



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L50-940-XXX-DIM-UNV-OM-CS-TD-XX\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.22

[TESTLAB] UL Verification Services Inc.

[ISSUEDATE] 2-FEB-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CR-TL-L50-940-xxx-DIM-UNV-OM-CS-TD-xx

[LUMINAIRE] Black formed aluminum housing, specular reflector, no lens

[MORE] enclosure

[LAMP] One white LED

[\_SEARCH\_SOURCETYPE] LED

[\_SEARCH\_APPLICATION] Indoor, Architectural, Classroom, Commercial, Healthcare, Office, Downlight

[\_SEARCH\_MOUNTING] Surface

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3368
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	77
Total Luminaire Watts	43.9
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.64
Spacing Criterion (90-270)	0.64
Spacing Criterion (Diagonal)	0.72
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	6080	6080	6080
55	2242	2242	2242
65	891	891	891
75	497	497	497
85	474	474	474

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CANDELA TABULATION

	<u>0</u>
0.0	6268.036
0.5	6286.486
1.0	6335.966
1.5	6417.315
2.0	6489.438
2.5	6559.884
3.0	6626.976
3.5	6679.811
4.0	6717.550
4.5	6706.647
5.0	6649.619
5.5	6569.109
6.0	6459.247
6.5	6327.580
7.0	6180.817
7.5	6024.829
8.0	5852.906
8.5	5667.566
9.0	5474.677
9.5	5287.659
10.0	5114.898
10.5	4953.040
11.0	4798.729
11.5	4656.998
12.0	4531.201
12.5	4417.984
13.0	4312.315
13.5	4212.516
14.0	4119.426
14.5	4033.884
15.0	3949.181
15.5	3869.510
16.0	3793.193
16.5	3719.392
17.0	3647.269
17.5	3574.307
18.0	3501.345
18.5	3426.705
19.0	3352.066
19.5	3277.426
20.0	3203.625
20.5	3129.825
21.0	3053.508
21.5	2973.837
22.0	2893.327
22.5	2812.817
23.0	2731.468
23.5	2648.442
24.0	2565.416
24.5	2483.229
25.0	2403.558
25.5	2323.886
26.0	2245.054
26.5	2169.576

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**CANDELA TABULATION - (Cont.)**

<b>27.0</b>	2098.291
<b>27.5</b>	2032.038
<b>28.0</b>	1968.301
<b>28.5</b>	1908.757
<b>29.0</b>	1853.406
<b>29.5</b>	1795.540
<b>30.0</b>	1728.448
<b>30.5</b>	1652.131
<b>31.0</b>	1570.783
<b>31.5</b>	1483.564
<b>32.0</b>	1385.442
<b>32.5</b>	1270.548
<b>33.0</b>	1145.590
<b>33.5</b>	1017.277
<b>34.0</b>	889.803
<b>34.5</b>	765.935
<b>35.0</b>	651.460
<b>35.5</b>	550.738
<b>36.0</b>	469.138
<b>36.5</b>	400.789
<b>37.0</b>	341.916
<b>37.5</b>	294.281
<b>38.0</b>	260.316
<b>38.5</b>	239.601
<b>39.0</b>	223.667
<b>39.5</b>	207.900
<b>40.0</b>	191.630
<b>40.5</b>	175.948
<b>41.0</b>	160.517
<b>41.5</b>	145.589
<b>42.0</b>	131.751
<b>42.5</b>	118.752
<b>43.0</b>	106.760
<b>43.5</b>	97.199
<b>44.0</b>	89.651
<b>44.5</b>	83.445
<b>45.0</b>	78.497
<b>45.5</b>	74.052
<b>46.0</b>	70.278
<b>46.5</b>	66.756
<b>47.0</b>	63.485
<b>47.5</b>	60.466
<b>48.0</b>	57.363
<b>48.5</b>	54.512
<b>49.0</b>	51.493
<b>49.5</b>	48.390
<b>50.0</b>	45.371
<b>50.5</b>	42.603
<b>51.0</b>	40.087
<b>51.5</b>	37.404
<b>52.0</b>	34.972
<b>52.5</b>	32.707
<b>53.0</b>	30.443
<b>53.5</b>	28.598
<b>54.0</b>	26.837
<b>54.5</b>	24.908

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CANDELA TABULATION - (Cont.)

55.0	23.482
55.5	21.973
56.0	20.631
56.5	19.457
57.0	18.115
57.5	17.108
58.0	16.186
58.5	15.096
59.0	14.173
59.5	13.334
60.0	12.412
60.5	11.825
61.0	11.154
61.5	10.483
62.0	9.812
62.5	9.309
63.0	8.722
63.5	8.303
64.0	7.716
64.5	7.464
65.0	6.877
65.5	6.541
66.0	6.290
66.5	5.871
67.0	5.535
67.5	5.116
68.0	5.032
68.5	4.696
69.0	4.361
69.5	4.109
70.0	4.025
70.5	3.690
71.0	3.438
71.5	3.606
72.0	3.187
72.5	3.019
73.0	2.768
73.5	2.768
74.0	2.516
74.5	2.264
75.0	2.348
75.5	2.097
76.0	1.929
76.5	1.845
77.0	1.845
77.5	1.677
78.0	1.426
78.5	1.510
79.0	1.510
79.5	1.510
80.0	1.258
80.5	1.174
81.0	1.090
81.5	1.090
82.0	1.006
82.5	0.923

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CANDELA TABULATION - (Cont.)

