



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CSDI-L12-835U-L12-835D-XXX-DIM1-UNV-OM-CSU-OS-CSD-WM_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13257153.18 and #13257153.24

[TESTLAB]

[ISSUE DATE] 9-FEB-2021

[MANUFAC] H E Williams Inc

[LUMCAT] 4CSDI-L12-835U-L12-835D-xxx-DIM1-UNV-OM-CSU-OS-CSD-WM

[MORE]

[LUMINAIRE] White formed aluminum housing, medium distrib anodized aluminum reflector trim w/clear cover glass up,

[MORE] narrow spot distrib anodized alum open reflector trim down

[LAMP] Two white LEDs (one up/one down)

[BALLAST] (2) ERP PHB30W-0700-42 Drivers

[OTHER]

[OTHER] This test was performed using the calibrated photodetector met

[MORE] hod of absolute photometry.

[CONVERT] Photometric web converted from original test data

[CONVERT] Luminaire test position and photometric web converted from original test data

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2129
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	62
Total Luminaire Watts	34.2953
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
Luminous Length (0-180)	0.21 ft
Luminous Width (90-270)	0.21 ft
Luminous Height	0.00 ft

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4CSDI-L12-835U-L12-835D-XXX-DIM1-UNV-OM-CSU-OS-CSD-WM_.IES****LUMINANCE DATA (cd/sq.m)**

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	50830	44714	52763
55	27085	26565	27995
65	882	5470	882
75	384	384	384
85	285	285	285

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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	1486.000	1486.000	1486.000	1486.000	1486.000	1486.000	1486.000	1486.000	1486.000
2.5	1470.000	1467.000	1467.000	1469.000	1471.000	1469.000	1467.000	1467.000	1470.000
5.0	1419.000	1416.000	1415.000	1415.000	1417.000	1415.000	1415.000	1416.000	1419.000
7.5	1343.000	1341.000	1338.000	1337.000	1338.000	1337.000	1338.000	1341.000	1343.000
10.0	1248.000	1248.000	1245.000	1242.000	1241.000	1242.000	1245.000	1248.000	1248.000
12.5	1138.000	1139.000	1138.000	1132.000	1128.000	1132.000	1138.000	1139.000	1138.000
15.0	1020.000	1024.000	1024.000	1017.000	1011.000	1017.000	1024.000	1024.000	1020.000
17.5	907.300	912.800	915.700	909.100	904.800	909.100	915.700	912.800	907.300
20.0	802.500	808.600	810.700	804.600	799.200	804.600	810.700	808.600	802.500
22.5	697.200	703.800	702.400	696.600	689.000	696.600	702.400	703.800	697.200
25.0	586.600	595.300	593.300	585.600	576.400	585.600	593.300	595.300	586.600
27.5	483.300	494.700	495.200	485.800	475.600	485.800	495.200	494.700	483.300
30.0	393.700	405.700	412.000	400.000	390.300	400.000	412.000	405.700	393.700
32.5	321.700	330.800	341.200	328.900	322.300	328.900	341.200	330.800	321.700
35.0	267.000	271.600	281.500	272.400	270.400	272.400	281.500	271.600	267.000
37.5	225.700	225.600	230.600	228.100	231.000	228.100	230.600	225.600	225.700
40.0	193.500	188.900	187.600	192.700	199.600	192.700	187.600	188.900	193.500
42.5	167.000	159.700	153.300	164.300	173.200	164.300	153.300	159.700	167.000
45.0	144.600	135.900	127.200	140.800	150.100	140.800	127.200	135.900	144.600
47.5	123.800	115.500	106.800	120.100	128.400	120.100	106.800	115.500	123.800
50.0	103.400	97.100	90.100	101.100	106.900	101.100	90.100	97.100	103.400
52.5	82.800	80.300	75.300	83.700	85.500	83.700	75.300	80.300	82.800
55.0	62.500	64.600	61.300	67.300	64.600	67.300	61.300	64.600	62.500
57.5	43.900	49.300	47.500	51.400	44.800	51.400	47.500	49.300	43.900
60.0	25.500	33.700	34.000	34.600	25.100	34.600	34.000	33.700	25.500
62.5	9.700	17.000	21.000	16.500	8.700	16.500	21.000	17.000	9.700
65.0	1.500	4.400	9.300	3.800	1.500	3.800	9.300	4.400	1.500
67.5	1.100	1.000	2.500	1.000	1.100	1.000	2.500	1.000	1.100
70.0	0.800	0.700	0.900	0.800	0.800	0.800	0.900	0.700	0.800
72.5	0.600	0.500	0.500	0.600	0.600	0.600	0.500	0.500	0.600
75.0	0.400	0.400	0.400	0.400	0.400	0.400	0.400	0.400	0.400
77.5	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300
80.0	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
82.5	0.100	0.100	0.100	0.100	0.200	0.100	0.100	0.100	0.100
85.0	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
87.5	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92.5	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
95.0	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
97.5	0.199	0.199	0.199	0.199	0.199	0.199	0.199	0.199	0.199
100.0	0.199	0.199	0.199	0.199	0.299	0.199	0.199	0.199	0.199
102.5	0.299	0.299	0.299	0.299	0.398	0.299	0.299	0.299	0.299
105.0	0.498	0.498	0.498	0.498	0.498	0.498	0.498	0.498	0.498
107.5	0.597	0.597	0.597	0.597	0.697	0.597	0.597	0.597	0.597
110.0	0.896	0.796	1.095	0.896	0.896	0.896	1.095	0.796	0.896
112.5	1.194	1.095	3.682	1.194	1.294	1.194	3.682	1.095	1.194
115.0	1.592	4.975	11.642	5.373	1.692	5.373	11.642	4.975	1.592
117.5	11.144	19.701	23.681	20.000	10.348	20.000	23.681	19.701	11.144
120.0	29.950	37.014	37.213	38.407	30.149	38.407	37.213	37.014	29.950
122.5	49.153	53.233	51.740	55.720	51.044	55.720	51.740	53.233	49.153
125.0	68.854	69.750	66.964	73.232	71.740	73.232	66.964	69.750	68.854
127.5	90.147	86.963	82.784	91.341	93.829	91.341	82.784	86.963	90.147
130.0	111.938	105.868	99.600	110.744	116.813	110.744	99.600	105.868	111.938
132.5	134.126	126.863	118.803	132.236	140.594	132.236	118.803	126.863	134.126

