



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CSDI-P12-835U-P12-835D-XXX-POE PR-LW-WHU-LM-WHD-WM_IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13537338.13 & #13257153.19

[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-LM-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	2770
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	2776	2341	2789
55	1494	1208	1525
65	879	644	879
75	403	283	412
85	81	51	86

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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	3184.311	3184.311	3184.311	3184.311	3184.311	3184.311	3184.311	3184.311	3184.311
2.5	3144.166	3132.122	3134.531	3143.363	3147.377	3143.363	3134.531	3132.122	3144.166
5.0	3017.307	3007.672	3013.293	3019.716	3022.927	3019.716	3013.293	3007.672	3017.307
7.5	2837.457	2827.019	2831.034	2832.640	2831.837	2832.640	2831.034	2827.019	2837.457
10.0	2570.091	2564.470	2571.696	2562.061	2550.018	2562.061	2571.696	2564.470	2570.091
12.5	2154.990	2167.034	2187.909	2163.822	2138.129	2163.822	2187.909	2167.034	2154.990
15.0	1630.695	1662.008	1706.970	1675.657	1637.921	1675.657	1706.970	1662.008	1630.695
17.5	1129.684	1175.449	1238.878	1204.354	1159.391	1204.354	1238.878	1175.449	1129.684
20.0	764.765	814.143	883.193	843.048	796.640	843.048	883.193	814.143	764.765
22.5	552.076	594.308	657.577	611.250	568.214	611.250	657.577	594.308	552.076
25.0	426.984	463.194	522.770	470.099	429.713	470.099	522.770	463.194	426.984
27.5	336.256	371.663	430.115	374.072	334.569	374.072	430.115	371.663	336.256
30.0	265.680	297.716	355.124	299.322	267.447	299.322	355.124	297.716	265.680
32.5	217.988	239.425	288.001	243.279	221.601	243.279	288.001	239.425	217.988
35.0	186.273	199.602	231.477	203.616	188.281	203.616	231.477	199.602	186.273
37.5	163.150	171.821	189.726	174.390	163.150	174.390	189.726	171.821	163.150
40.0	142.596	150.143	160.098	151.347	142.596	151.347	160.098	150.143	142.596
42.5	123.326	131.355	137.617	132.158	123.566	132.158	137.617	131.355	123.326
45.0	106.385	114.414	119.793	115.297	106.867	115.297	119.793	114.414	106.385
47.5	91.852	99.078	104.458	100.202	92.735	100.202	104.458	99.078	91.852
50.0	79.728	85.830	90.568	87.115	80.933	87.115	90.568	85.830	79.728
52.5	70.173	74.911	78.684	76.436	71.539	76.436	78.684	74.911	70.173
55.0	62.546	66.159	68.567	67.524	63.831	67.524	68.567	66.159	62.546
57.5	56.284	58.612	59.897	59.816	57.327	59.816	59.897	58.612	56.284
60.0	50.743	52.028	52.349	52.911	50.904	52.911	52.349	52.028	50.743
62.5	44.721	45.846	45.445	46.248	44.721	46.248	45.445	45.846	44.721
65.0	38.780	39.583	39.021	39.744	38.780	39.744	39.021	39.583	38.780
67.5	33.160	33.481	33.000	33.882	33.240	33.882	33.000	33.481	33.160
70.0	27.861	27.941	27.459	28.422	28.021	28.422	27.459	27.941	27.861
72.5	22.802	22.802	22.321	23.284	23.124	23.284	22.321	22.802	22.802
75.0	18.146	18.146	17.745	18.467	18.547	18.467	17.745	18.146	18.146
77.5	13.890	13.810	13.489	14.051	14.211	14.051	13.489	13.810	13.890
80.0	10.036	9.876	9.635	10.117	10.438	10.117	9.635	9.876	10.036
82.5	6.584	6.343	6.182	6.584	6.905	6.584	6.182	6.343	6.584
85.0	3.613	3.372	3.212	3.532	3.854	3.532	3.212	3.372	3.613
87.5	0.643	0.884	0.963	1.044	1.124	1.044	0.963	0.884	0.643
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	54.155	50.716	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	724.07	N.A.	26.10
0-30	951.33	N.A.	34.30
0-40	1083.88	N.A.	39.10
0-60	1232.9	N.A.	44.50
0-80	1291.46	N.A.	46.60
0-90	1295.77	N.A.	46.80
10-90	1021.95	N.A.	36.90
20-40	359.80	N.A.	13.00
20-50	448.70	N.A.	16.20
40-70	188.13	N.A.	6.80
60-80	58.57	N.A.	2.10
70-80	19.45	N.A.	0.70
80-90	4.31	N.A.	0.20
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.	53.20
110-180	1450.57	N.A.	52.40
0-180	2770.23	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	273.83
10-20	450.24
20-30	227.25
30-40	132.55
40-50	88.90
50-60	60.13
60-70	39.11
70-80	19.45
80-90	4.31
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	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	49	49	43
2	92	86	81	77	85	80	76	72	68	65	63	57	55	54	47	46	45	40
3	86	78	73	68	79	73	68	64	63	59	56	53	51	49	44	43	42	38
4	80	72	65	61	74	67	62	57	58	54	51	50	47	45	42	40	39	35
5	75	66	59	55	70	62	56	52	54	50	47	47	44	41	40	38	36	33
6	71	61	54	50	66	57	52	47	50	46	43	44	41	39	38	36	34	32
7	67	57	50	46	62	54	48	44	47	43	40	42	39	36	36	34	33	30
8	63	53	47	42	59	50	45	41	45	40	37	40	36	34	35	33	31	29
9	60	50	44	39	56	47	42	38	42	38	35	38	34	32	33	31	29	28
10	57	47	41	37	53	45	39	36	40	36	33	36	33	31	32	30	28	26

