



IES INDOOR REPORT

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13537338.12 & #13257153.24

[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-OS-CSD-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	2047
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	89
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	3426	2257	3556
55	1356	981	1401
65	31	139	31
75	8	6	8
85	2	1	2

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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	1349.075	1349.075	1349.075	1349.075	1349.075	1349.075	1349.075	1349.075	1349.075
2.5	1334.549	1331.825	1331.825	1333.641	1335.457	1333.641	1331.825	1331.825	1334.549
5.0	1288.248	1285.525	1284.617	1284.617	1286.433	1284.617	1284.617	1285.525	1288.248
7.5	1219.251	1217.435	1214.712	1213.804	1214.712	1213.804	1214.712	1217.435	1219.251
10.0	1133.005	1133.005	1130.281	1127.558	1126.650	1127.558	1130.281	1133.005	1133.005
12.5	1033.141	1034.048	1033.141	1027.693	1024.062	1027.693	1033.141	1034.048	1033.141
15.0	926.014	929.645	929.645	923.290	917.843	923.290	929.645	929.645	926.014
17.5	823.698	828.691	831.324	825.332	821.428	825.332	831.324	828.691	823.698
20.0	728.555	734.093	735.999	730.461	725.559	730.461	735.999	734.093	728.555
22.5	632.957	638.949	637.678	632.413	625.513	632.413	637.678	638.949	632.957
25.0	532.549	540.447	538.631	531.641	523.288	531.641	538.631	540.447	532.549
27.5	438.767	449.117	449.570	441.037	431.776	441.037	449.570	449.117	438.767
30.0	357.423	368.317	374.037	363.143	354.336	363.143	374.037	368.317	357.423
32.5	292.057	300.319	309.761	298.594	292.602	298.594	309.761	300.319	292.057
35.0	242.398	246.574	255.562	247.300	245.484	247.300	255.562	246.574	242.398
37.5	204.903	204.812	209.352	207.082	209.715	207.082	209.352	204.812	204.903
40.0	175.670	171.494	170.314	174.944	181.208	174.944	170.314	171.494	175.670
42.5	151.612	144.985	139.174	149.161	157.241	149.161	139.174	144.985	151.612
45.0	131.276	123.378	115.479	127.826	136.269	127.826	115.479	123.378	131.276
47.5	112.393	104.857	96.959	109.034	116.569	109.034	96.959	104.857	112.393
50.0	93.872	88.153	81.798	91.784	97.050	91.784	81.798	88.153	93.872
52.5	75.171	72.901	68.362	75.988	77.622	75.988	68.362	72.901	75.171
55.0	56.741	58.648	55.652	61.099	58.648	61.099	55.652	58.648	56.741
57.5	39.855	44.757	43.123	46.664	40.672	46.664	43.123	44.757	39.855
60.0	23.150	30.595	30.867	31.412	22.787	31.412	30.867	30.595	23.150
62.5	8.806	15.434	19.065	14.980	7.898	14.980	19.065	15.434	8.806
65.0	1.362	3.995	8.443	3.450	1.362	3.450	8.443	3.995	1.362
