



IES INDOOR REPORT
PHOTOMETRIC FILENAME : 2DR-L9-930-DIM-UNV-ON-ZF-CS_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST]GEN FROM 13131414.09
[TESTLAB] UL Verification Services Inc.
[ISSUE DATE] 04-26-2022
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO. 64836
[LUMCAT] 2DR-L9-930-DIM-UNV-ON-ZF-CS
[LUMINAIRE] Aluminum housing and reflector, no lens enclosure
[LAMP] One white LED
[BALLAST] Philips Advance XI036C100V054DSM1
[OTHER] 24.4 C, 120.019 V, 0.251193 A, 30.0395 W, 0.996403 PF, 59.9701
[MORE] Hz
[OTHER] This test was performed using the calibrated photodetector met
[MORE] hod of absolute photometry.
[_SEARCH_SOURCE TYPE] LED
[_SEARCH_APPLICATION] Indoor, Downlight
[_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	631
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	59
Total Luminaire Watts	10.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.28
Spacing Criterion (90-270)	0.28
Spacing Criterion (Diagonal)	0.32
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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 2DR-L9-930-DIM-UNV-ON-ZF-CS_.IES

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2743	2743	2743
55	1424	1424	1424
65	1208	1208	1208
75	1577	1577	1577
85	3515	3515	3515

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 2DR-L9-930-DIM-UNV-ON-ZF-CS_.IES

CANDELA TABULATION

	<u>0</u>
0.0	4170.437
0.5	4160.761
1.0	4122.056
1.5	4067.224
2.0	3993.040
2.5	3896.278
3.0	3780.164
3.5	3644.697
4.0	3496.329
4.5	3341.510
5.0	3186.046
5.5	3018.003
6.0	2840.284
6.5	2659.662
7.0	2478.394
7.5	2297.450
8.0	2125.213
8.5	1963.621
9.0	1811.705
9.5	1669.465
10.0	1536.579
10.5	1414.336
11.0	1303.060
11.5	1204.040
12.0	1117.600
12.5	1040.835
13.0	971.167
13.5	908.272
14.0	851.505
14.5	800.221
15.0	754.098
15.5	712.490
16.0	676.043
16.5	642.821
17.0	613.470
17.5	586.700
18.0	562.187
18.5	538.964
19.0	517.354
19.5	497.679
20.0	479.616
20.5	461.877
21.0	444.782
21.5	427.688
22.0	410.593
22.5	392.853
23.0	375.114
23.5	356.729
24.0	338.021
24.5	318.669
25.0	298.672
25.5	278.674
26.0	258.354
26.5	238.357

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 2DR-L9-930-DIM-UNV-ON-ZF-CS_.IES

CANDELA TABULATION - (Cont.)

27.0	218.037
27.5	198.039
28.0	178.364
28.5	159.657
29.0	141.272
29.5	123.855
30.0	107.728
30.5	92.246
31.0	78.700
31.5	66.766
32.0	56.122
32.5	47.091
33.0	39.672
33.5	33.222
34.0	27.738
34.5	23.223
35.0	19.675
35.5	16.772
36.0	15.159
36.5	13.869
37.0	13.224
37.5	12.579
38.0	11.934
38.5	11.289
39.0	10.966
39.5	10.644
40.0	9.999
40.5	9.676
41.0	9.354
41.5	8.709
42.0	8.386
42.5	8.063
43.0	7.741
43.5	7.096
44.0	6.773
44.5	6.451
45.0	6.128
45.5	5.806
46.0	5.806
46.5	5.161
47.0	5.161
47.5	4.838
48.0	4.516
48.5	4.193
49.0	4.193
49.5	3.870
50.0	3.870
50.5	3.548
51.0	3.548
51.5	3.225
52.0	3.225
52.5	3.225
53.0	2.903
53.5	2.903
54.0	2.903
54.5	2.580

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 2DR-L9-930-DIM-UNV-ON-ZF-CS_.IES

CANDELA TABULATION - (Cont.)

55.0	2.580
55.5	2.580
56.0	2.580
56.5	2.258
57.0	2.258
57.5	2.258
58.0	2.258
58.5	2.258
59.0	1.935
59.5	1.935
60.0	1.935
60.5	1.935
61.0	1.935
61.5	1.613
62.0	1.935
62.5	1.613
63.0	1.613
63.5	1.613
64.0	1.613
64.5	1.613
65.0	1.613
65.5	1.613
66.0	1.613
66.5	1.613
67.0	1.290
67.5	1.613
68.0	1.613
68.5	1.613
69.0	1.290
69.5	1.290
70.0	1.290
70.5	1.290
71.0	1.290
71.5	1.290
72.0	1.290
72.5	1.290
73.0	1.290
73.5	1.290
74.0	1.290
74.5	1.290
75.0	1.290
75.5	1.290
76.0	0.968
76.5	0.968
77.0	0.968
77.5	1.290
78.0	0.968
78.5	0.968
79.0	1.290
79.5	1.290
80.0	1.290
80.5	0.968
81.0	1.290
81.5	1.290
82.0	1.290
82.5	0.968

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 2DR-L9-930-DIM-UNV-ON-ZF-CS_.IES

CANDELA TABULATION - (Cont.)