83.0	0.839
83.5	0.839
84.0	1.006
84.5	0.755
85.0	0.755
85.5	0.755
86.0	0.671
86.5	0.671
87.0	0.671
87.5	0.587
88.0	0.503
88.5	0.587
89.0	0.587
89.5	0.419
90.0	0.503
90.5	0.000
91.0	0.000
91.5	0.000
92.0	0.000
92.5	0.000
93.0	0.000
93.5	0.000
94.0	0.000
94.5	0.000
95.0	0.000
95.5	0.000
96.0	0.000
96.5	0.000
97.0	0.000
97.5	0.000
98.0	0.000
98.5	0.000
99.0	0.000
99.5	0.000
100.0	0.000
100.5	0.000
101.0	0.000
101.5	0.000
102.0	0.000
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103.5	0.000
104.0	0.000
104.5	0.000
105.0	0.000
105.5	0.000
106.0	0.000
106.5	0.000
107.0	0.000
107.5	0.000
108.0	0.000
108.5	0.000
109.0	0.000
109.5	0.000
110.0	0.000
110.5	0.000

CANDELA TABULATION - (Cont.)

111.0	0.000
111.5	0.000
112.0	0.000
112.5	0.000
113.0	0.000
113.5	0.000
114.0	0.000
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136.5	0.000
137.0	0.000
137.5	0.000
138.0	0.000
138.5	0.000

CANDELA TABULATION - (Cont.)

139.0	0.000
139.5	0.000
140.0	0.000
140.5	0.000
141.0	0.000
141.5	0.000
142.0	0.000
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143.0	0.000
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162.0	0.000
162.5	0.000
163.0	0.000
163.5	0.000
164.0	0.000
164.5	0.000
165.0	0.000
165.5	0.000
166.0	0.000
166.5	0.000

CANDELA TABULATION - (Cont.)

167.0	0.000
167.5	0.000
168.0	0.000
168.5	0.000
169.0	0.000
169.5	0.000
170.0	0.000
170.5	0.000
171.0	0.000
171.5	0.000
172.0	0.000
172.5	0.000
173.0	0.000
173.5	0.000
174.0	0.000
174.5	0.000
175.0	0.000
175.5	0.000
176.0	0.000
176.5	0.000
177.0	0.000
177.5	0.000
178.0	0.000
178.5	0.000
179.0	0.000
179.5	0.000
180.0	0.000



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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1689.84	N.A.	50.20
0-30	2791.78	N.A.	82.90
0-40	3264.86	N.A.	96.90
0-60	3357.57	N.A.	99.70
0-80	3367.34	N.A.	100.00
0-90	3368.2	N.A.	100.00
10-90	2788.98	N.A.	82.80
20-40	1575.02	N.A.	46.80
20-50	1645.29	N.A.	48.80
40-70	99.98	N.A.	3.00
60-80	9.77	N.A.	0.30
70-80	2.51	N.A.	0.10
80-90	0.86	N.A.	0.00
90-110	0.01	N.A.	0.00
90-120	0.01	N.A.	0.00
90-130	0.01	N.A.	0.00
90-150	0.01	N.A.	0.00
90-180	0.01	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	3368.22	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	579.23
10-20	1110.61
20-30	1101.94
30-40	473.07
40-50	70.27
50-60	22.45
60-70	7.26
70-80	2.51
80-90	0.86
90-100	0.01
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

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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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	114	112	109	107	112	109	107	106	105	104	102	102	100	99	98	97	96	95
2	109	105	101	98	107	103	100	97	100	97	95	97	95	93	94	92	91	89
3	104	99	94	91	102	97	93	90	95	91	88	92	89	87	90	88	86	84
4	100	93	88	84	98	92	87	84	90	86	83	88	85	82	86	83	81	80
5	96	88	83	79	94	87	82	79	85	81	78	84	80	77	82	79	77	75
6	91	84	78	74	90	83	78	74	81	77	74	80	76	73	79	75	73	71
7	88	79	74	70	86	79	74	70	78	73	70	76	72	69	75	72	69	68
8	84	76	70	67	83	75	70	66	74	69	66	73	69	66	72	68	66	64
9	81	72	67	63	80	72	67	63	71	66	63	70	66	63	69	65	63	61
10	77	69	64	60	77	68	63	60	68	63	60	67	63	60	66	62	60	58

