



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CR-TL-L40-930-XXX-DIM-UNV-LW-WH-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-L40-930-xxx-DIM-UNV-LW-WH-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	2289
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	60
Total Luminaire Watts	38
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	63180	63180	63180
55	51915	51915	51915
65	37979	37979	37979
75	26292	26292	26292
85	14333	14333	14333

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CANDELA TABULATION

	<u>0</u>
0.0	1608.251
0.5	1607.743
1.0	1606.726
1.5	1605.371
2.0	1604.016
2.5	1602.492
3.0	1600.459
3.5	1599.274
4.0	1598.427
4.5	1597.919
5.0	1597.241
5.5	1596.564
6.0	1596.055
6.5	1595.378
7.0	1594.870
7.5	1594.531
8.0	1594.362
8.5	1593.854
9.0	1593.345
9.5	1592.329
10.0	1591.652
10.5	1590.466
11.0	1589.280
11.5	1587.756
12.0	1586.062
12.5	1584.030
13.0	1581.658
13.5	1578.948
14.0	1575.561
14.5	1571.496
15.0	1566.584
15.5	1560.655
16.0	1554.050
16.5	1546.258
17.0	1537.789
17.5	1528.304
18.0	1517.125
18.5	1505.607
19.0	1493.073
19.5	1479.015
20.0	1463.601
20.5	1446.833
21.0	1428.709
21.5	1409.231
22.0	1387.720
22.5	1364.854
23.0	1340.294
23.5	1313.871
24.0	1285.415
24.5	1255.096
25.0	1222.237
25.5	1187.853
26.0	1151.098
26.5	1112.141

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CANDELA TABULATION - (Cont.)

27.0	1071.828
27.5	1029.822
28.0	987.139
28.5	944.286
29.0	902.280
29.5	861.121
30.0	821.487
30.5	784.223
31.0	749.331
31.5	717.488
32.0	688.524
32.5	662.440
33.0	639.235
33.5	618.571
34.0	600.109
34.5	583.848
35.0	569.112
35.5	555.732
36.0	543.875
36.5	532.696
37.0	522.533
37.5	513.048
38.0	504.240
38.5	495.771
39.0	487.980
39.5	480.358
40.0	473.244
40.5	466.130
41.0	459.355
41.5	452.749
42.0	446.482
42.5	440.215
43.0	433.948
43.5	427.681
44.0	421.414
44.5	415.147
45.0	408.880
45.5	402.613
46.0	396.346
46.5	390.079
47.0	383.473
47.5	376.868
48.0	370.262
48.5	363.487
49.0	356.542
49.5	349.598
50.0	342.822
50.5	335.878
51.0	328.933
51.5	321.989
52.0	315.214
52.5	308.439
53.0	301.494
53.5	294.380
54.0	287.097
54.5	279.814

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CANDELA TABULATION - (Cont.)

55.0	272.530
55.5	265.247
56.0	258.133
56.5	251.189
57.0	244.244
57.5	237.300
58.0	230.524
58.5	223.919
59.0	217.313
59.5	210.876
60.0	204.609
60.5	198.342
61.0	192.245
61.5	186.317
62.0	180.388
62.5	174.460
63.0	168.803
63.5	163.179
64.0	157.658
64.5	152.221
65.0	146.902
65.5	141.719
66.0	136.604
66.5	131.624
67.0	126.763
67.5	121.987
68.0	117.362
68.5	112.840
69.0	108.318
69.5	103.948
70.0	99.696
70.5	95.513
71.0	91.431
71.5	87.450
72.0	83.605
72.5	79.811
73.0	76.119
73.5	72.528
74.0	69.005
74.5	65.600
75.0	62.281
75.5	59.062
76.0	55.912
76.5	52.846
77.0	49.916
77.5	47.003
78.0	44.191
78.5	41.464
79.0	38.788
79.5	36.213
80.0	33.689
80.5	31.233
81.0	28.811
81.5	26.457
82.0	24.153
82.5	21.918

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CANDELA TABULATION - (Cont.)