67.5	0.999	0.908	2.270	0.908	0.999	0.908	2.270	0.908	0.999
70.0	0.726	0.635	0.817	0.726	0.726	0.726	0.817	0.635	0.726
72.5	0.545	0.454	0.454	0.545	0.545	0.545	0.454	0.454	0.545
75.0	0.363	0.363	0.363	0.363	0.363	0.363	0.363	0.363	0.363
77.5	0.272	0.272	0.272	0.272	0.272	0.272	0.272	0.272	0.272
80.0	0.182	0.182	0.182	0.182	0.182	0.182	0.182	0.182	0.182
82.5	0.091	0.091	0.091	0.091	0.182	0.091	0.091	0.091	0.091
85.0	0.091	0.091	0.091	0.091	0.091	0.091	0.091	0.091	0.091
87.5	0.091	0.091	0.091	0.091	0.091	0.091	0.091	0.091	0.091
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	4.290	2.758	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	14.707	8.702	4.351
120.0	12.440	18.445	25.002	22.551	16.852	22.551	25.002	18.445	12.440
122.5	23.225	32.600	38.668	35.236	29.414	35.236	38.668	32.600	23.225
125.0	40.322	49.943	53.680	50.739	44.550	50.739	53.680	49.943	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	375.20	N.A.	18.30
0-30	620.29	N.A.	30.30
0-40	778.99	N.A.	38.10
0-60	928.92	N.A.	45.40
0-80	937.82	N.A.	45.80
0-90	937.92	N.A.	45.80
10-90	820.19	N.A.	40.10
20-40	403.79	N.A.	19.70
20-50	501.64	N.A.	24.50
40-70	158.41	N.A.	7.70
60-80	8.90	N.A.	0.40
70-80	0.42	N.A.	0.00
80-90	0.10	N.A.	0.00
90-110	4.69	N.A.	0.20
90-120	12.49	N.A.	0.60
90-130	57.24	N.A.	2.80
90-150	341.03	N.A.	16.70
90-180	1108.7	N.A.	54.20
110-180	1104.01	N.A.	53.90
0-180	2046.62	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	117.73
10-20	257.47
20-30	245.09
30-40	158.70
40-50	97.85
50-60	52.09
60-70	8.48
70-80	0.42
80-90	0.10
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 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	97	97	97	97	81	81	81	66	66	66	52	52	52	46
1	99	95	92	89	91	88	85	83	74	72	71	61	60	59	49	49	48	43
2	92	86	81	77	84	79	75	72	67	65	62	56	54	53	46	45	44	39
3	85	78	72	67	79	72	67	63	62	58	55	52	50	48	43	42	40	36
4	79	71	64	59	73	66	60	56	57	53	49	48	45	43	40	39	37	34
5	74	64	58	53	68	60	54	50	52	48	45	45	42	39	38	36	34	31
6	69	59	52	47	64	55	49	45	48	44	40	42	39	36	36	33	32	29
7	65	54	48	43	60	51	45	41	45	40	37	39	36	33	34	31	30	27
8	61	50	44	39	57	47	42	37	42	37	34	37	33	31	32	29	28	25
9	57	47	40	36	53	44	38	34	39	35	32	34	31	29	30	28	26	24
10	54	44	37	33	50	41	36	32	37	32	29	32	29	27	28	26	24	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	3.0	3.7	4.0	4.7	6.0	3.3	3.9	4.3	4.9	6.3
	3H	2.8	3.4	3.8	4.4	5.8	3.1	3.7	4.1	4.7	6.1
	4H	2.7	3.3	3.7	4.3	5.7	3.0	3.5	4.0	4.5	5.9
	6H	2.6	3.1	3.6	4.1	5.5	2.8	3.4	3.9	4.4	5.8
	8H	2.5	3.0	3.6	4.1	5.4	2.8	3.3	3.8	4.3	5.7
	12H	2.5	2.9	3.5	4.0	5.4	2.7	3.2	3.8	4.2	5.6