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## UGR TABLE - CORRECTED

### Reflectances

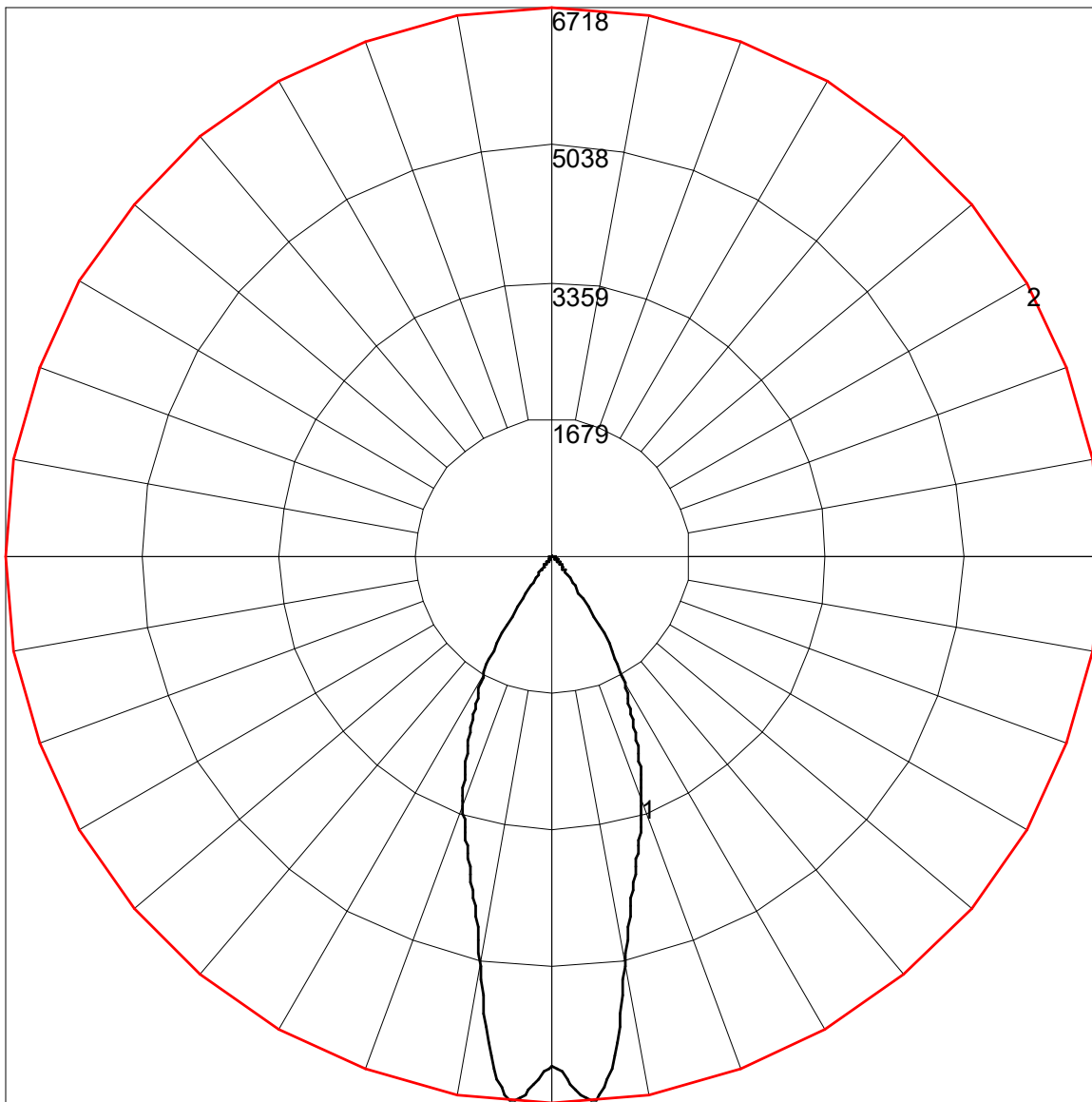
Ceiling Cavity	70	70	50	50	30	70	70	50	50	30
Walls	50	30	50	30	30	50	30	50	30	30
Floor Cavity	20	20	20	20	20	20	20	20	20	20

### Room Size UGR Viewed Crosswise

X=2H	Y=2H	4.3	4.3	4.3	4.3	4.3	UGR Viewed Endwise	4.3	4.3	4.3	4.3	4.3
	3H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	4H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	6H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	8H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	12H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
4H	2H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	3H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	4H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	6H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	8H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	12H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
8H	4H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	6H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	8H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	12H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
12H	4H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	6H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	8H	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3

Maximum UGR = 4.3

POLAR GRAPH



Maximum Candela = 6717.55 Located At Horizontal Angle = 0, Vertical Angle = 4  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)  
# 2 - Horizontal Cone Through Vertical Angle (4) (Through Max. Cd.)