



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 192\_168\_39\_135-13\_22\_12-MERGED.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.05 & #12326812.05

[TESTLAB] UL Verification Services Inc.

[ISSUEDATE] 15-MAR-2021

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS INC. - CARTHAGE, MO.

[LUMCAT] 8CRDI-L25-9DWU-L25-9DWD-xxx-DIM-UNV-ON-CSU-ON-CSD-WM

[LUMINAIRE] 8" DIA. ALUMINUM CYLINDER

[LAMP] Two white LEDs, one up/ one down

[BALLAST]

[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 for upright orientation and clear glass

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4814
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	64
Total Luminaire Watts	75.4
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	Circular
Luminous Length (0-180)	0.50 ft (Diameter)
Luminous Width (90-270)	0.50 ft (Diameter)
Luminous Height	0.00 ft

### LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	1228	1228	1228
55	466	466	466
65	158	158	158
75	0	0	0
85	0	0	0

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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>	<u>202.5</u>
<b>0.0</b>	26839.142	26839.142	26839.142	26839.142	26839.142	26839.142	26839.142	26839.142	26839.142	26839.142
<b>2.5</b>	21141.924	21141.924	21141.924	21141.924	21141.924	21141.924	21141.924	21141.924	21141.924	21141.924
<b>5.0</b>	11992.217	11992.217	11992.217	11992.217	11992.217	11992.217	11992.217	11992.217	11992.217	11992.217
<b>7.5</b>	6747.604	6747.604	6747.604	6747.604	6747.604	6747.604	6747.604	6747.604	6747.604	6747.604
<b>10.0</b>	4301.582	4301.582	4301.582	4301.582	4301.582	4301.582	4301.582	4301.582	4301.582	4301.582
<b>12.5</b>	3084.061	3084.061	3084.061	3084.061	3084.061	3084.061	3084.061	3084.061	3084.061	3084.061
<b>15.0</b>	2478.961	2478.961	2478.961	2478.961	2478.961	2478.961	2478.961	2478.961	2478.961	2478.961
<b>17.5</b>	2137.372	2137.372	2137.372	2137.372	2137.372	2137.372	2137.372	2137.372	2137.372	2137.372
<b>20.0</b>	1900.699	1900.699	1900.699	1900.699	1900.699	1900.699	1900.699	1900.699	1900.699	1900.699
<b>22.5</b>	1609.129	1609.129	1609.129	1609.129	1609.129	1609.129	1609.129	1609.129	1609.129	1609.129
<b>25.0</b>	1245.580	1245.580	1245.580	1245.580	1245.580	1245.580	1245.580	1245.580	1245.580	1245.580
<b>27.5</b>	1004.028	1004.028	1004.028	1004.028	1004.028	1004.028	1004.028	1004.028	1004.028	1004.028
<b>30.0</b>	921.071	921.071	921.071	921.071	921.071	921.071	921.071	921.071	921.071	921.071
<b>32.5</b>	661.219	661.219	661.219	661.219	661.219	661.219	661.219	661.219	661.219	661.219
<b>35.0</b>	295.231	295.231	295.231	295.231	295.231	295.231	295.231	295.231	295.231	295.231
<b>37.5</b>	46.359	46.359	46.359	46.359	46.359	46.359	46.359	46.359	46.359	46.359
<b>40.0</b>	25.619	25.619	25.619	25.619	25.619	25.619	25.619	25.619	25.619	25.619
<b>42.5</b>	20.739	20.739	20.739	20.739	20.739	20.739	20.739	20.739	20.739	20.739
<b>45.0</b>	15.859	15.859	15.859	15.859	15.859	15.859	15.859	15.859	15.859	15.859
<b>47.5</b>	12.200	12.200	12.200	12.200	12.200	12.200	12.200	12.200	12.200	12.200
<b>50.0</b>	9.760	9.760	9.760	9.760	9.760	9.760	9.760	9.760	9.760	9.760
<b>52.5</b>	6.100	6.100	6.100	6.100	6.100	6.100	6.100	6.100	6.100	6.100
<b>55.0</b>	4.880	4.880	4.880	4.880	4.880	4.880	4.880	4.880	4.880	4.880
<b>57.5</b>	3.660	3.660	3.660	3.660	3.660	3.660	3.660	3.660	3.660	3.660
<b>60.0</b>	2.440	2.440	2.440	2.440	2.440	2.440	2.440	2.440	2.440	2.440
<b>62.5</b>	2.440	2.440	2.440	2.440	2.440	2.440	2.440	2.440	2.440	2.440
<b>65.0</b>	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220
<b>67.5</b>	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220
<b>70.0</b>	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220
<b>72.5</b>	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220	1.220
<b>75.0</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>77.5</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>80.0</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>82.5</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>85.0</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>87.5</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>90.0</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>92.5</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>95.0</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>97.5</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>100.0</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>102.5</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>105.0</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>107.5</b>	1.112	1.112	1.112	1.112	1.112	1.112	1.112	1.112	1.112	1.112
<b>110.0</b>	1.112	1.112	1.112	1.112	1.112	1.112	1.112	1.112	1.112	1.112
<b>112.5</b>	1.112	1.112	1.112	1.112	1.112	1.112	1.112	1.112	1.112	1.112
<b>115.0</b>	1.112	1.112	1.112	1.112	1.112	1.112	1.112	1.112	1.112	1.112
<b>117.5</b>	2.224	2.224	2.224	2.224	2.224	2.224	2.224	2.224	2.224	2.224
<b>120.0</b>	2.224	2.224	2.224	2.224	2.224	2.224	2.224	2.224	2.224	2.224
<b>122.5</b>	3.336	3.336	3.336	3.336	3.336	3.336	3.336	3.336	3.336	3.336
<b>125.0</b>	4.448	4.448	4.448	4.448	4.448	4.448	4.448	4.448	4.448	4.448
<b>127.5</b>	5.560	5.560	5.560	5.560	5.560	5.560	5.560	5.560	5.560	5.560
<b>130.0</b>	8.897	8.897	8.897	8.897	8.897	8.897	8.897	8.897	8.897	8.897
<b>132.5</b>	11.121	11.121	11.121	11.121	11.121	11.121	11.121	11.121	11.121	11.121