83.0	0.968
83.5	1.290
84.0	0.968
84.5	1.290
85.0	0.968
85.5	0.968
86.0	0.968
86.5	0.968
87.0	0.968
87.5	1.290
88.0	1.290
88.5	0.968
89.0	1.290
89.5	0.968
90.0	0.968
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
PHOTOMETRIC FILENAME : 2DR-L9-930-DIM-UNV-ON-ZF-CS_.IES

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
122.0	0.000
122.5	0.000
123.0	0.000
123.5	0.000
124.0	0.000
124.5	0.000
125.0	0.000
125.5	0.000
126.0	0.000
126.5	0.000
127.0	0.000
127.5	0.000
128.0	0.000
128.5	0.000
129.0	0.000
129.5	0.000
130.0	0.000
130.5	0.000
131.0	0.000
131.5	0.000
132.0	0.000
132.5	0.000
133.0	0.000
133.5	0.000
134.0	0.000
134.5	0.000
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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 2DR-L9-930-DIM-UNV-ON-ZF-CS_.IES

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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 2DR-L9-930-DIM-UNV-ON-ZF-CS_.IES

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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 2DR-L9-930-DIM-UNV-ON-ZF-CS_.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	468.78	N.A.	74.30
0-30	600.15	N.A.	95.10
0-40	619.78	N.A.	98.20
0-60	627.10	N.A.	99.30
0-80	629.98	N.A.	99.80
0-90	631.18	N.A.	100.00
10-90	384.37	N.A.	60.90
20-40	151.00	N.A.	23.90
20-50	155.92	N.A.	24.70
40-70	8.91	N.A.	1.40
60-80	2.88	N.A.	0.50
70-80	1.28	N.A.	0.20
80-90	1.21	N.A.	0.20
90-110	0.03	N.A.	0.00
90-120	0.03	N.A.	0.00
90-130	0.03	N.A.	0.00
90-150	0.03	N.A.	0.00
90-180	0.03	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	631.21	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	246.82
10-20	221.97
20-30	131.37
30-40	19.63
40-50	4.92
50-60	2.40
60-70	1.60
70-80	1.28
80-90	1.21
90-100	0.03
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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 2DR-L9-930-DIM-UNV-ON-ZF-CS_.IES

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	115	113	111	109	113	111	109	107	107	105	104	103	102	101	100	99	98	96
2	111	107	104	102	109	106	103	101	103	100	99	100	98	96	97	96	95	93
3	108	103	99	96	106	102	98	96	99	96	94	97	95	93	95	93	91	90
4	104	99	95	92	103	98	94	91	96	93	90	94	91	89	92	90	88	87
5	101	95	91	88	100	94	90	88	93	89	87	91	88	86	90	87	85	84
6	98	92	88	85	97	91	87	84	90	86	84	89	86	83	88	85	83	82
7	95	89	85	82	94	88	84	82	87	84	81	86	83	81	85	83	81	79
8	93	86	82	79	92	86	82	79	85	81	79	84	81	79	83	80	78	77
9	90	84	80	77	90	83	80	77	83	79	77	82	79	76	81	78	76	75
10	88	81	78	75	87	81	77	75	80	77	75	80	77	74	79	76	74	73

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 2DR-L9-930-DIM-UNV-ON-ZF-CS_.IES

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	0.0	0.9	0.4	1.2	1.5	UGR Viewed Endwise				
	3H	2.2	3.0	2.6	3.3	3.7	0.0	0.9	0.4	1.2	1.5
	4H	3.2	3.9	3.6	4.3	4.6	2.2	3.0	2.6	3.3	3.7
	6H	4.6	5.2	5.0	5.6	6.0	3.2	3.9	3.6	4.3	4.6
	8H	5.3	5.9	5.7	6.3	6.7	4.6	5.2	5.0	5.6	6.0
	12H	6.1	6.7	6.6	7.1	7.6	5.3	5.9	5.7	6.3	6.7

