



IES INDOOR REPORT
PHOTOMETRIC FILENAME : 2DR-L5-940-DIM-UNV-RM-OF-CS_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM 13257153.07
[TESTLAB] UL Verification Services Inc.
[ISSUEDATE] 04/21/2023
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
[LUMCAT] 2DR-L5-940-DIM-UNV-RM-OF-CS
[LUMINAIRE] Aluminum housing, optics, and trim enclosure
[LAMP] One white LED
[SEARCH_SOURCETYPE] LED
[SEARCH_APPLICATION] Indoor, Downlight
[SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	418
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	62
Total Luminaire Watts	6.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.50
Spacing Criterion (90-270)	0.50
Spacing Criterion (Diagonal)	0.48
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.21 ft (Diameter)
Luminous Width (90-270)	0.21 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	19312	19312	19312
55	14151	14151	14151
65	10360	10360	10360
75	5111	5111	5111
85	3036	3036	3036

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CANDELA TABULATION

	<u>0</u>
0.0	1058.484
0.5	1057.675
1.0	1055.248
1.5	1051.742
2.0	1046.618
2.5	1040.146
3.0	1032.055
3.5	1023.156
4.0	1012.908
4.5	1001.312
5.0	988.368
5.5	974.344
6.0	958.973
6.5	942.523
7.0	924.724
7.5	906.116
8.0	886.160
8.5	864.855
9.0	841.933
9.5	817.662
10.0	792.312
10.5	765.884
11.0	738.107
11.5	709.252
12.0	679.317
12.5	648.574
13.0	617.292
13.5	585.739
14.0	554.187
14.5	522.904
15.0	491.892
15.5	461.418
16.0	432.023
16.5	403.977
17.0	377.279
17.5	352.199
18.0	329.006
18.5	307.163
19.0	287.206
19.5	268.868
20.0	252.472
20.5	237.775
21.0	224.533
21.5	212.587
22.0	201.934
22.5	192.226
23.0	183.515
23.5	175.641
24.0	168.629
24.5	162.130
25.0	155.874
25.5	150.022
26.0	144.493
26.5	139.127

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CANDELA TABULATION - (Cont.)

27.0	134.030
27.5	129.095
28.0	124.267
28.5	119.521
29.0	114.802
29.5	110.136
30.0	105.606
30.5	101.183
31.0	96.868
31.5	92.796
32.0	89.047
32.5	85.542
33.0	82.306
33.5	79.393
34.0	76.750
34.5	74.296
35.0	72.031
35.5	69.954
36.0	68.040
36.5	66.233
37.0	64.561
37.5	62.943
38.0	61.379
38.5	59.895
39.0	58.412
39.5	56.983
40.0	55.607
40.5	54.232
41.0	52.884
41.5	51.562
42.0	50.268
42.5	49.027
43.0	47.787
43.5	46.600
44.0	45.414
44.5	44.281
45.0	43.148
45.5	42.043
46.0	40.991
46.5	39.912
47.0	38.887
47.5	37.863
48.0	36.865
48.5	35.894
49.0	34.950
49.5	34.033
50.0	33.170
50.5	32.307
51.0	31.471
51.5	30.689
52.0	29.907
52.5	29.152
53.0	28.424
53.5	27.696
54.0	26.995
54.5	26.321

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CANDELA TABULATION - (Cont.)

55.0	25.646
55.5	24.972
56.0	24.352
56.5	23.705
57.0	23.084
57.5	22.464
58.0	21.844
58.5	21.251
59.0	20.630
59.5	20.064
60.0	19.471
60.5	18.877
61.0	18.311
61.5	17.718
62.0	17.151
62.5	16.585
63.0	16.019
63.5	15.479
64.0	14.913
64.5	14.374
65.0	13.834
65.5	13.295
66.0	12.783
66.5	12.243
67.0	11.731
67.5	11.246
68.0	10.733
68.5	10.248
69.0	9.735
69.5	9.250
70.0	8.765
70.5	8.279
71.0	7.821
71.5	7.335
72.0	6.877
72.5	6.418
73.0	5.960
73.5	5.501
74.0	5.043
74.5	4.611
75.0	4.180
75.5	3.775
76.0	3.398
76.5	3.101
77.0	2.832
77.5	2.616
78.0	2.427
78.5	2.292
79.0	2.184
79.5	2.050
80.0	1.942
80.5	1.807
81.0	1.699
81.5	1.591
82.0	1.483
82.5	1.348

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CANDELA TABULATION - (Cont.)

