.344	438.993
22.5	348.392	370.809	400.698	370.809	338.118	370.809	400.698	370.809	348.392
25.0	274.604	300.757	336.250	299.823	272.736	299.823	336.250	300.757	274.604
27.5	218.562	244.715	283.944	244.715	215.760	244.715	283.944	244.715	218.562
30.0	179.333	198.948	237.243	196.146	175.597	196.146	237.243	198.948	179.333
32.5	149.444	163.455	196.146	163.455	150.378	163.455	196.146	163.455	149.444
35.0	129.830	139.170	159.719	139.170	129.830	139.170	159.719	139.170	129.830
37.5	113.951	120.490	132.632	120.490	113.017	120.490	132.632	120.490	113.951
40.0	98.073	105.545	112.083	105.545	98.073	105.545	112.083	105.545	98.073
42.5	83.128	91.535	96.205	91.535	84.062	91.535	96.205	91.535	83.128
45.0	70.986	78.458	83.128	79.392	71.920	79.392	83.128	78.458	70.986
47.5	60.712	67.250	70.986	67.250	62.580	67.250	70.986	67.250	60.712
50.0	53.240	58.844	61.646	58.844	54.174	58.844	61.646	58.844	53.240
52.5	46.701	51.372	53.240	52.306	48.569	52.306	53.240	51.372	46.701
55.0	42.031	44.833	46.701	45.767	42.965	45.767	46.701	44.833	42.031
57.5	37.361	40.163	40.163	40.163	38.295	40.163	40.163	40.163	37.361
60.0	34.559	35.493	35.493	36.427	34.559	36.427	35.493	35.493	34.559
62.5	29.889	31.757	30.823	30.823	29.889	30.823	30.823	31.757	29.889
65.0	26.153	27.087	26.153	27.087	26.153	27.087	26.153	27.087	26.153
67.5	21.483	23.351	22.417	23.351	22.417	23.351	22.417	23.351	21.483
70.0	17.747	19.615	18.681	19.615	18.681	19.615	18.681	19.615	17.747
72.5	14.944	14.944	14.944	15.878	15.878	15.878	14.944	14.944	14.944
75.0	11.208	12.142	12.142	12.142	12.142	12.142	12.142	12.142	11.208
77.5	8.406	9.340	9.340	9.340	9.340	9.340	9.340	9.340	8.406
80.0	6.538	6.538	6.538	7.472	7.472	7.472	6.538	6.538	6.538
82.5	3.736	4.670	4.670	4.670	4.670	4.670	4.670	4.670	3.736
85.0	2.802	2.802	2.802	2.802	2.802	2.802	2.802	2.802	2.802
87.5	0.934	0.934	0.934	1.868	0.934	1.868	0.934	0.934	0.934
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	992.49	N.A.	34.90
0-30	1134.24	N.A.	39.90
0-40	1225.08	N.A.	43.10
0-60	1326.77	N.A.	46.70
0-80	1366.39	N.A.	48.00
0-90	1369.64	N.A.	48.20
10-90	700.33	N.A.	24.60
20-40	232.59	N.A.	8.20
20-50	293.54	N.A.	10.30
40-70	128.26	N.A.	4.50
60-80	39.61	N.A.	1.40
70-80	13.05	N.A.	0.50
80-90	3.26	N.A.	0.10
90-110	23.89	N.A.	0.80
90-120	59.88	N.A.	2.10
90-130	108.92	N.A.	3.80
90-150	336.45	N.A.	11.80
90-180	1474.45	N.A.	51.80
110-180	1450.57	N.A.	51.00
0-180	2844.09	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	669.31
10-20	323.19
20-30	141.75
30-40	90.84
40-50	60.95
50-60	40.75
60-70	26.57
70-80	13.05
80-90	3.26
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	98	98	98	98	82	82	82	68	68	68	54	54	54	48
1	100	97	94	91	92	90	87	85	76	75	73	64	63	62	52	52	51	46
2	94	88	84	80	87	82	79	75	71	68	66	60	58	57	50	49	48	44
3	88	81	76	72	82	76	72	68	66	63	60	57	55	53	48	47	46	42
4	83	75	70	65	77	71	66	62	62	59	56	54	52	50	47	45	44	41
5	79	70	64	60	74	66	61	57	59	55	52	52	49	47	45	43	42	39
6	75	66	60	56	70	62	57	54	56	52	49	49	47	45	44	42	41	38
7	71	62	56	52	67	59	54	50	53	49	47	48	45	43	42	41	39	37
8	68	59	53	49	64	56	51	48	51	47	45	46	43	41	41	40	38	36
9	65	56	51	47	62	54	49	45	49	45	43	44	42	40	40	38	37	35
10	63	54	48	45	59	52	47	44	47	44	41	43	41	39	39	38	36	35

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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	3.7	3.7	3.7	3.7	4.3	3.7	3.7	3.7	3.7	4.3
	3H	3.7	3.7	3.7	3.8	5.2	3.7	3.7	3.7	3.9	5.2
	4H	3.7	3.7	3.7	4.0	5.3	3.7	3.7	3.7	4.1	5.4
	6H	3.7	3.7	3.7	4.0	5.3	3.7	3.7	3.7	4.1	5.5
	8H	3.7	3.7	3.7	4.0	5.3	3.7	3.7	3.7	4.1	5.4
	12H	3.7	3.7	3.7	3.9	5.3	3.7	3.7	3.7	4.0	5.4

