



IES INDOOR REPORT

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13537338.13 and #13257153.24

[TESTLAB]

[ISSUE DATE] 8-FEB-2021

[MANUFAC] H E Williams Inc

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

[MORE]

[LUMINAIRE] White formed aluminum housing, wide distrib white painted flush prismatic lens trim 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

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2508
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	73
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 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	3774	2486	3917
55	1493	1080	1543
65	34	153	34
75	9	6	9
85	2	2	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	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	0.737	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	54.155	50.716
127.5	54.400	58.698	60.847	60.356	57.777	60.356	60.847	58.698	54.400
130.0	58.944	64.654	67.479	65.944	62.382	65.944	67.479	64.654	58.944
132.5	65.821	72.820	76.382	73.496	69.382	73.496	76.382	72.820	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	413.28	N.A.	16.50
0-30	683.24	N.A.	27.20
0-40	858.05	N.A.	34.20
0-60	1023.2	N.A.	40.80
0-80	1033.01	N.A.	41.20
0-90	1033.12	N.A.	41.20
10-90	903.43	N.A.	36.00
20-40	444.77	N.A.	17.70
20-50	552.55	N.A.	22.00
40-70	174.49	N.A.	7.00
60-80	9.80	N.A.	0.40
70-80	0.46	N.A.	0.00
80-90	0.11	N.A.	0.00
90-110	23.89	N.A.	1.00
90-120	59.88	N.A.	2.40
90-130	108.92	N.A.	4.30
90-150	336.45	N.A.	13.40
90-180	1474.45	N.A.	58.80
110-180	1450.57	N.A.	57.80
0-180	2507.57	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	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	105	105	105	105	96	96	96	96	78	78	78	63	63	63	48	48	48	41
1	98	94	91	88	89	86	83	81	71	70	68	58	57	56	45	45	44	38
2	90	84	79	75	83	78	73	70	65	62	59	53	51	50	42	41	40	35
3	84	76	70	65	77	70	65	61	59	56	53	49	47	45	39	38	37	33
4	78	69	62	57	72	64	58	54	54	50	47	45	43	40	37	35	34	30
5	73	63	56	51	67	58	52	48	50	46	42	42	39	37	35	33	31	28
6	68	57	51	46	62	54	48	43	46	42	38	39	36	34	32	30	29	26
7	63	53	46	41	58	49	43	39	43	38	35	36	33	31	31	28	27	24
8	59	49	42	38	55	46	40	36	40	35	32	34	31	29	29	27	25	23
9	56	45	39	34	52	42	37	33	37	33	30	32	29	27	27	25	24	21
10	53	42	36	32	49	40	34	30	35	30	28	30	27	25	26	24	22	20

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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	3.2	3.5	3.9	4.5	5.9	3.2	3.8	4.2	4.8	6.2
	3H	3.2	3.2	3.7	4.3	5.7	3.2	3.5	4.0	4.5	6.0
	4H	3.2	3.2	3.6	4.1	5.6	3.2	3.3	3.9	4.4	5.8
	6H	3.2	3.2	3.5	4.0	5.4	3.2	3.2	3.8	4.2	5.7
	8H	3.2	3.2	3.4	3.9	5.3	3.2	3.2	3.7	4.2	5.6
	12H	3.2	3.2	3.4	3.8	5.3	3.2	3.2	3.7	4.1	5.5