83.0	1.241
83.5	1.160
84.0	1.052
84.5	0.944
85.0	0.836
85.5	0.728
86.0	0.647
86.5	0.539
87.0	0.458
87.5	0.351
88.0	0.270
88.5	0.189
89.0	0.135
89.5	0.081
90.0	0.000
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
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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
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125.5	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
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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	221.93	N.A.	53.10
0-30	295.40	N.A.	70.70
0-40	341.87	N.A.	81.80
0-60	398.43	N.A.	95.30
0-80	417.02	N.A.	99.80
0-90	417.98	N.A.	100.00
10-90	329.84	N.A.	78.90
20-40	119.94	N.A.	28.70
20-50	153.41	N.A.	36.70
40-70	70.31	N.A.	16.80
60-80	18.60	N.A.	4.50
70-80	4.84	N.A.	1.20
80-90	0.95	N.A.	0.20
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	417.98	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	88.14
10-20	133.80
20-30	73.47
30-40	46.47
40-50	33.48
50-60	23.08
60-70	13.76
70-80	4.84
80-90	0.95
90-100	0.00
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	113	110	108	105	111	108	106	104	104	102	100	100	99	97	97	96	95	93
2	107	102	98	95	105	101	97	94	97	94	92	94	92	90	92	90	88	86
3	102	95	90	86	100	94	89	86	91	87	84	89	86	83	87	84	82	80
4	97	89	84	80	95	88	83	79	86	82	78	84	80	77	82	79	76	75
5	93	84	78	74	91	83	78	74	81	77	73	80	76	72	78	75	72	70
6	88	80	74	70	87	79	73	69	77	72	69	76	72	68	75	71	68	67
7	85	76	70	66	83	75	69	66	74	69	65	72	68	65	71	67	64	63
8	81	72	66	62	80	71	66	62	70	65	62	69	65	62	68	64	61	60
9	78	69	63	59	77	68	63	59	67	63	59	67	62	59	66	62	59	57
10	75	66	60	57	74	65	60	57	65	60	57	64	60	56	63	59	56	55