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**CANDELA TABULATION - (Cont.)**

135.0	14.457	14.457	14.457	14.457	14.457	14.457	14.457	14.457	14.457	14.457
137.5	18.905	18.905	18.905	18.905	18.905	18.905	18.905	18.905	18.905	18.905
140.0	23.354	23.354	23.354	23.354	23.354	23.354	23.354	23.354	23.354	23.354
142.5	42.259	42.259	42.259	42.259	42.259	42.259	42.259	42.259	42.259	42.259
145.0	269.123	269.123	269.123	269.123	269.123	269.123	269.123	269.123	269.123	269.123
147.5	602.747	602.747	602.747	602.747	602.747	602.747	602.747	602.747	602.747	602.747
150.0	839.620	839.620	839.620	839.620	839.620	839.620	839.620	839.620	839.620	839.620
152.5	915.242	915.242	915.242	915.242	915.242	915.242	915.242	915.242	915.242	915.242
155.0	1135.434	1135.434	1135.434	1135.434	1135.434	1135.434	1135.434	1135.434	1135.434	1135.434
157.5	1466.834	1466.834	1466.834	1466.834	1466.834	1466.834	1466.834	1466.834	1466.834	1466.834
160.0	1732.621	1732.621	1732.621	1732.621	1732.621	1732.621	1732.621	1732.621	1732.621	1732.621
162.5	1948.364	1948.364	1948.364	1948.364	1948.364	1948.364	1948.364	1948.364	1948.364	1948.364
165.0	2259.747	2259.747	2259.747	2259.747	2259.747	2259.747	2259.747	2259.747	2259.747	2259.747
167.5	2811.338	2811.338	2811.338	2811.338	2811.338	2811.338	2811.338	2811.338	2811.338	2811.338
170.0	3921.194	3921.194	3921.194	3921.194	3921.194	3921.194	3921.194	3921.194	3921.194	3921.194
172.5	6150.924	6150.924	6150.924	6150.924	6150.924	6150.923	6150.923	6150.923	6150.923	6150.923
175.0	10931.768	10931.768	10931.768	10931.768	10931.768	10931.766	10931.766	10931.766	10931.766	10931.766
177.5	19272.364	19272.364	19272.364	19272.363	19272.363	19272.363	19272.362	19272.362	19272.362	19272.362
180.0	24465.761	24465.761	24465.761	24465.761	24465.761	24465.761	24465.761	24465.761	24465.761	24465.761