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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	4.1	4.8	5.1	5.8	7.1	4.2	4.9	5.2	5.9	7.2
	3H	5.0	5.6	6.0	6.6	8.0	5.1	5.7	6.1	6.7	8.1
	4H	5.2	5.8	6.3	6.8	8.2	5.3	5.9	6.4	6.9	8.3
	6H	5.3	5.8	6.3	6.8	8.2	5.4	5.9	6.5	7.0	8.3
	8H	5.3	5.8	6.3	6.8	8.2	5.4	5.9	6.4	6.9	8.3
	12H	5.2	5.7	6.3	6.7	8.1	5.4	5.8	6.4	6.9	8.3

UGR Viewed Endwise

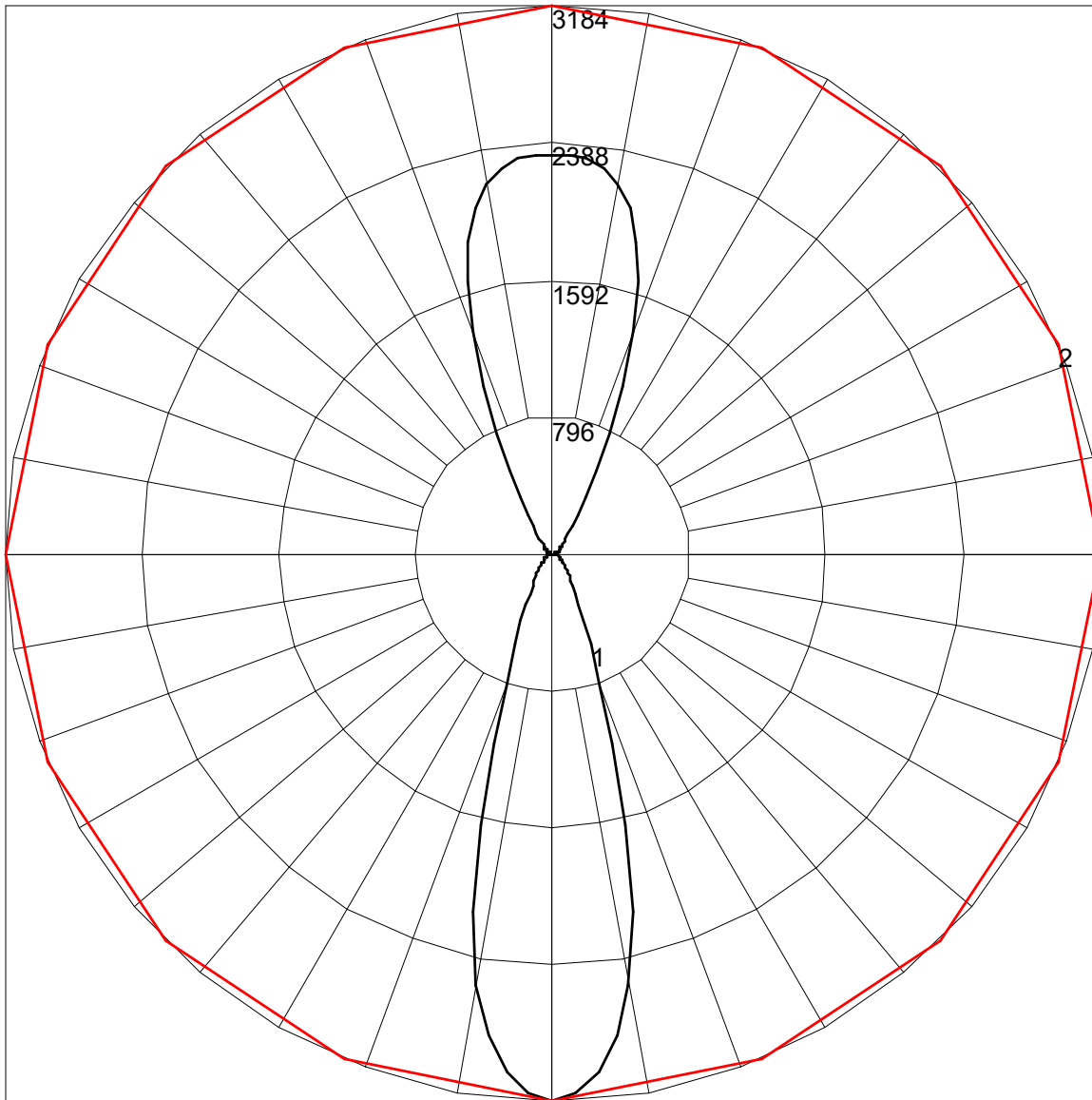
4H	2H	4.3	4.8	5.3	5.9	7.2	4.4	5.0	5.4	6.0	7.3
	3H	5.3	5.8	6.4	6.8	8.2	5.4	5.9	6.5	6.9	8.3
	4H	5.6	6.0	6.7	7.1	8.5	5.7	6.1	6.8	7.2	8.6
	6H	5.7	6.1	6.8	7.2	8.6	5.8	6.2	6.9	7.3	8.7
	8H	5.7	6.1	6.8	7.1	8.5	5.8	6.2	6.9	7.2	8.6
	12H	5.7	6.0	6.8	7.1	8.5	5.8	6.1	6.9	7.2	8.6
8H	4H	5.6	5.9	6.7	7.0	8.4	5.7	6.0	6.8	7.1	8.5
	6H	5.8	6.0	6.8	7.1	8.5	5.9	6.2	7.0	7.2	8.6
	8H	5.8	6.0	6.9	7.1	8.5	5.9	6.1	7.0	7.2	8.6
	12H	5.8	6.0	6.9	7.1	8.5	5.9	6.1	7.0	7.2	8.6
12H	4H	5.5	5.9	6.6	6.9	8.3	5.6	5.9	6.7	7.0	8.4
	6H	5.7	6.0	6.8	7.0	8.5	5.8	6.1	6.9	7.1	8.6
	8H	5.8	6.0	6.9	7.0	8.5	5.9	6.1	7.0	7.1	8.6

Maximum UGR = 8.7

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POLAR GRAPH



Maximum Candela = 3184.311 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.)