UGR Viewed Endwise

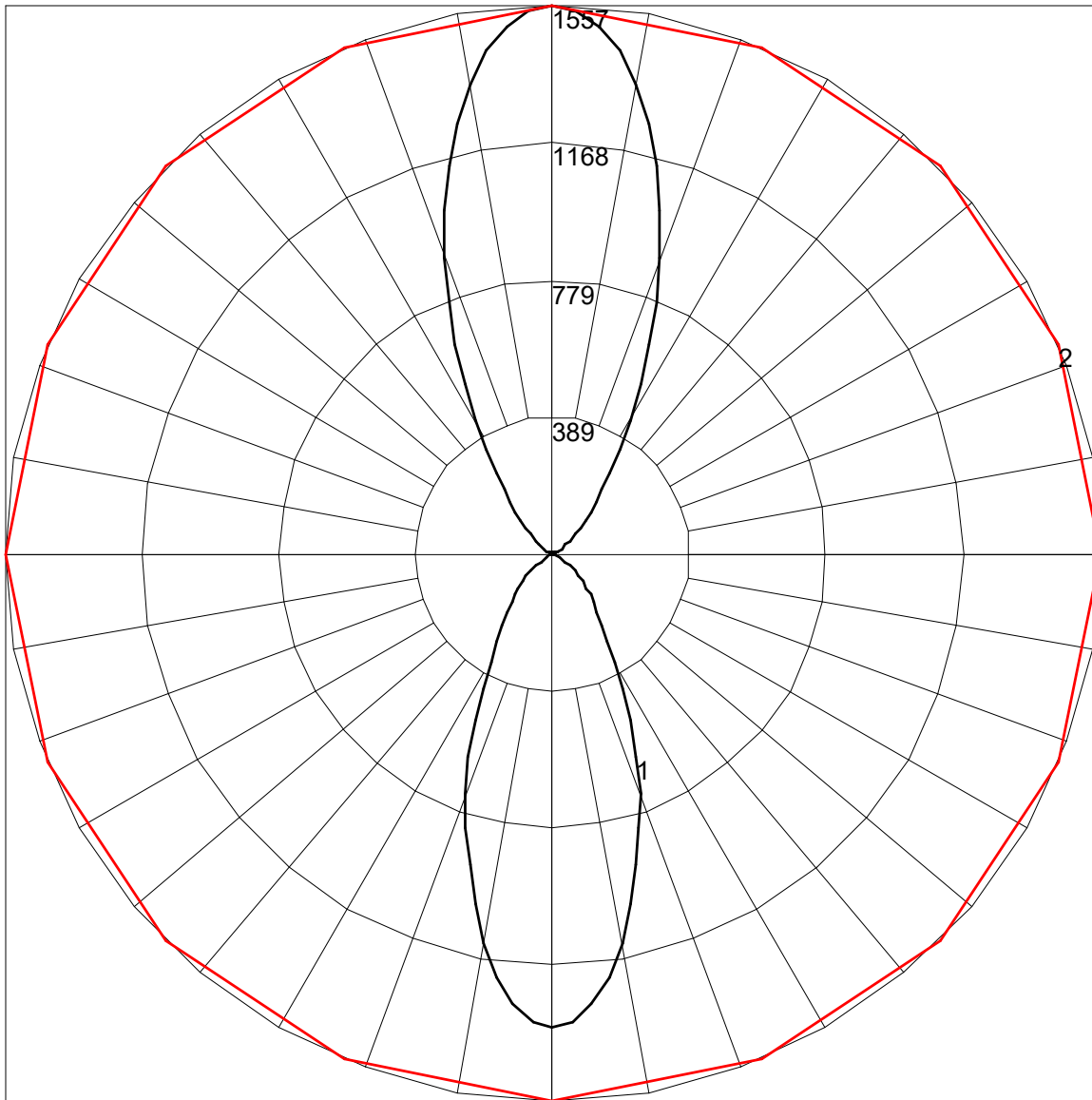
4H	2H	2.7	3.3	3.8	4.3	5.7	3.0	3.6	4.1	4.6	6.0
	3H	2.5	3.0	3.6	4.1	5.5	2.8	3.3	3.9	4.3	5.7
	4H	2.5	2.9	3.5	3.9	5.3	2.7	3.1	3.8	4.2	5.6
	6H	2.5	2.7	3.4	3.8	5.2	2.6	2.9	3.7	4.0	5.4
	8H	2.5	2.6	3.3	3.7	5.1	2.5	2.8	3.6	3.9	5.3
	12H	2.5	2.5	3.3	3.6	5.0	2.5	2.7	3.5	3.8	5.2
8H	4H	2.5	2.6	3.3	3.7	5.1	2.5	2.8	3.6	3.9	5.3
	6H	2.5	2.5	3.2	3.5	4.9	2.5	2.7	3.5	3.8	5.2
	8H	2.5	2.5	3.2	3.4	4.8	2.5	2.6	3.5	3.7	5.1
	12H	2.5	2.5	3.1	3.3	4.8	2.5	2.5	3.4	3.6	5.0
12H	4H	2.5	2.5	3.3	3.6	5.0	2.5	2.7	3.5	3.8	5.2
	6H	2.5	2.5	3.2	3.4	4.8	2.5	2.6	3.4	3.6	5.1
	8H	2.5	2.5	3.1	3.3	4.8	2.5	2.5	3.4	3.6	5.0

Maximum UGR = 6.3

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POLAR GRAPH



Maximum Candela = 1557.383 Located At Horizontal Angle = 0, Vertical Angle = 180

1 - Vertical Plane Through Horizontal Angles (90 - 270)

2 - Horizontal Cone Through Vertical Angle (180) (Through Max. Cd.)