UGR Viewed Endwise

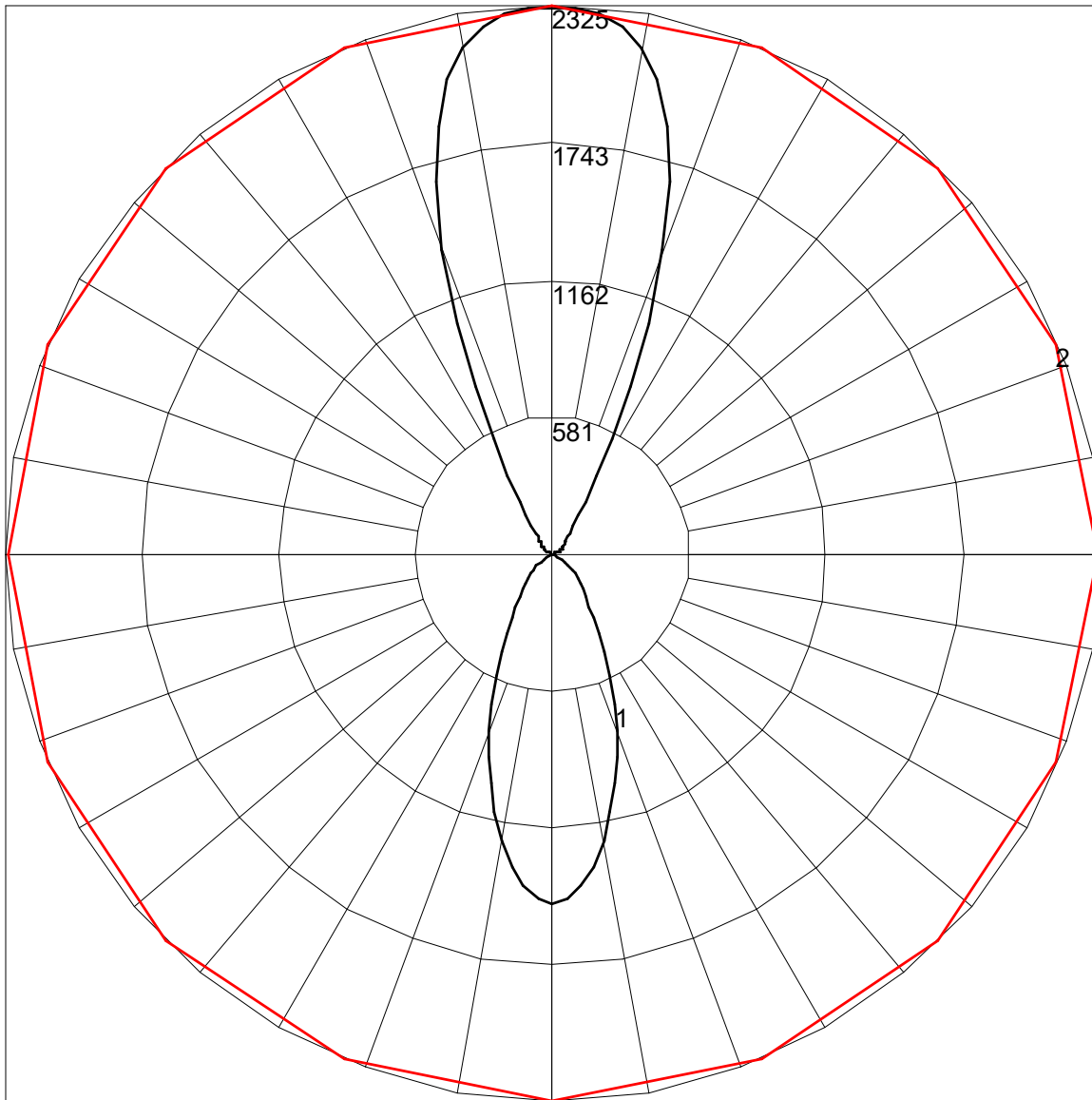
4H	2H	3.2	3.2	3.7	4.2	5.6	3.2	3.4	3.9	4.4	5.9
	3H	3.2	3.2	3.5	3.9	5.4	3.2	3.2	3.7	4.2	5.6
	4H	3.2	3.2	3.4	3.8	5.2	3.2	3.2	3.6	4.0	5.5
	6H	3.2	3.2	3.3	3.6	5.1	3.2	3.2	3.5	3.9	5.3
	8H	3.2	3.2	3.2	3.5	5.0	3.2	3.2	3.4	3.8	5.2
	12H	3.2	3.2	3.2	3.4	4.9	3.2	3.2	3.4	3.7	5.1
8H	4H	3.2	3.2	3.2	3.5	5.0	3.2	3.2	3.4	3.8	5.2
	6H	3.2	3.2	3.2	3.4	4.8	3.2	3.2	3.4	3.6	5.1
	8H	3.2	3.2	3.2	3.3	4.7	3.2	3.2	3.3	3.5	5.0
	12H	3.2	3.2	3.2	3.2	4.7	3.2	3.2	3.2	3.4	4.9
12H	4H	3.2	3.2	3.2	3.4	4.9	3.2	3.2	3.4	3.7	5.1
	6H	3.2	3.2	3.2	3.3	4.8	3.2	3.2	3.3	3.5	5.0
	8H	3.2	3.2	3.2	3.2	4.7	3.2	3.2	3.2	3.4	4.9

Maximum UGR = 6.2

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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.)