



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CSDI-P12-835U-P12-835D-XXX-POE PR-OW-CSU-LN-WHD-WM_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13537338.12 & #13257153.22

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 20-APR-2021

[MANUFAC] H E Williams Inc

[LUMCAT] 4CSDI-P12-835U-P12-835D-xxx-PoE PR-OW-CSU-LN-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] 24.9 C, 120 V, 0.1984 A, 23.44 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	2363
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	103
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	2797	2381	2753
55	1515	1183	1464
65	860	621	857
75	391	267	379
85	79	49	74

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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	4517.023	4517.023	4517.023	4517.023	4517.023	4517.023	4517.023	4517.023	4517.023
2.5	4353.641	4350.438	4354.442	4361.650	4362.451	4361.650	4354.442	4350.438	4353.641
5.0	3926.767	3917.957	3919.559	3918.758	3915.554	3918.758	3919.559	3917.957	3926.767
7.5	3275.643	3271.638	3263.629	3256.421	3252.417	3256.421	3263.629	3271.638	3275.643
10.0	2539.624	2533.217	2523.606	2508.389	2505.186	2508.389	2523.606	2533.217	2539.624
12.5	1851.659	1840.447	1830.836	1810.814	1805.207	1810.814	1830.836	1840.447	1851.659
15.0	1299.845	1293.438	1284.629	1259.801	1245.385	1259.801	1284.629	1293.438	1299.845
17.5	916.219	917.821	915.418	886.586	868.966	886.586	915.418	917.821	916.219
20.0	676.833	687.885	695.733	664.899	646.399	664.899	695.733	687.885	676.833
22.5	525.144	546.928	570.795	535.235	510.648	535.235	570.795	546.928	525.144
25.0	418.625	449.219	491.666	443.373	409.175	443.373	491.666	449.219	418.625
27.5	331.328	368.009	424.472	362.963	324.201	362.963	424.472	368.009	331.328
30.0	268.379	297.611	357.838	292.325	261.410	292.325	357.838	297.611	268.379
32.5	225.691	245.392	292.966	239.707	219.844	239.707	292.966	245.392	225.691
35.0	194.135	208.472	237.064	204.468	191.894	204.468	237.064	208.472	194.135
37.5	169.629	180.281	195.818	178.679	169.228	178.679	195.818	180.281	169.629
40.0	147.204	156.894	165.544	156.574	146.643	156.574	165.544	156.894	147.204
42.5	125.740	135.751	141.598	135.431	124.779	135.431	141.598	135.751	125.740
45.0	107.159	116.610	121.816	115.809	105.477	115.809	121.816	116.610	107.159
47.5	91.942	100.111	104.757	98.670	89.299	98.670	104.757	100.111	91.942
50.0	80.009	86.496	89.860	84.494	77.045	84.494	89.860	86.496	80.009
52.5	70.798	75.604	77.366	73.522	68.076	73.522	77.366	75.604	70.798
55.0	63.430	66.714	67.115	64.953	61.268	64.953	67.115	66.714	63.430
57.5	57.023	59.025	58.465	57.745	55.581	57.745	58.465	59.025	57.023
60.0	50.697	51.977	50.937	51.257	49.736	51.257	50.937	51.977	50.697
62.5	44.049	45.250	44.049	45.090	43.889	45.090	44.049	45.250	44.049
65.0	37.962	38.763	37.642	38.843	37.802	38.843	37.642	38.763	37.962
67.5	32.436	32.837	31.716	32.677	32.036	32.677	31.716	32.837	32.436
70.0	27.070	27.311	26.349	27.070	26.670	27.070	26.349	27.311	27.070
72.5	22.184	22.105	21.384	21.944	21.624	21.944	21.384	22.105	22.184
75.0	17.620	17.379	16.738	17.219	17.059	17.219	16.738	17.379	17.620
77.5	13.455	13.215	12.654	12.974	12.895	12.974	12.654	13.215	13.455
80.0	9.691	9.451	9.050	9.291	9.291	9.291	9.050	9.451	9.691
82.5	6.407	6.087	5.766	6.007	6.087	6.007	5.766	6.087	6.407
85.0	3.524	3.204	3.044	3.204	3.284	3.204	3.044	3.204	3.524
87.5	0.560	0.881	1.041	1.201	1.282	1.201	1.041	0.881	0.560
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92.5	0.735	0.980	1.593	3.003	2.881	3.003	1.593	0.980	0.735
95.0	0.858	1.165	1.716	3.064	3.003	3.064	1.716	1.165	0.858
97.5	0.980	1.287	1.900	3.187	3.064	3.187	1.900	1.287	0.980
100.0	1.103	1.471	2.083	3.309	3.187	3.309	2.083	1.471	1.103
102.5	1.226	1.593	2.268	3.432	3.371	3.432	2.268	1.593	1.226
105.0	1.410	1.838	2.451	3.616	3.493	3.616	2.451	1.838	1.410
107.5	1.655	2.083	2.696	3.799	3.739	3.799	2.696	2.083	1.655
110.0	1.900	2.390	3.126	3.984	3.984	3.984	3.126	2.390	1.900
112.5	2.268	2.758	4.290	4.290	4.290	4.290	2.758	2.268	2.268
115.0	2.696	4.412	7.721	7.048	4.780	7.048	7.721	4.412	2.696
117.5	4.351	8.702	14.707	12.746	9.989	12.746	8.702	4.351	4.351
120.0	12.440	18.445	25.002	22.551	16.852	22.551	18.445	12.440	12.440
122.5	23.225	32.600	38.668	35.236	29.414	35.236	32.600	23.225	23.225
125.0	40.322	49.943	53.680	50.739	44.550	50.739	49.943	40.322	40.322
127.5	60.851	68.387	69.430	67.775	62.995	67.775	69.430	68.387	60.851
130.0	81.808	86.526	86.526	85.791	83.462	85.791	86.526	86.526	81.808
132.5	105.216	105.768	105.462	105.339	106.810	105.339	105.462	105.768	105.216

