



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L30-840-XXX-DIM-UNV-RN-CS-XX\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.15

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 1-FEB-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CR-TL-L30-840-xxx-DIM-UNV-RN-CS-xx

[LUMINAIRE] 8" DIA. SURFACE CYLINDER

[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	2683
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	100
Total Luminaire Watts	26.9
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.44
Spacing Criterion (90-270)	0.44
Spacing Criterion (Diagonal)	0.46
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.48 ft (Diameter)
Luminous Width (90-270)	0.48 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	8785	8785	8785
55	5746	5746	5746
65	3910	3910	3910
75	2526	2526	2526
85	2027	2027	2027

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CANDELA TABULATION

	<u>0</u>
0.0	9963.523
0.5	9954.639
1.0	9926.506
1.5	9877.643
2.0	9809.532
2.5	9720.691
3.0	9614.081
3.5	9491.185
4.0	9353.481
4.5	9199.490
5.0	9032.173
5.5	8848.568
6.0	8650.156
6.5	8439.899
7.0	8217.796
7.5	7983.848
8.0	7739.535
8.5	7486.339
9.0	7222.777
9.5	6953.292
10.0	6676.404
10.5	6398.036
11.0	6116.706
11.5	5833.895
12.0	5552.565
12.5	5271.235
13.0	4995.828
13.5	4720.421
14.0	4453.898
14.5	4194.778
15.0	3941.581
15.5	3700.229
16.0	3470.723
16.5	3253.063
17.0	3042.806
17.5	2842.913
18.0	2653.386
18.5	2477.184
19.0	2309.867
19.5	2158.837
20.0	2010.769
20.5	1871.585
21.0	1742.765
21.5	1622.830
22.0	1508.817
22.5	1401.616
23.0	1302.114
23.5	1209.571
24.0	1123.247
24.5	1042.846
25.0	968.071
25.5	898.775
26.0	834.810
26.5	775.434

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**CANDELA TABULATION - (Cont.)**

<b>27.0</b>	720.649
<b>27.5</b>	670.306
<b>28.0</b>	623.960
<b>28.5</b>	581.317
<b>29.0</b>	542.078
<b>29.5</b>	506.098
<b>30.0</b>	472.782
<b>30.5</b>	442.280
<b>31.0</b>	414.295
<b>31.5</b>	388.383
<b>32.0</b>	364.544
<b>32.5</b>	342.482
<b>33.0</b>	322.197
<b>33.5</b>	303.392
<b>34.0</b>	286.068
<b>34.5</b>	269.929
<b>35.0</b>	254.974
<b>35.5</b>	241.203
<b>36.0</b>	228.470
<b>36.5</b>	216.476
<b>37.0</b>	205.519
<b>37.5</b>	195.154
<b>38.0</b>	185.678
<b>38.5</b>	176.942
<b>39.0</b>	168.798
<b>39.5</b>	161.098
<b>40.0</b>	154.139
<b>40.5</b>	147.476
<b>41.0</b>	141.405
<b>41.5</b>	135.631
<b>42.0</b>	130.300
<b>42.5</b>	125.266
<b>43.0</b>	120.528
<b>43.5</b>	116.086
<b>44.0</b>	111.792
<b>44.5</b>	107.794
<b>45.0</b>	104.092
<b>45.5</b>	100.538
<b>46.0</b>	97.133
<b>46.5</b>	93.875
<b>47.0</b>	90.766
<b>47.5</b>	87.656
<b>48.0</b>	84.843
<b>48.5</b>	82.030
<b>49.0</b>	79.513
<b>49.5</b>	76.996
<b>50.0</b>	74.626
<b>50.5</b>	72.257
<b>51.0</b>	70.036
<b>51.5</b>	67.963
<b>52.0</b>	65.890
<b>52.5</b>	63.966
<b>53.0</b>	62.041
<b>53.5</b>	60.264
<b>54.0</b>	58.487
<b>54.5</b>	56.858

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CANDELA TABULATION - (Cont.)