83.0	19.699
83.5	17.548
84.0	15.447
84.5	13.398
85.0	11.433
85.5	9.536
86.0	7.724
86.5	6.013
87.0	4.505
87.5	3.252
88.0	2.270
88.5	1.440
89.0	0.898
89.5	0.610
90.0	0.423
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
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120.0	0.000
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127.5	0.000
128.0	0.000
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131.0	0.000
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132.5	0.000
133.0	0.000
133.5	0.000
134.0	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
145.5	0.000
146.0	0.000
146.5	0.000
147.0	0.000
147.5	0.000
148.0	0.000
148.5	0.000
149.0	0.000
149.5	0.000
150.0	0.000
150.5	0.000
151.0	0.000
151.5	0.000
152.0	0.000
152.5	0.000
153.0	0.000
153.5	0.000
154.0	0.000
154.5	0.000
155.0	0.000
155.5	0.000
156.0	0.000
156.5	0.000
157.0	0.000
157.5	0.000
158.0	0.000
158.5	0.000
159.0	0.000
159.5	0.000
160.0	0.000
160.5	0.000
161.0	0.000
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

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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Zone	Lumens	%Lamp	%Fixt
0-20	590.74	N.A.	25.80
0-30	1133.11	N.A.	49.50
0-40	1502.55	N.A.	65.60
0-60	2061.01	N.A.	90.00
0-80	2275.09	N.A.	99.40
0-90	2289.41	N.A.	100.00
10-90	2137.08	N.A.	93.30
20-40	911.81	N.A.	39.80
20-50	1226.7	N.A.	53.60
40-70	705.35	N.A.	30.80
60-80	214.08	N.A.	9.40
70-80	67.19	N.A.	2.90
80-90	14.32	N.A.	0.60
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	2289.42	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	152.33
10-20	438.41
20-30	542.37
30-40	369.44
40-50	314.89
50-60	243.57
60-70	146.89
70-80	67.19
80-90	14.32
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	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