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135.0	129.973	126.909	126.787	127.032	131.689	127.032	126.787	126.909	129.973
137.5	156.691	151.543	152.462	152.279	158.652	152.279	152.462	151.543	156.691
140.0	186.963	182.366	187.146	184.450	189.536	184.450	187.146	182.366	186.963
142.5	224.894	222.750	234.698	227.529	229.980	227.529	234.698	222.750	224.894
145.0	273.856	279.126	297.938	283.906	281.638	283.906	297.938	279.126	273.856
147.5	341.324	355.112	375.824	358.666	350.700	358.666	375.824	355.112	341.324
150.0	433.242	450.400	466.946	451.749	439.555	451.749	466.946	450.400	433.242
152.5	552.798	561.438	566.892	553.472	543.667	553.472	566.892	561.438	552.798
155.0	683.261	683.873	675.294	662.426	653.234	662.426	675.294	683.873	683.261
157.5	813.172	811.946	794.176	781.307	772.728	781.307	794.176	811.946	813.172
160.0	937.568	935.730	919.797	907.542	899.575	907.542	919.797	935.730	937.568
162.5	1060.739	1056.450	1042.355	1029.487	1020.908	1029.487	1042.355	1056.450	1060.739
165.0	1173.492	1174.105	1163.688	1149.594	1142.240	1149.594	1163.688	1174.105	1173.492
167.5	1276.441	1276.441	1270.313	1260.509	1254.381	1260.509	1270.313	1276.441	1276.441
170.0	1376.939	1373.875	1369.585	1363.457	1359.780	1363.457	1369.585	1373.875	1376.939
172.5	1457.214	1453.537	1451.086	1447.409	1445.571	1447.409	1451.086	1453.537	1457.214
175.0	1516.042	1512.978	1510.527	1508.688	1508.688	1508.688	1510.527	1512.978	1516.042
177.5	1550.358	1547.907	1545.456	1546.681	1546.069	1546.681	1545.456	1547.907	1550.358
180.0	1557.383	1557.383	1557.383	1557.383	1557.383	1557.383	1557.383	1557.383	1557.383

