



IES INDOOR REPORT

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13537338.13 & #13257153.16

[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-RW-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	2776
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	121
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	2147	2189	2101
55	1108	883	1085
65	600	404	602
75	207	138	209
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	1498.374	1498.374	1498.374	1498.374	1498.374	1498.374	1498.374	1498.374	1498.374
2.5	1495.959	1502.400	1495.154	1489.518	1487.908	1489.518	1495.154	1502.400	1495.959
5.0	1481.466	1487.908	1481.466	1475.025	1473.415	1475.025	1481.466	1487.908	1481.466
7.5	1460.533	1466.169	1459.727	1454.091	1450.871	1454.091	1459.727	1466.169	1460.533
10.0	1432.353	1438.794	1432.353	1425.911	1423.496	1425.911	1432.353	1438.794	1432.353
12.5	1393.706	1400.952	1394.511	1388.875	1385.654	1388.875	1394.511	1400.952	1393.706
15.0	1341.371	1349.423	1344.592	1338.956	1334.125	1338.956	1344.592	1349.423	1341.371
17.5	1272.129	1280.985	1278.570	1272.934	1266.493	1272.934	1278.570	1280.985	1272.129
20.0	1179.537	1191.614	1194.835	1186.783	1175.511	1186.783	1194.835	1191.614	1179.537
22.5	1058.765	1076.479	1089.361	1074.063	1055.545	1074.063	1089.361	1076.479	1058.765
25.0	906.593	936.383	962.953	935.578	904.983	935.578	962.953	936.383	906.593
27.5	736.627	776.965	816.417	775.032	733.084	775.032	816.417	776.965	736.627
30.0	569.962	613.037	658.448	606.274	559.012	606.274	658.448	613.037	569.962
32.5	413.764	458.772	506.838	449.431	396.453	449.431	506.838	458.772	413.764
35.0	276.728	328.982	374.473	317.308	263.202	317.308	374.473	328.982	276.728
37.5	183.895	224.877	273.105	216.503	174.313	216.503	273.105	224.877	183.895
40.0	129.145	156.359	200.883	149.596	122.865	149.596	200.883	156.359	129.145
42.5	99.677	114.653	149.435	110.144	95.731	110.144	149.435	114.653	99.677
45.0	82.285	91.142	111.996	88.405	80.514	88.405	111.996	91.142	82.285
47.5	70.450	76.328	87.439	75.039	69.323	75.039	87.439	76.328	70.450
50.0	61.030	65.539	71.094	64.734	60.064	64.734	71.094	65.539	61.030
52.5	53.059	56.843	59.420	56.119	52.174	56.119	59.420	56.843	53.059
55.0	46.376	49.274	50.080	48.631	45.410	48.631	50.080	49.274	46.376
57.5	40.740	42.673	42.270	42.109	40.016	42.109	42.270	42.673	40.740
60.0	35.828	36.795	35.507	36.473	35.426	36.473	35.507	36.795	35.828
62.5	30.998	31.401	29.710	31.320	30.998	31.320	29.710	31.401	30.998
65.0	26.489	26.409	24.477	26.489	26.570	26.489	24.477	26.409	26.489
67.5	22.061	21.739	19.887	21.900	22.141	21.900	19.887	21.739	22.061
70.0	17.794	17.391	15.781	17.632	17.955	17.632	15.781	17.391	17.794
72.5	13.527	13.284	11.996	13.446	13.768	13.446	11.996	13.284	13.527
75.0	9.339	9.420	8.615	9.581	9.420	9.581	8.615	9.420	9.339
77.5	4.750	5.555	5.717	5.636	5.153	5.636	5.717	5.555	4.750
80.0	3.462	3.462	3.543	3.381	3.381	3.381	3.543	3.462	3.462
82.5	2.415	2.415	2.335	2.335	2.335	2.335	2.335	2.415	2.415
85.0	1.450	1.450	1.450	1.450	1.450	1.450	1.450	1.450	1.450
87.5	0.645	0.645	0.645	0.645	0.645	0.645	0.645	0.645	0.645
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	513.36	N.A.	18.50
0-30	931.79	N.A.	33.60
0-40	1143.78	N.A.	41.20
0-60	1264.35	N.A.	45.50
0-80	1300.29	N.A.	46.80
0-90	1301.97	N.A.	46.90
10-90	1162.22	N.A.	41.90
20-40	630.42	N.A.	22.70
20-50	706.97	N.A.	25.50
40-70	146.48	N.A.	5.30
60-80	35.93	N.A.	1.30
70-80	10.03	N.A.	0.40
80-90	1.68	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.	53.10
110-180	1450.57	N.A.	52.20
0-180	2776.42	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	139.75
10-20	373.62
20-30	418.42
30-40	211.99
40-50	76.55
50-60	44.02
60-70	25.91
70-80	10.03
80-90	1.68
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	49	49	44
2	92	86	81	77	85	80	76	72	68	65	63	57	55	53	47	46	45	40
3	86	78	72	67	79	73	67	63	62	59	56	53	50	48	44	42	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	65	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	47	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	23

