



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CR-TL-L60-927-XXX-DIM-UNV-LW-CS-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM 12316380.07

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 28-JAN-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 6CR-TL-L60-927-xxx-DIM-UNV-LW-CS-xx

[LUMINAIRE] 6" DIA. SURFACE CYLINDER

[LAMP] One white LED

[_SEARCH_SOURCETYPE] LED

[_SEARCH_APPLICATION] Indoor, Classroom, Commercial, Corridor, Hotel, Industrial, Office, Downlight

[_SEARCH_MOUNTING] Surface

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3071
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	52
Total Luminaire Watts	58.6
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.00
Spacing Criterion (90-270)	1.00
Spacing Criterion (Diagonal)	0.90
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.35 ft (Diameter)
Luminous Width (90-270)	0.35 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	84755	84755	84755
55	69643	69643	69643
65	50949	50949	50949
75	35270	35270	35270
85	19227	19227	19227

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CANDELA TABULATION

	<u>0</u>
0.0	2157.443
0.5	2156.762
1.0	2155.398
1.5	2153.581
2.0	2151.763
2.5	2149.718
3.0	2146.991
3.5	2145.401
4.0	2144.265
4.5	2143.583
5.0	2142.674
5.5	2141.765
6.0	2141.084
6.5	2140.175
7.0	2139.493
7.5	2139.039
8.0	2138.811
8.5	2138.130
9.0	2137.448
9.5	2136.085
10.0	2135.176
10.5	2133.585
11.0	2131.995
11.5	2129.950
12.0	2127.678
12.5	2124.951
13.0	2121.770
13.5	2118.134
14.0	2113.590
14.5	2108.137
15.0	2101.548
15.5	2093.595
16.0	2084.733
16.5	2074.281
17.0	2062.920
17.5	2050.196
18.0	2035.200
18.5	2019.749
19.0	2002.935
19.5	1984.075
20.0	1963.398
20.5	1940.904
21.0	1916.591
21.5	1890.461
22.0	1861.604
22.5	1830.930
23.0	1797.983
23.5	1762.537
24.0	1724.364
24.5	1683.692
25.0	1639.612
25.5	1593.486
26.0	1544.180
26.5	1491.919

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CANDELA TABULATION - (Cont.)

27.0	1437.841
27.5	1381.491
28.0	1324.232
28.5	1266.745
29.0	1210.395
29.5	1155.181
30.0	1102.012
30.5	1052.023
31.0	1005.216
31.5	962.499
32.0	923.645
32.5	888.653
33.0	857.524
33.5	829.803
34.0	805.037
34.5	783.224
35.0	763.455
35.5	745.505
36.0	729.600
36.5	714.603
37.0	700.970
37.5	688.246
38.0	676.431
38.5	665.070
39.0	654.618
39.5	644.393
40.0	634.850
40.5	625.306
41.0	616.218
41.5	607.356
42.0	598.949
42.5	590.542
43.0	582.135
43.5	573.728
44.0	565.321
44.5	556.913
45.0	548.506
45.5	540.099
46.0	531.692
46.5	523.285
47.0	514.424
47.5	505.562
48.0	496.700
48.5	487.612
49.0	478.296
49.5	468.980
50.0	459.891
50.5	450.575
51.0	441.259
51.5	431.943
52.0	422.854
52.5	413.766
53.0	404.450
53.5	394.906
54.0	385.136
54.5	375.366

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CANDELA TABULATION - (Cont.)

55.0	365.595
55.5	355.825
56.0	346.282
56.5	336.966
57.0	327.650
57.5	318.334
58.0	309.245
58.5	300.383
59.0	291.522
59.5	282.888
60.0	274.480
60.5	266.073
61.0	257.893
61.5	249.941
62.0	241.988
62.5	234.035
63.0	226.446
63.5	218.903
64.0	211.495
64.5	204.202
65.0	197.067
65.5	190.114
66.0	183.252
66.5	176.572
67.0	170.051
67.5	163.643
68.0	157.440
68.5	151.373
69.0	145.306
69.5	139.444
70.0	133.741
70.5	128.129
71.0	122.653
71.5	117.313
72.0	112.155
72.5	107.066
73.0	102.112
73.5	97.295
74.0	92.569
74.5	88.002
75.0	83.548
75.5	79.231
76.0	75.005
76.5	70.892
77.0	66.961
77.5	63.053
78.0	59.281
78.5	55.623
79.0	52.033
79.5	48.579
80.0	45.194
80.5	41.899
81.0	38.650
81.5	35.492
82.0	32.401
82.5	29.402

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CANDELA TABULATION - (Cont.)