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Zone	Lumens	%Lamp	%Fixt
0-20	699.31	N.A.	29.60
0-30	908.87	N.A.	38.50
0-40	1044.03	N.A.	44.20
0-60	1193.23	N.A.	50.50
0-80	1249.82	N.A.	52.90
0-90	1253.88	N.A.	53.10
10-90	925.33	N.A.	39.20
20-40	344.73	N.A.	14.60
20-50	434.74	N.A.	18.40
40-70	187.32	N.A.	7.90
60-80	56.60	N.A.	2.40
70-80	18.48	N.A.	0.80
80-90	4.05	N.A.	0.20
90-110	4.69	N.A.	0.20
90-120	12.49	N.A.	0.50
90-130	57.24	N.A.	2.40
90-150	341.03	N.A.	14.40
90-180	1108.7	N.A.	46.90
110-180	1104.01	N.A.	46.70
0-180	2362.58	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	328.55
10-20	370.76
20-30	209.56
30-40	135.16
40-50	90.02
50-60	59.18
60-70	38.12
70-80	18.48
80-90	4.05
90-100	1.92
100-110	2.77
110-120	7.80
120-130	44.75
130-140	100.12
140-150	183.67
150-160	307.32
160-170	320.66
170-180	139.69

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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	108	108	108	108	100	100	100	100	85	85	85	71	71	71	59	59	59	53
1	101	97	94	92	93	91	88	86	78	76	75	66	65	64	56	55	54	49
2	94	88	84	80	87	83	79	75	72	69	66	62	60	58	53	51	50	46
3	88	81	75	70	82	76	71	67	66	63	60	58	55	53	50	48	47	43
4	83	74	68	63	77	70	64	60	62	58	55	54	51	49	47	45	44	40
5	78	69	62	57	73	65	59	55	58	53	50	51	48	46	45	43	41	38
6	73	64	57	53	69	60	55	51	54	50	47	48	45	43	43	41	39	36
7	69	60	53	49	65	57	51	47	51	47	44	46	43	40	41	39	37	35
8	66	56	50	45	62	53	48	44	48	44	41	44	40	38	39	37	35	33
9	63	53	47	43	59	50	45	41	46	42	39	42	39	36	38	35	34	32
10	60	50	44	40	56	48	43	39	44	40	37	40	37	35	36	34	32	31

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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	4.8	5.5	5.7	6.5	7.7	4.6	5.3	5.6	6.3	7.5
	3H	5.7	6.3	6.6	7.3	8.5	5.5	6.2	6.5	7.1	8.4
	4H	5.9	6.5	6.9	7.4	8.7	5.7	6.3	6.7	7.3	8.6
	6H	5.9	6.5	6.9	7.4	8.7	5.8	6.3	6.8	7.3	8.6
	8H	5.9	6.4	6.9	7.4	8.7	5.8	6.3	6.8	7.3	8.6
	12H	5.9	6.4	6.9	7.3	8.6	5.7	6.2	6.7	7.2	8.5