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CANDELA TABULATION - (Cont.)

135.0	157.509	150.444	141.887	156.016	165.170	156.016	141.887	150.444	157.509
137.5	183.478	178.006	171.837	183.777	191.836	183.777	171.837	178.006	183.478
140.0	214.821	212.134	211.836	217.408	222.880	217.408	211.836	212.134	214.821
142.5	253.228	254.919	263.476	258.999	260.193	258.999	263.476	254.919	253.228
145.0	300.888	308.550	324.967	310.938	306.560	310.938	324.967	308.550	300.888
147.5	362.280	376.409	395.115	377.006	366.558	377.006	395.115	376.409	362.280
150.0	441.084	459.491	473.322	458.098	443.074	458.098	473.322	459.491	441.084
152.5	536.504	552.225	557.897	549.539	534.614	549.539	557.897	552.225	536.504
155.0	638.094	647.646	649.636	645.059	633.915	645.059	649.636	647.646	638.094
157.5	735.206	742.867	745.255	740.877	731.027	740.877	745.255	742.867	735.206
160.0	831.223	839.084	843.263	838.288	829.532	838.288	843.263	839.084	831.223
162.5	930.126	937.489	943.260	936.793	930.226	936.793	943.260	937.489	930.126
165.0	1028.830	1033.805	1040.770	1033.805	1027.835	1033.805	1040.770	1033.805	1028.830
167.5	1122.360	1125.345	1129.325	1124.350	1121.365	1124.350	1129.325	1125.345	1122.360
170.0	1206.935	1207.930	1206.935	1206.935	1205.940	1206.935	1206.935	1207.930	1206.935
172.5	1276.585	1276.585	1274.595	1274.595	1275.590	1274.595	1274.595	1276.585	1276.585
175.0	1330.315	1331.310	1329.320	1329.320	1330.315	1329.320	1329.320	1331.310	1330.315
177.5	1368.125	1368.125	1365.140	1366.135	1367.130	1366.135	1365.140	1368.125	1368.125
180.0	1379.000	1379.000	1379.000	1379.000	1379.000	1379.000	1379.000	1379.000	1379.000