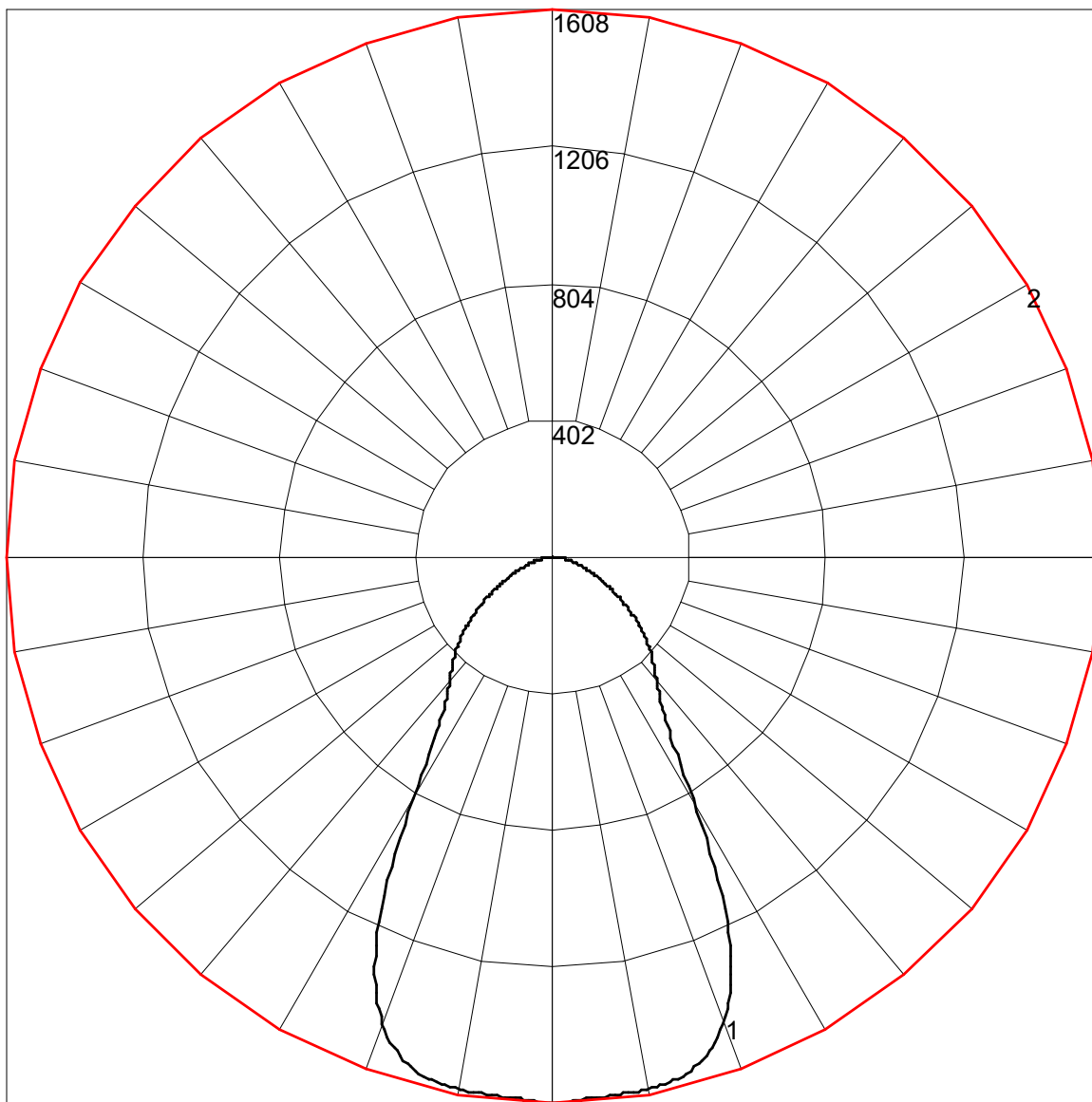
X=2H	Y=2H	23.5	24.9	23.9	25.2	25.5	23.5	24.9	23.9	25.2	25.5
	3H	24.6	25.8	25.0	26.2	26.5	24.6	25.8	25.0	26.2	26.5
	4H	25.0	26.1	25.4	26.5	26.8	25.0	26.1	25.4	26.5	26.8
	6H	25.2	26.2	25.6	26.6	27.0	25.2	26.2	25.6	26.6	27.0
	8H	25.2	26.2	25.7	26.6	27.0	25.2	26.2	25.7	26.6	27.0
	12H	25.2	26.2	25.7	26.6	27.0	25.2	26.2	25.7	26.6	27.0

UGR Viewed Endwise

4H	2H	23.9	25.0	24.3	25.4	25.7	23.9	25.0	24.3	25.4	25.7
	3H	25.2	26.1	25.6	26.5	26.9	25.2	26.1	25.6	26.5	26.9
	4H	25.6	26.5	26.0	26.9	27.3	25.6	26.5	26.0	26.9	27.3
	6H	25.9	26.7	26.4	27.1	27.6	25.9	26.7	26.4	27.1	27.6
	8H	26.0	26.7	26.5	27.1	27.6	26.0	26.7	26.5	27.1	27.6
	12H	26.0	26.6	26.5	27.1	27.6	26.0	26.6	26.5	27.1	27.6
8H	4H	25.7	26.4	26.2	26.9	27.3	25.7	26.4	26.2	26.9	27.3
	6H	26.1	26.7	26.6	27.2	27.7	26.1	26.7	26.6	27.2	27.7
	8H	26.2	26.7	26.8	27.3	27.7	26.2	26.7	26.8	27.3	27.7
	12H	26.3	26.8	26.8	27.2	27.8	26.3	26.8	26.8	27.2	27.8
12H	4H	25.7	26.3	26.2	26.8	27.3	25.7	26.3	26.2	26.8	27.3
	6H	26.1	26.6	26.7	27.1	27.6	26.1	26.6	26.7	27.1	27.6
	8H	26.3	26.7	26.8	27.2	27.8	26.3	26.7	26.8	27.2	27.8

Maximum UGR = 27.8

POLAR GRAPH



Maximum Candela = 1608.251 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.)