UGR Viewed Endwise

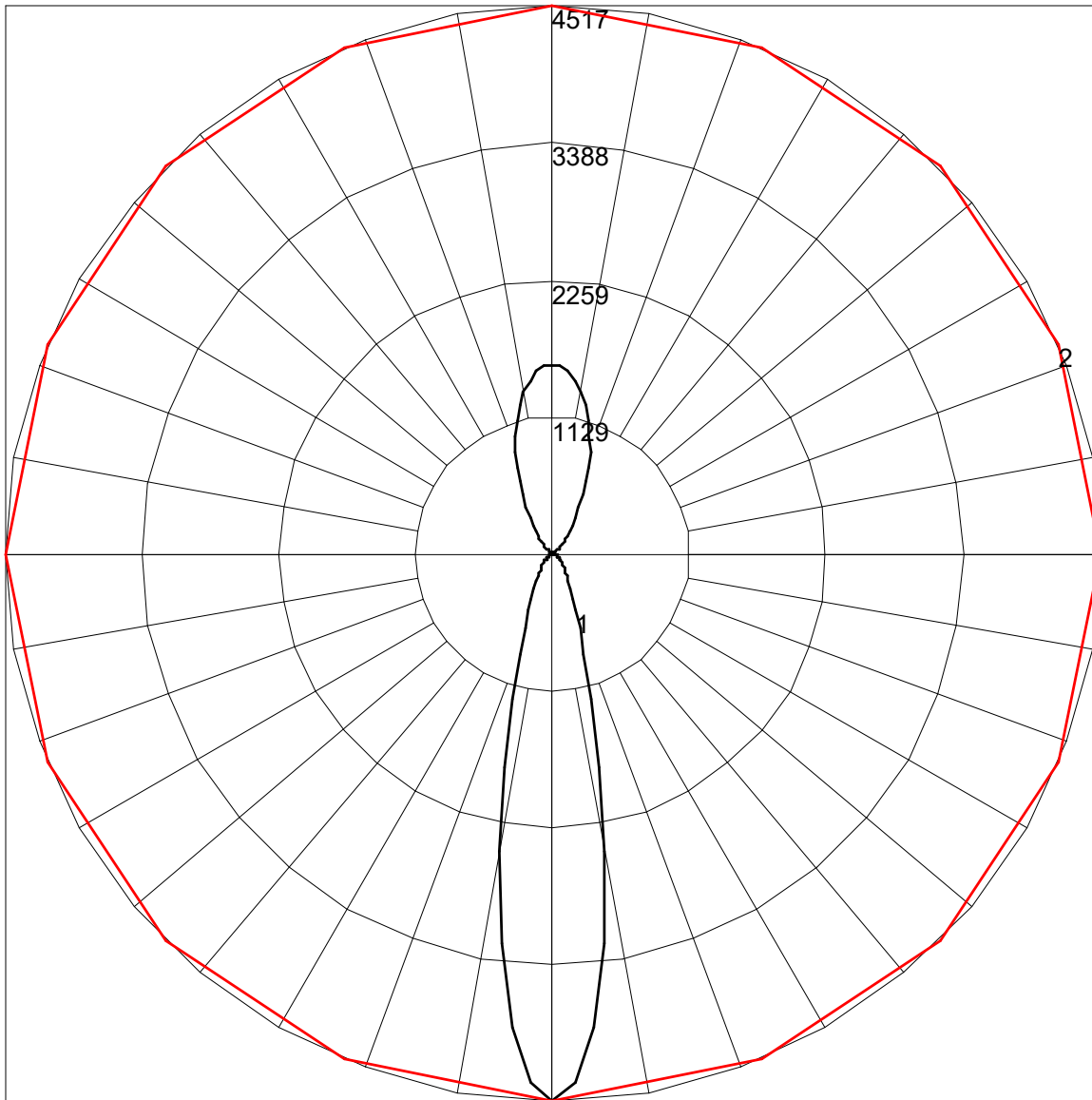
4H	2H	4.9	5.5	5.9	6.5	7.8	4.8	5.4	5.8	6.4	7.7
	3H	5.9	6.4	6.9	7.4	8.7	5.8	6.3	6.8	7.3	8.6
	4H	6.2	6.7	7.2	7.6	9.0	6.1	6.5	7.1	7.5	8.9
	6H	6.3	6.7	7.3	7.7	9.0	6.2	6.6	7.2	7.6	8.9
	8H	6.3	6.7	7.3	7.7	9.0	6.2	6.5	7.2	7.6	8.9
	12H	6.3	6.6	7.3	7.6	8.9	6.1	6.5	7.2	7.5	8.8
8H	4H	6.2	6.5	7.2	7.5	8.9	6.1	6.4	7.1	7.4	8.8
	6H	6.3	6.6	7.4	7.7	9.0	6.2	6.5	7.3	7.6	8.9
	8H	6.4	6.6	7.4	7.6	9.0	6.2	6.5	7.3	7.5	8.9
	12H	6.3	6.5	7.4	7.6	9.0	6.2	6.4	7.3	7.5	8.9
12H	4H	6.1	6.4	7.2	7.5	8.8	6.0	6.3	7.0	7.4	8.7
	6H	6.3	6.5	7.3	7.6	8.9	6.2	6.4	7.2	7.5	8.8
	8H	6.3	6.5	7.4	7.6	9.0	6.2	6.4	7.2	7.5	8.8

Maximum UGR = 9.0

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POLAR GRAPH



Maximum Candela = 4517.023 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.)