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UGR TABLE - CORRECTED

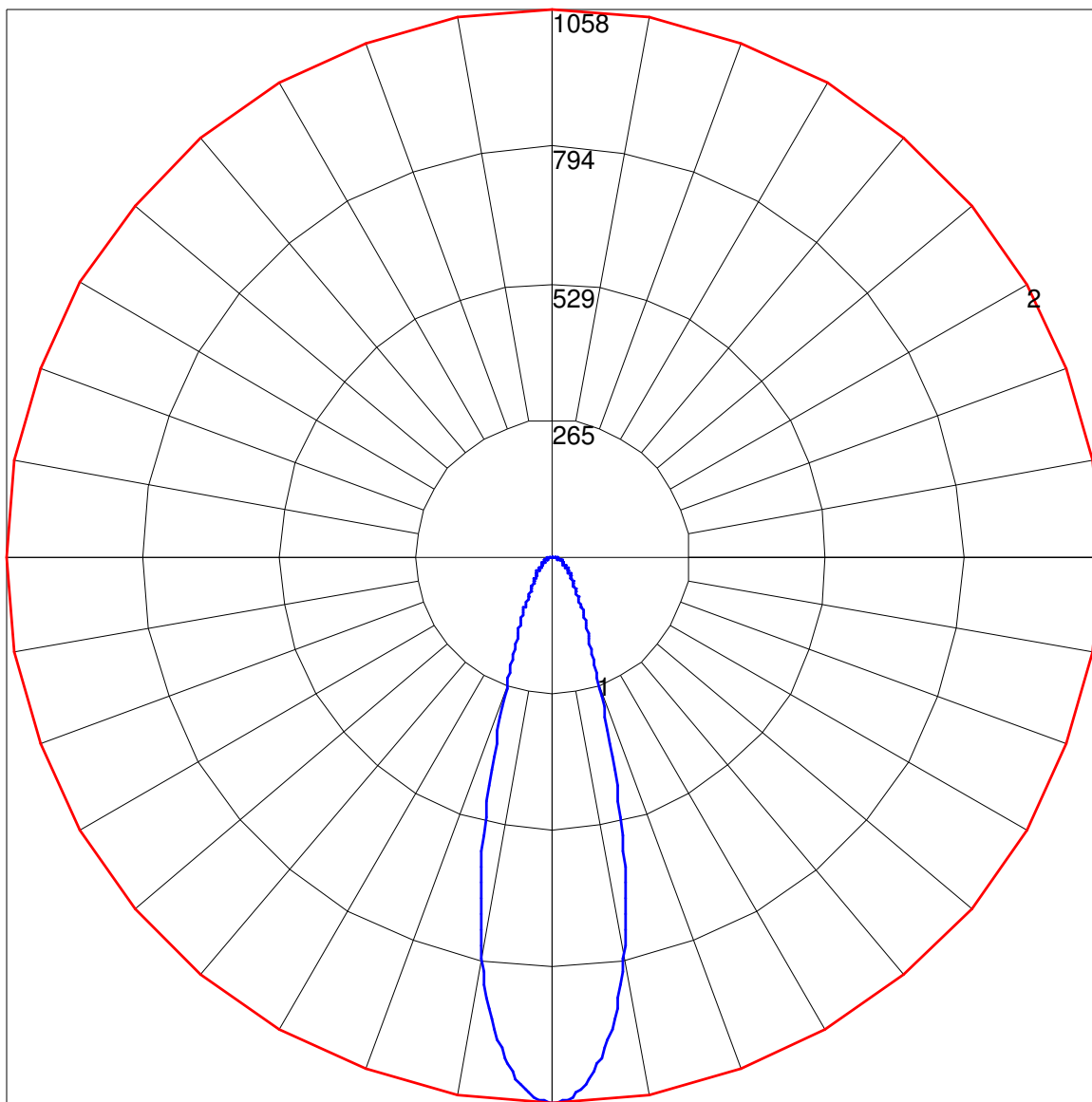
Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	17.0	18.1	17.3	18.4	18.7	17.0	18.1	17.3	18.4	18.7
	3H	18.0	19.0	18.4	19.3	19.7	18.0	19.0	18.4	19.3	19.7
	4H	18.1	19.1	18.6	19.4	19.8	18.1	19.1	18.6	19.4	19.8
	6H	18.2	19.0	18.6	19.4	19.8	18.2	19.0	18.6	19.4	19.8
	8H	18.2	19.0	18.6	19.4	19.8	18.2	19.0	18.6	19.4	19.8
	12H	18.1	18.9	18.6	19.3	19.7	18.1	18.9	18.6	19.3	19.7
4H	2H	17.3	18.2	17.7	18.6	19.0	17.3	18.2	17.7	18.6	19.0
	3H	18.5	19.2	18.9	19.6	20.0	18.5	19.2	18.9	19.6	20.0
	4H	18.7	19.3	19.1	19.8	20.2	18.7	19.3	19.1	19.8	20.2
	6H	18.7	19.3	19.2	19.7	20.2	18.7	19.3	19.2	19.7	20.2
	8H	18.7	19.2	19.2	19.7	20.2	18.7	19.2	19.2	19.7	20.2
	12H	18.7	19.2	19.2	19.7	20.1	18.7	19.2	19.2	19.7	20.1
8H	4H	18.6	19.2	19.1	19.6	20.1	18.6	19.2	19.1	19.6	20.1
	6H	18.7	19.2	19.2	19.7	20.2	18.7	19.2	19.2	19.7	20.2
	8H	18.7	19.1	19.3	19.7	20.2	18.7	19.1	19.3	19.7	20.2
	12H	18.8	19.1	19.3	19.6	20.2	18.8	19.1	19.3	19.6	20.2
12H	4H	18.6	19.1	19.1	19.6	20.0	18.6	19.1	19.1	19.6	20.0
	6H	18.7	19.1	19.2	19.6	20.1	18.7	19.1	19.2	19.6	20.1
	8H	18.8	19.1	19.3	19.6	20.2	18.8	19.1	19.3	19.6	20.2

Maximum UGR = 20.2

POLAR GRAPH



Maximum Candela = 1058.484 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)