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Zone	Lumens	%Lamp	%Fixt
0-20	413.28	N.A.	19.40
0-30	683.24	N.A.	32.10
0-40	858.05	N.A.	40.30
0-60	1023.2	N.A.	48.10
0-80	1033.01	N.A.	48.50
0-90	1033.12	N.A.	48.50
10-90	903.43	N.A.	42.40
20-40	444.77	N.A.	20.90
20-50	552.55	N.A.	26.00
40-70	174.49	N.A.	8.20
60-80	9.80	N.A.	0.50
70-80	0.46	N.A.	0.00
80-90	0.11	N.A.	0.00
90-110	0.66	N.A.	0.00
90-120	11.49	N.A.	0.50
90-130	74.28	N.A.	3.50
90-150	392.69	N.A.	18.40
90-180	1095.83	N.A.	51.50
110-180	1095.17	N.A.	51.40
0-180	2128.95	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	129.68
10-20	283.60
20-30	269.96
30-40	174.81
40-50	107.78
50-60	57.37
60-70	9.34
70-80	0.46
80-90	0.11
90-100	0.14
100-110	0.52
110-120	10.83
120-130	62.79
130-140	119.48
140-150	198.92
150-160	293.61
160-170	286.51
170-180	123.03

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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	107	107	107	107	98	98	98	98	83	83	83	68	68	68	55	55	55	49
1	100	96	93	90	92	89	86	84	75	74	72	63	62	61	52	51	50	45
2	93	87	82	78	85	80	76	73	69	66	63	58	56	55	48	47	46	42
3	86	78	73	68	80	73	68	64	63	59	56	54	51	49	45	44	42	38
4	80	71	65	60	74	67	61	57	58	54	51	50	47	45	42	40	39	36
5	75	65	59	54	70	61	55	51	54	49	46	46	43	41	40	38	36	33
6	70	60	53	48	65	56	50	46	50	45	42	43	40	38	37	35	33	31
7	66	55	49	44	61	52	46	42	46	42	38	41	37	35	35	33	31	29
8	62	51	45	40	58	48	43	38	43	39	35	38	35	32	33	31	29	27
9	58	48	41	37	54	45	39	35	40	36	33	36	32	30	32	29	27	25
10	55	44	38	34	51	42	37	33	38	33	30	34	30	28	30	27	26	24

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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	14.7	15.4	15.7	16.4	17.7	14.9	15.6	16.0	16.6	17.9
	3H	14.5	15.1	15.5	16.1	17.4	14.7	15.4	15.8	16.4	17.7
	4H	14.4	15.0	15.4	16.0	17.3	14.6	15.2	15.7	16.2	17.6
	6H	14.3	14.8	15.3	15.8	17.2	14.5	15.1	15.6	16.1	17.4
	8H	14.2	14.7	15.3	15.7	17.1	14.5	15.0	15.5	16.0	17.3
	12H	14.1	14.6	15.2	15.6	17.0	14.4	14.9	15.5	15.9	17.3