55.0	55.230
55.5	53.601
56.0	52.120
56.5	50.639
57.0	49.011
57.5	47.530
58.0	46.197
58.5	44.717
59.0	43.384
59.5	41.903
60.0	40.571
60.5	39.090
61.0	37.757
61.5	36.425
62.0	35.092
62.5	33.908
63.0	32.575
63.5	31.391
64.0	30.058
64.5	28.873
65.0	27.689
65.5	26.504
66.0	25.468
66.5	24.431
67.0	23.395
67.5	22.358
68.0	21.322
68.5	20.433
69.0	19.545
69.5	18.657
70.0	17.768
70.5	17.028
71.0	16.139
71.5	15.399
72.0	14.659
72.5	13.918
73.0	13.326
73.5	12.734
74.0	12.142
74.5	11.549
75.0	10.957
75.5	10.365
76.0	9.921
76.5	9.476
77.0	9.032
77.5	8.588
78.0	8.144
78.5	7.848
79.0	7.403
79.5	6.959
80.0	6.663
80.5	6.219
81.0	5.775
81.5	5.479
82.0	5.034
82.5	4.738

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CANDELA TABULATION - (Cont.)

83.0	4.442
83.5	3.998
84.0	3.702
84.5	3.258
85.0	2.961
85.5	2.665
86.0	2.369
86.5	2.073
87.0	1.777
87.5	1.481
88.0	1.185
88.5	0.888
89.0	0.740
89.5	0.592
90.0	0.444
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
102.5	0.000
103.0	0.000
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

IES INDOOR REPORT  
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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
114.5	0.000
115.0	0.000
115.5	0.000
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135.5	0.000
136.0	0.000
136.5	0.000
137.0	0.000
137.5	0.000
138.0	0.000
138.5	0.000

IES INDOOR REPORT  
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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
142.5	0.000
143.0	0.000
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144.0	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
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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	1870.82	N.A.	69.70
0-30	2339.57	N.A.	87.20
0-40	2507.75	N.A.	93.50
0-60	2639.98	N.A.	98.40
0-80	2679.83	N.A.	99.90
0-90	2683.25	N.A.	100.00
10-90	1897.61	N.A.	70.70
20-40	636.92	N.A.	23.70
20-50	719.23	N.A.	26.80
40-70	160.08	N.A.	6.00
60-80	39.85	N.A.	1.50
70-80	12.00	N.A.	0.40
80-90	3.42	N.A.	0.10
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	2683.27	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	785.65
10-20	1085.18
20-30	468.75
30-40	168.17
40-50	82.31
50-60	49.92
60-70	27.84
70-80	12.00
80-90	3.42
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	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95
2	110	106	102	100	108	104	101	98	101	98	96	98	96	94	95	94	92	91
3	106	100	96	93	104	99	95	92	97	93	91	94	92	89	92	90	88	87
4	102	96	91	88	100	95	90	87	93	89	86	91	88	85	89	86	84	83
5	98	91	87	83	97	91	86	83	89	85	82	87	84	82	86	83	81	80
6	95	88	83	80	94	87	83	79	86	82	79	84	81	78	83	80	78	77
7	92	84	80	76	91	84	79	76	83	79	76	81	78	75	80	77	75	74
8	89	81	77	73	88	81	76	73	80	76	73	79	75	73	78	75	72	71
9	86	78	74	71	85	78	74	71	77	73	70	76	73	70	76	72	70	69
10	83	76	71	68	83	76	71	68	75	71	68	74	70	68	73	70	68	67

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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	10.2	11.1	10.5	11.4	11.8
	3H	11.0	11.9	11.4	12.2	12.6
	4H	11.3	12.1	11.7	12.4	12.8
	6H	11.4	12.2	11.9	12.5	12.9
	8H	11.5	12.2	11.9	12.6	13.0
	12H	11.5	12.1	11.9	12.5	13.0

### UGR Viewed Endwise

10.2	11.1	10.5	11.4	11.8
11.0	11.9	11.4	12.2	12.6
11.3	12.1	11.7	12.4	12.8
11.4	12.2	11.9	12.5	12.9
11.5	12.2	11.9	12.6	13.0
11.5	12.1	11.9	12.5	13.0