**Vert.  
Angles**

**Horizontal Angles**

	<u>225.0</u>	<u>247.5</u>	<u>270.0</u>	<u>292.5</u>	<u>315.0</u>	<u>337.5</u>	<u>360.0</u>
0.0	26839.142	26839.142	26839.142	26839.142	26839.142	26839.142	26839.142
2.5	21141.924	21141.924	21141.924	21141.924	21141.924	21141.924	21141.924
5.0	11992.217	11992.217	11992.217	11992.217	11992.217	11992.217	11992.217
7.5	6747.604	6747.604	6747.604	6747.604	6747.604	6747.604	6747.604
10.0	4301.582	4301.582	4301.582	4301.582	4301.582	4301.582	4301.582
12.5	3084.061	3084.061	3084.061	3084.061	3084.061	3084.061	3084.061
15.0	2478.961	2478.961	2478.961	2478.961	2478.961	2478.961	2478.961
17.5	2137.372	2137.372	2137.372	2137.372	2137.372	2137.372	2137.372
20.0	1900.699	1900.699	1900.699	1900.699	1900.699	1900.699	1900.699
22.5	1609.129	1609.129	1609.129	1609.129	1609.129	1609.129	1609.129
25.0	1245.580	1245.580	1245.580	1245.580	1245.580	1245.580	1245.580
27.5	1004.028	1004.028	1004.028	1004.028	1004.028	1004.028	1004.028
30.0	921.071	921.071	921.071	921.071	921.071	921.071	921.071
32.5	661.219	661.219	661.219	661.219	661.219	661.219	661.219
35.0	295.231	295.231	295.231	295.231	295.231	295.231	295.231
37.5	46.359	46.359	46.359	46.359	46.359	46.359	46.359
40.0	25.619	25.619	25.619	25.619	25.619	25.619	25.619
42.5	20.739	20.739	20.739	20.739	20.739	20.739	20.739
45.0	15.859	15.859	15.859	15.859	15.859	15.859	15.859
47.5	12.200	12.200	12.200	12.200	12.200	12.200	12.200
50.0	9.760	9.760	9.760	9.760	9.760	9.760	9.760
52.5	6.100	6.100	6.100	6.100	6.100	6.100	6.100
55.0	4.880	4.880	4.880	4.880	4.880	4.880	4.880
57.5	3.660	3.660	3.660	3.660	3.660	3.660	3.660
60.0	2.440	2.440	2.440	2.440	2.440	2.440	2.440
62.5	2.440	2.440	2.440	2.440	2.440	2.440	2.440
65.0	1.220	1.220	1.220	1.220	1.220	1.220	1.220
67.5	1.220	1.220	1.220	1.220	1.220	1.220	1.220
70.0	1.220	1.220	1.220	1.220	1.220	1.220	1.220
72.5	1.220	1.220	1.220	1.220	1.220	1.220	1.220
75.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
77.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
80.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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**CANDELA TABULATION - (Cont.)**