83.0	26.426
83.5	23.540
84.0	20.722
84.5	17.973
85.0	15.337
85.5	12.792
86.0	10.361
86.5	8.066
87.0	6.044
87.5	4.363
88.0	3.045
88.5	1.931
89.0	1.204
89.5	0.818
90.0	0.568
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

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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
116.0	0.000
116.5	0.000
117.0	0.000
117.5	0.000
118.0	0.000
118.5	0.000
119.0	0.000
119.5	0.000
120.0	0.000
120.5	0.000
121.0	0.000
121.5	0.000
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135.0	0.000
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

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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
143.5	0.000
144.0	0.000
144.5	0.000
145.0	0.000
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154.0	0.000
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156.5	0.000
157.0	0.000
157.5	0.000
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158.5	0.000
159.0	0.000
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160.0	0.000
160.5	0.000
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161.5	0.000
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

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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	792.47	N.A.	25.80
0-30	1520.05	N.A.	49.50
0-40	2015.65	N.A.	65.60
0-60	2764.81	N.A.	90.00
0-80	3052.00	N.A.	99.40
0-90	3071.21	N.A.	100.00
10-90	2866.86	N.A.	93.30
20-40	1223.18	N.A.	39.80
20-50	1645.6	N.A.	53.60
40-70	946.21	N.A.	30.80
60-80	287.18	N.A.	9.40
70-80	90.14	N.A.	2.90
80-90	19.21	N.A.	0.60
90-110	0.02	N.A.	0.00
90-120	0.02	N.A.	0.00
90-130	0.02	N.A.	0.00
90-150	0.02	N.A.	0.00
90-180	0.02	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	3071.22	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	204.35
10-20	588.12
20-30	727.58
30-40	495.60
40-50	422.42
50-60	326.74
60-70	197.05
70-80	90.14
80-90	19.21
90-100	0.02
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	111	108	104	101	109	105	102	100	101	99	96	97	95	94	94	92	91	89
2	103	97	91	87	101	95	90	86	92	88	84	89	85	82	86	83	80	78
3	96	88	81	76	94	86	80	75	83	78	74	81	76	73	78	75	72	70
4	90	80	73	67	88	79	72	67	76	70	66	74	69	65	72	68	64	62
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56
6	79	67	60	54	77	66	59	54	65	58	54	63	58	53	62	57	53	51
7	74	62	55	50	72	62	54	49	60	54	49	59	53	49	58	52	49	47
8	69	58	51	46	68	57	50	45	56	50	45	55	49	45	54	49	45	43
9	66	54	47	42	64	53	47	42	52	46	42	51	46	42	50	45	41	40
10	62	51	44	39	61	50	43	39	49	43	39	48	43	39	47	42	39	37

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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	24.5	25.9	24.9	26.2	26.5	24.5	25.9	24.9	26.2	26.5
	3H	25.6	26.8	26.0	27.2	27.5	25.6	26.8	26.0	27.2	27.5
	4H	26.0	27.1	26.4	27.4	27.8	26.0	27.1	26.4	27.4	27.8
	6H	26.2	27.2	26.6	27.6	28.0	26.2	27.2	26.6	27.6	28.0
	8H	26.2	27.2	26.7	27.6	28.0	26.2	27.2	26.7	27.6	28.0
	12H	26.2	27.2	26.7	27.6	28.0	26.2	27.2	26.7	27.6	28.0