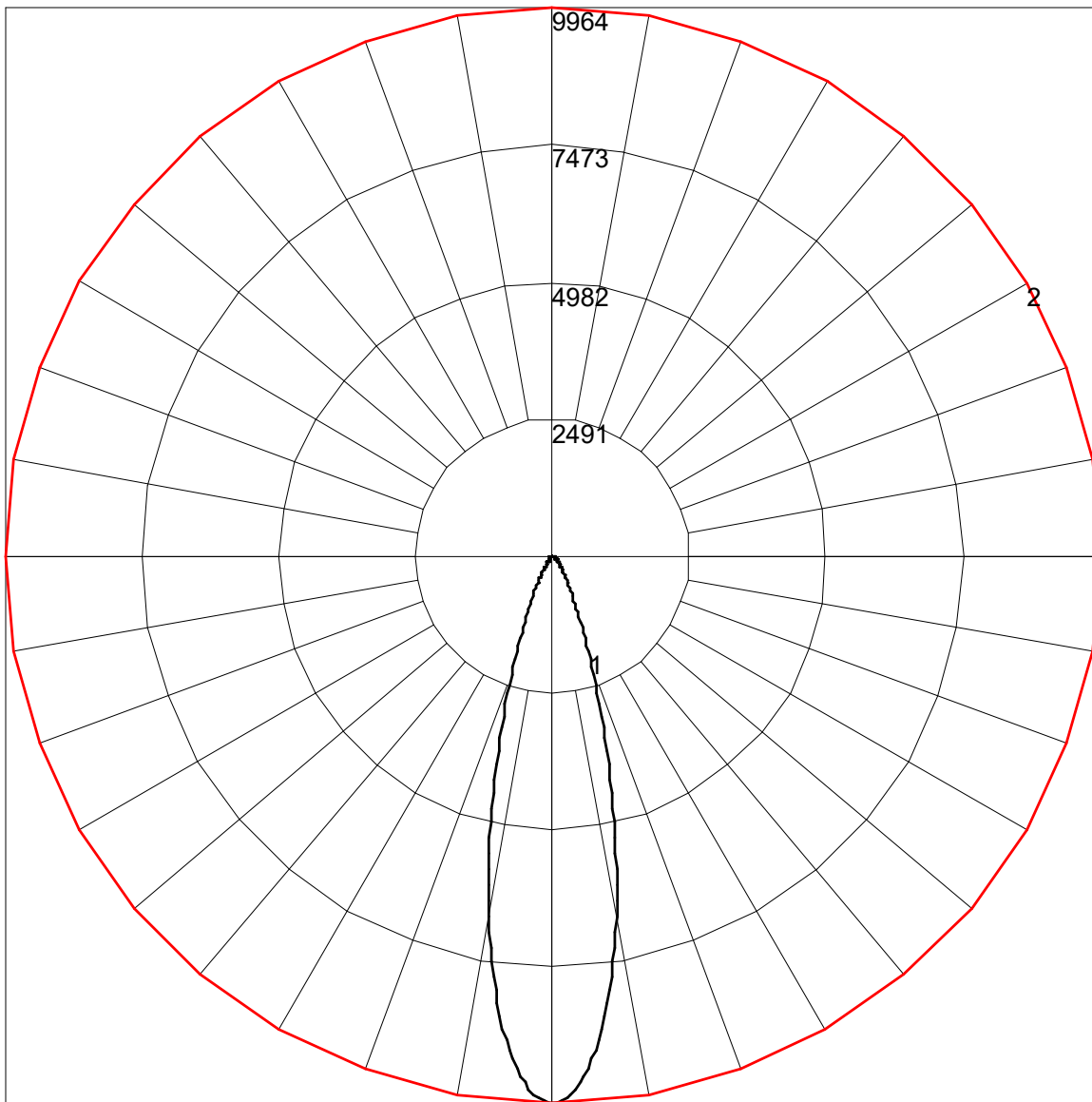
4H	2H	10.4	11.2	10.8	11.5	11.9	10.4	11.2	10.8	11.5	11.9
	3H	11.4	12.1	11.8	12.5	12.9	11.4	12.1	11.8	12.5	12.9
	4H	11.8	12.3	12.2	12.7	13.2	11.8	12.3	12.2	12.7	13.2
	6H	12.0	12.5	12.5	12.9	13.4	12.0	12.5	12.5	12.9	13.4
	8H	12.1	12.5	12.6	13.0	13.5	12.1	12.5	12.6	13.0	13.5
	12H	12.1	12.5	12.6	13.0	13.5	12.1	12.5	12.6	13.0	13.5

8H	4H	11.8	12.2	12.3	12.7	13.2	11.8	12.2	12.3	12.7	13.2
	6H	12.1	12.5	12.7	13.0	13.5	12.1	12.5	12.7	13.0	13.5
	8H	12.3	12.6	12.8	13.1	13.6	12.3	12.6	12.8	13.1	13.6
	12H	12.4	12.7	12.9	13.2	13.7	12.4	12.7	12.9	13.2	13.7

12H	4H	11.8	12.1	12.2	12.6	13.1	11.8	12.1	12.2	12.6	13.1
	6H	12.1	12.5	12.7	12.9	13.5	12.1	12.5	12.7	12.9	13.5
	8H	12.3	12.6	12.8	13.1	13.7	12.3	12.6	12.8	13.1	13.7

Maximum UGR = 13.7

POLAR GRAPH



Maximum Candela = 9963.523 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.)