82.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
85.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
87.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
95.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
97.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
102.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
105.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
107.5	1.112	1.112	1.112	1.112	1.112	1.112	1.112
110.0	1.112	1.112	1.112	1.112	1.112	1.112	1.112
112.5	1.112	1.112	1.112	1.112	1.112	1.112	1.112
115.0	1.112	1.112	1.112	1.112	1.112	1.112	1.112
117.5	2.224	2.224	2.224	2.224	2.224	2.224	2.224
120.0	2.224	2.224	2.224	2.224	2.224	2.224	2.224
122.5	3.336	3.336	3.336	3.336	3.336	3.336	3.336
125.0	4.448	4.448	4.448	4.448	4.448	4.448	4.448
127.5	5.560	5.560	5.560	5.560	5.560	5.560	5.560
130.0	8.897	8.897	8.897	8.897	8.897	8.897	8.897
132.5	11.121	11.121	11.121	11.121	11.121	11.121	11.121
135.0	14.457	14.457	14.457	14.457	14.457	14.457	14.457
137.5	18.905	18.905	18.905	18.905	18.905	18.905	18.905
140.0	23.354	23.354	23.354	23.354	23.354	23.354	23.354
142.5	42.259	42.259	42.259	42.259	42.259	42.259	42.259
145.0	269.123	269.123	269.123	269.123	269.123	269.123	269.123
147.5	602.747	602.747	602.747	602.747	602.747	602.747	602.747
150.0	839.620	839.620	839.620	839.620	839.620	839.620	839.620
152.5	915.242	915.242	915.242	915.242	915.242	915.242	915.242
155.0	1135.434	1135.434	1135.434	1135.434	1135.434	1135.434	1135.434
157.5	1466.834	1466.834	1466.834	1466.834	1466.834	1466.834	1466.834
160.0	1732.621	1732.621	1732.621	1732.621	1732.621	1732.621	1732.621
162.5	1948.364	1948.364	1948.364	1948.364	1948.364	1948.364	1948.364
165.0	2259.747	2259.747	2259.747	2259.747	2259.747	2259.747	2259.747
167.5	2811.338	2811.338	2811.338	2811.338	2811.338	2811.338	2811.338
170.0	3921.194	3921.194	3921.194	3921.194	3921.194	3921.194	3921.194
172.5	6150.923	6150.923	6150.924	6150.924	6150.924	6150.924	6150.924
175.0	10931.766	10931.766	10931.768	10931.768	10931.768	10931.768	10931.768
177.5	19272.362	19272.363	19272.363	19272.363	19272.364	19272.364	19272.364
180.0	24465.761	24465.761	24465.761	24465.761	24465.761	24465.761	24465.761

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1684.23	N.A.	35.00
0-30	2279.48	N.A.	47.40
0-40	2498.69	N.A.	51.90
0-60	2515.98	N.A.	52.30
0-80	2518.11	N.A.	52.30
0-90	2518.11	N.A.	52.30
10-90	1567.59	N.A.	32.60
20-40	814.45	N.A.	16.90
20-50	827.15	N.A.	17.20
40-70	18.95	N.A.	0.40
60-80	2.13	N.A.	0.00
70-80	0.48	N.A.	0.00
80-90	0.00	N.A.	0.00
90-110	0.43	N.A.	0.00
90-120	1.94	N.A.	0.00
90-130	6.13	N.A.	0.10
90-150	217.53	N.A.	4.50
90-180	2295.44	N.A.	47.70
110-180	2295.00	N.A.	47.70
0-180	4813.55	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	950.53
10-20	733.71
20-30	595.25
30-40	219.21
40-50	12.70
50-60	4.60
60-70	1.65
70-80	0.48
80-90	0.00
90-100	0.00
100-110	0.43
110-120	1.51
120-130	4.19
130-140	11.58
140-150	199.82
150-160	542.61
160-170	668.82
170-180	866.47

# IES INDOOR REPORT

PHOTOMETRIC FILENAME : 192\_168\_39\_135-13\_22\_12-MERGED.IES

## 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	58	58	58	52
1	101	98	96	93	94	92	89	87	79	77	76	67	66	65	56	56	55	50
2	96	90	86	82	89	85	81	78	74	71	69	64	62	61	54	53	53	48
3	90	84	78	74	84	79	74	71	69	66	64	61	58	57	52	51	50	47
4	85	78	72	68	80	73	69	65	65	62	59	58	55	53	51	49	48	45
5	81	73	67	63	76	69	64	60	62	58	55	55	53	51	49	47	46	43
6	77	68	62	58	72	65	60	56	59	55	52	53	50	48	47	46	44	42
7	73	64	59	55	69	61	56	53	56	52	49	51	48	46	46	44	43	40
8	70	61	55	51	66	58	53	50	53	50	47	49	46	44	44	42	41	39
9	67	58	52	49	63	56	51	47	51	47	45	47	44	42	43	41	40	38
10	64	55	50	46	61	53	48	45	49	45	43	45	43	41	42	40	38	37