UGR Viewed Endwise

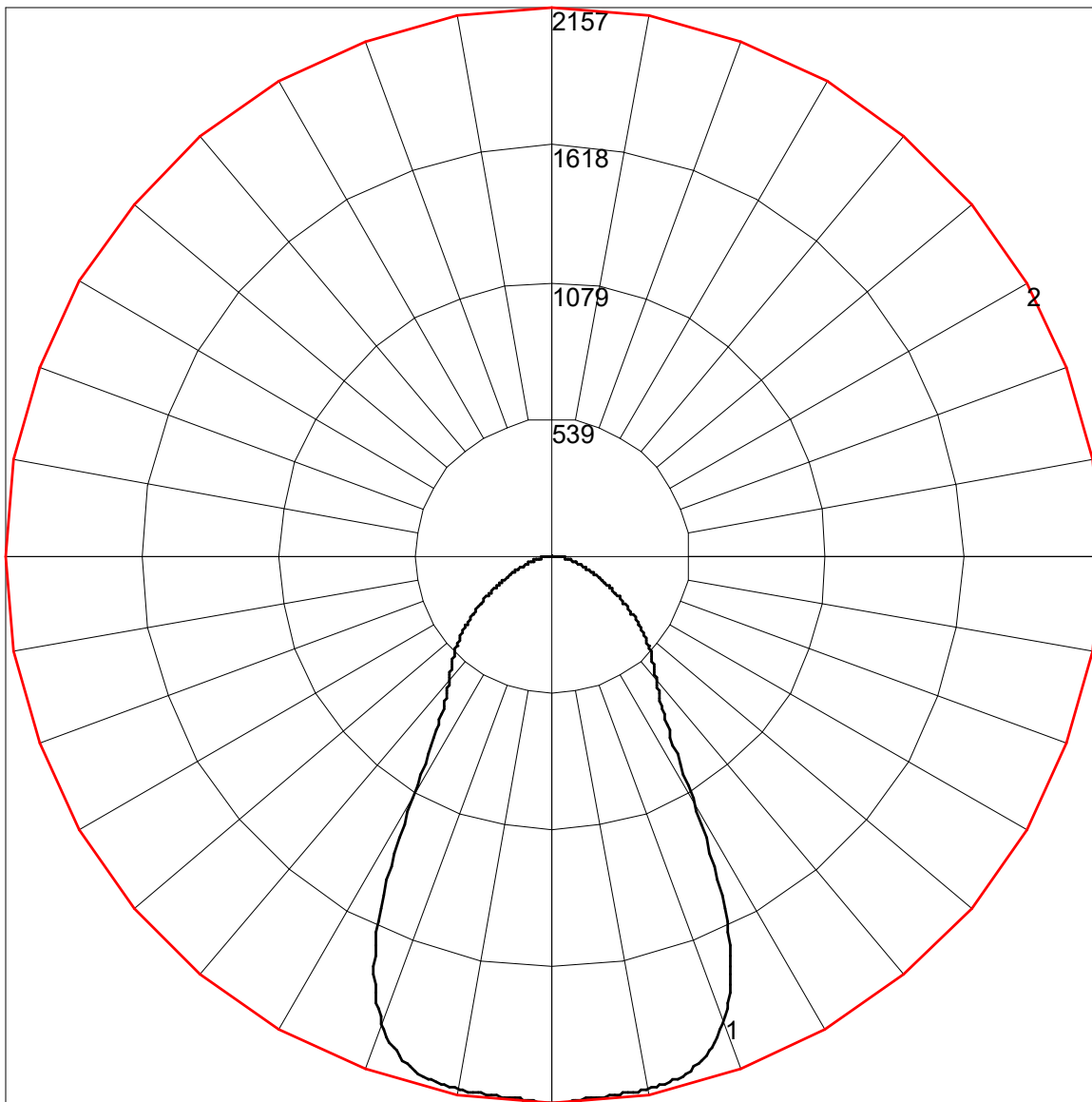
4H	2H	24.9	26.0	25.3	26.4	26.7	24.9	26.0	25.3	26.4	26.7
	3H	26.2	27.1	26.6	27.5	27.9	26.2	27.1	26.6	27.5	27.9
	4H	26.6	27.5	27.0	27.9	28.3	26.6	27.5	27.0	27.9	28.3
	6H	26.9	27.7	27.4	28.1	28.6	26.9	27.7	27.4	28.1	28.6
	8H	27.0	27.7	27.5	28.1	28.6	27.0	27.7	27.5	28.1	28.6
	12H	27.0	27.6	27.5	28.1	28.6	27.0	27.6	27.5	28.1	28.6

8H	4H	26.7	27.4	27.2	27.9	28.3	26.7	27.4	27.2	27.9	28.3
	6H	27.1	27.7	27.6	28.2	28.7	27.1	27.7	27.6	28.2	28.7
	8H	27.2	27.7	27.8	28.3	28.7	27.2	27.7	27.8	28.3	28.7
	12H	27.3	27.7	27.8	28.2	28.8	27.3	27.7	27.8	28.2	28.8

12H	4H	26.7	27.3	27.2	27.8	28.3	26.7	27.3	27.2	27.8	28.3
	6H	27.1	27.6	27.7	28.1	28.6	27.1	27.6	27.7	28.1	28.6
	8H	27.3	27.7	27.8	28.2	28.8	27.3	27.7	27.8	28.2	28.8

Maximum UGR = 28.8

POLAR GRAPH



Maximum Candela = 2157.443 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.)