UGR Viewed Endwise

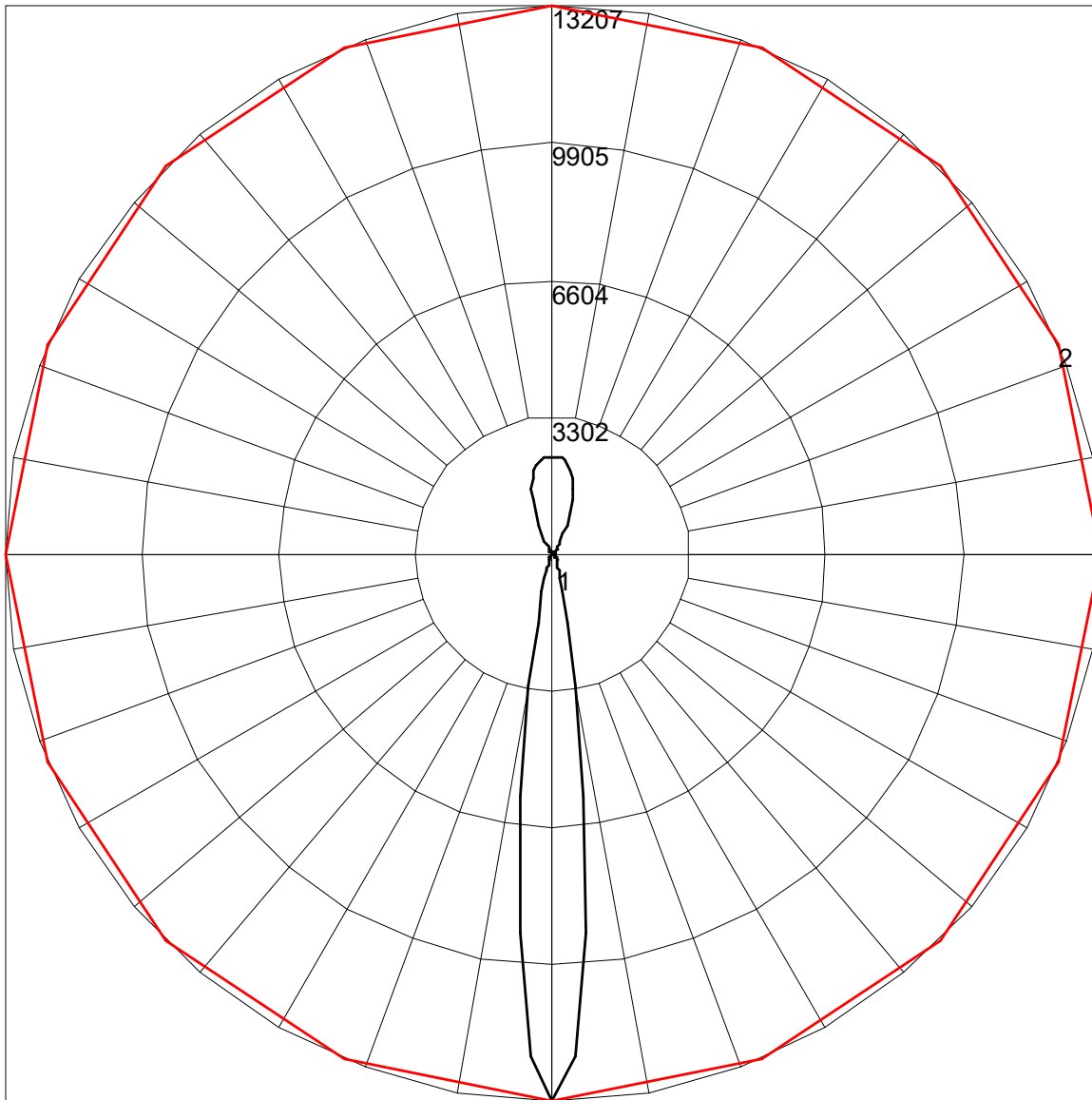
4H	2H	3.7	3.7	3.7	3.7	4.4	3.7	3.7	3.7	3.7	4.4
	3H	3.7	3.7	3.7	4.0	5.4	3.7	3.7	3.7	4.1	5.5
	4H	3.7	3.7	3.8	4.3	5.6	3.7	3.7	3.9	4.3	5.7
	6H	3.7	3.7	4.0	4.3	5.7	3.7	3.7	4.1	4.4	5.8
	8H	3.7	3.7	4.0	4.3	5.7	3.7	3.7	4.1	4.4	5.8
	12H	3.7	3.7	3.9	4.2	5.6	3.7	3.7	4.1	4.3	5.7
8H	4H	3.7	3.7	3.8	4.2	5.6	3.7	3.7	3.9	4.3	5.6
	6H	3.7	3.7	4.0	4.3	5.7	3.7	3.7	4.1	4.4	5.8
	8H	3.7	3.7	4.0	4.3	5.7	3.7	3.7	4.2	4.4	5.8
	12H	3.7	3.7	4.0	4.2	5.7	3.7	3.7	4.2	4.3	5.8
12H	4H	3.7	3.7	3.8	4.1	5.5	3.7	3.7	3.9	4.2	5.6
	6H	3.7	3.7	4.0	4.2	5.6	3.7	3.7	4.1	4.3	5.7
	8H	3.7	3.7	4.0	4.2	5.6	3.7	3.7	4.1	4.3	5.8

Maximum UGR = 5.8

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POLAR GRAPH



Maximum Candela = 13207.152 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.)