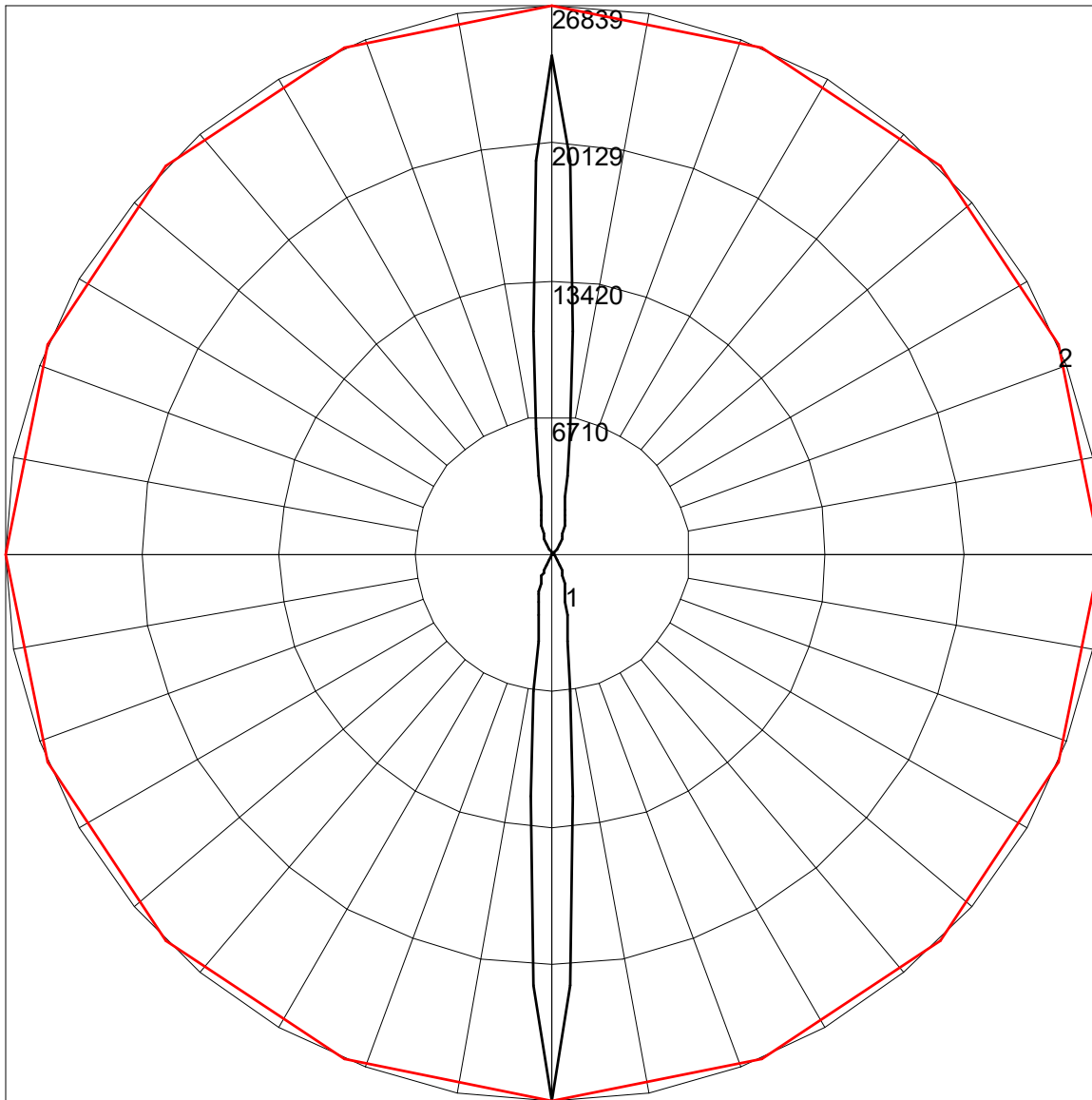
**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : 192\_168\_39\_135-13\_22\_12-MERGED.IES**

**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					UGR Viewed Endwise				
X=2H	Y=2H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	3H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	4H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	6H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	8H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	12H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
4H	2H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	3H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	4H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	6H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	8H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	12H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
8H	4H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	6H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	8H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	12H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
12H	4H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	6H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	8H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7

Maximum UGR = 5.7

POLAR GRAPH



Maximum Candela = 26839.142 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.)