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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	3.6	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	5.5	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

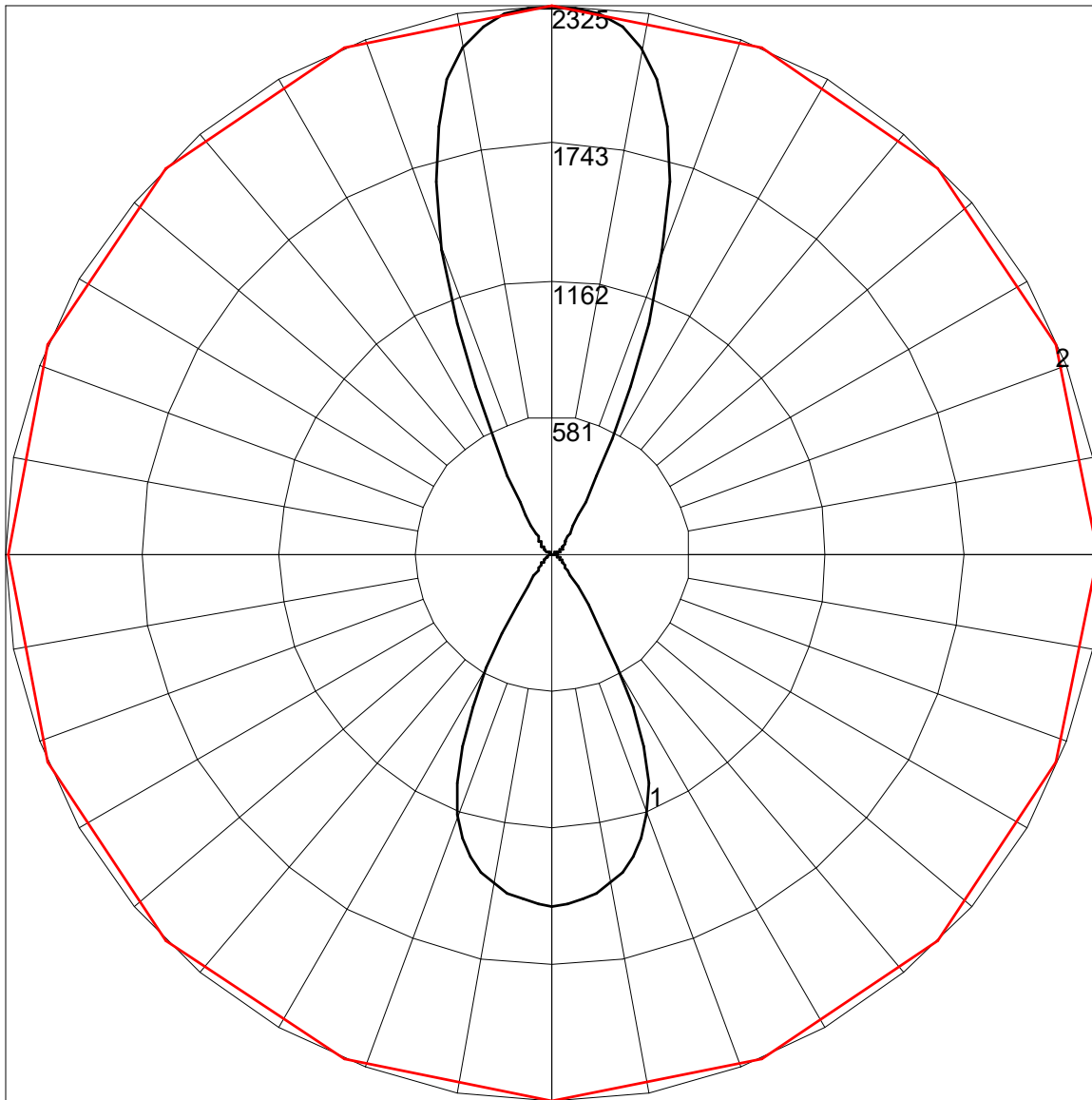
4H	2H	3.6	3.6	3.6	3.6	4.9	3.6	3.6	3.6	3.6	4.8
	3H	3.6	3.6	3.8	4.3	5.7	3.6	3.6	3.8	4.3	5.6
	4H	3.6	3.6	4.0	4.4	5.8	3.6	3.6	3.9	4.3	5.7
	6H	3.6	3.6	3.9	4.3	5.7	3.6	3.6	3.9	4.3	5.6
	8H	3.6	3.6	3.9	4.2	5.6	3.6	3.6	3.8	4.2	5.6
	12H	3.6	3.6	3.8	4.1	5.5	3.6	3.6	3.8	4.1	5.5
8H	4H	3.6	3.6	3.9	4.2	5.6	3.6	3.6	3.8	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	3.8	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	5.4	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.)