UGR Viewed Endwise

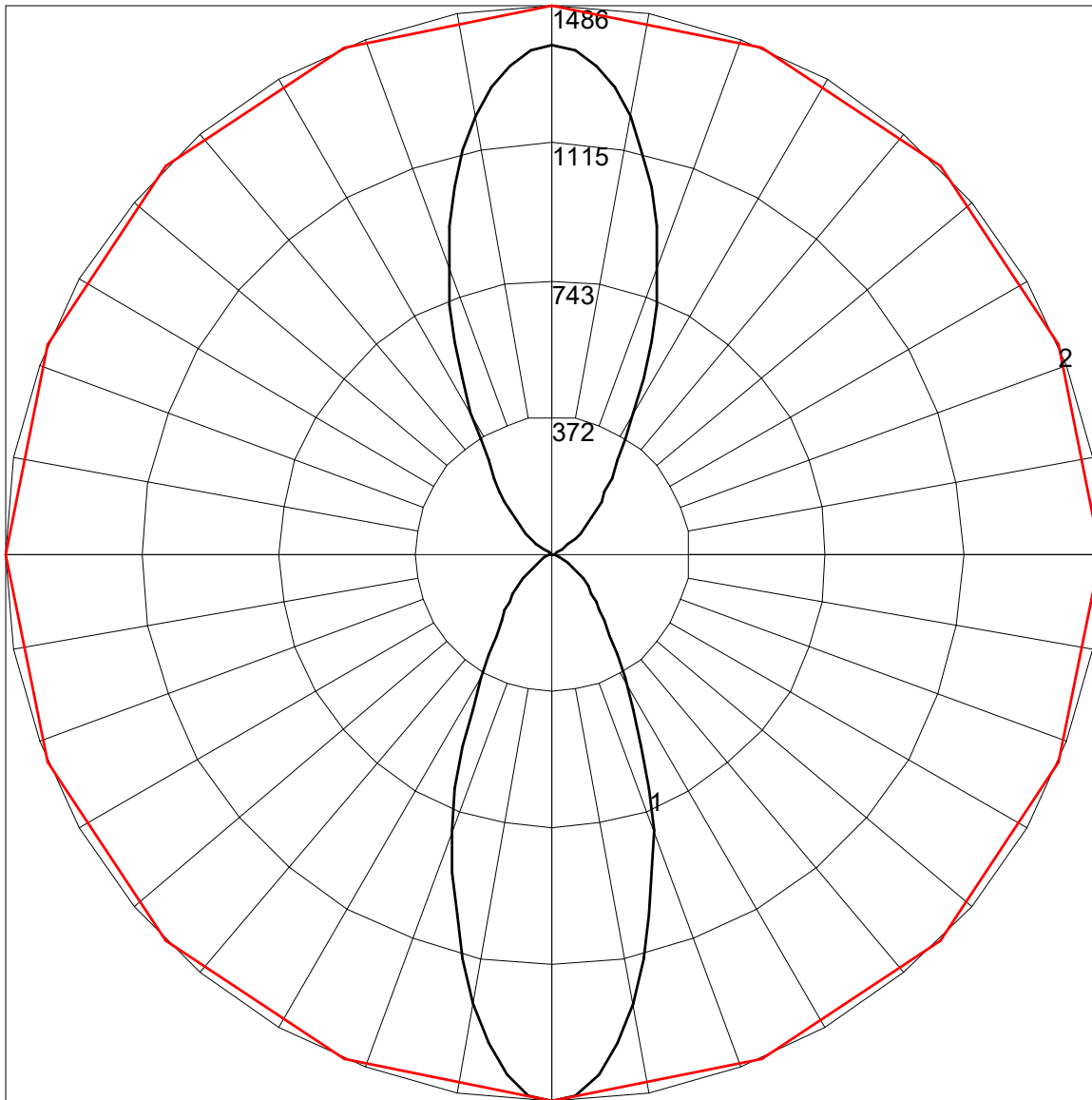
4H	2H	14.5	15.0	15.5	16.0	17.4	14.7	15.3	15.7	16.3	17.6
	3H	14.3	14.7	15.3	15.8	17.1	14.5	15.0	15.5	16.0	17.4
	4H	14.1	14.6	15.2	15.6	17.0	14.4	14.8	15.4	15.9	17.2
	6H	14.0	14.4	15.1	15.4	16.8	14.3	14.7	15.3	15.7	17.1
	8H	14.0	14.3	15.0	15.4	16.7	14.2	14.6	15.3	15.6	17.0
	12H	13.9	14.2	15.0	15.3	16.6	14.1	14.5	15.2	15.5	16.9
8H	4H	14.0	14.3	15.0	15.4	16.7	14.2	14.6	15.3	15.6	17.0
	6H	13.9	14.1	14.9	15.2	16.6	14.1	14.4	15.2	15.5	16.8
	8H	13.8	14.0	14.9	15.1	16.5	14.0	14.3	15.1	15.4	16.8
	12H	13.7	13.9	14.8	15.0	16.4	14.0	14.2	15.1	15.3	16.7
12H	4H	13.9	14.2	15.0	15.3	16.6	14.1	14.5	15.2	15.5	16.9
	6H	13.8	14.0	14.9	15.1	16.5	14.0	14.3	15.1	15.3	16.8
	8H	13.7	13.9	14.8	15.0	16.4	14.0	14.2	15.1	15.3	16.7

Maximum UGR = 17.9

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POLAR GRAPH



Maximum Candela = 1486 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.)