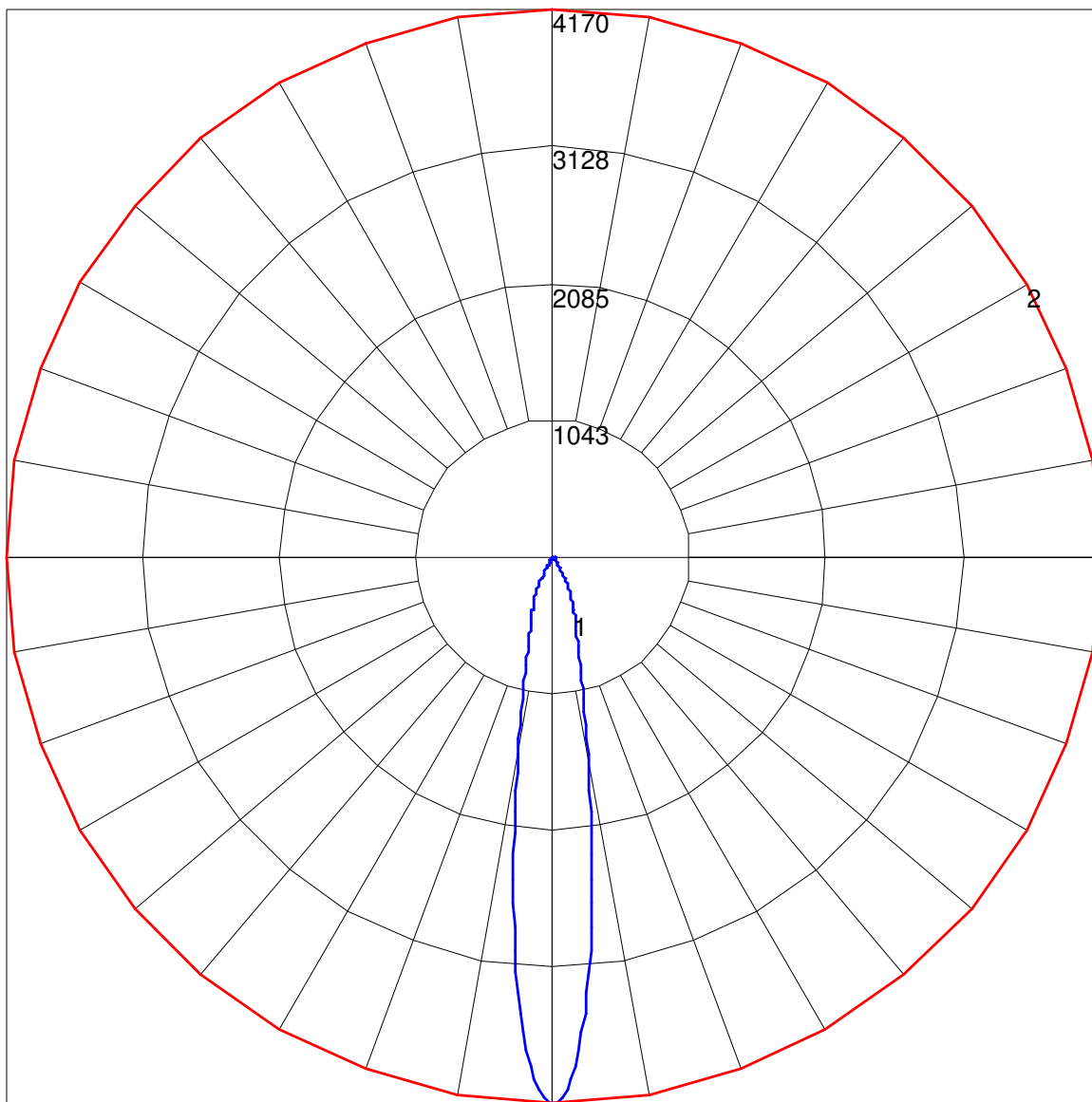
4H	2H	0.5	1.2	0.9	1.5	1.9	0.0	0.9	0.4	1.2	1.5
	3H	2.8	3.4	3.2	3.8	4.2	2.2	3.0	2.6	3.3	3.7
	4H	4.1	4.6	4.5	5.0	5.5	3.2	3.9	3.6	4.3	4.6
	6H	5.6	6.1	6.1	6.5	7.0	4.6	5.2	5.0	5.6	6.0
	8H	6.5	6.9	7.0	7.4	7.9	5.3	5.9	5.7	6.3	6.7
	12H	7.5	7.9	8.0	8.4	8.9	6.1	6.7	6.6	7.1	7.6

8H	4H	4.4	4.8	4.9	5.2	5.7	0.5	1.2	0.9	1.5	1.9
	6H	6.3	6.6	6.8	7.1	7.6	2.8	3.4	3.2	3.8	4.2
	8H	7.4	7.7	7.9	8.2	8.7	4.1	4.6	4.5	5.0	5.5
	12H	8.7	9.0	9.2	9.5	10.0	5.6	6.1	6.1	6.5	7.0

12H	4H	4.5	4.9	5.0	5.4	5.8	6.5	6.9	7.0	7.4	7.9
	6H	6.6	6.9	7.1	7.4	7.9	7.5	7.9	8.0	8.4	8.9
	8H	7.8	8.0	8.3	8.5	9.1	4.4	4.8	4.9	5.2	5.7

Maximum UGR = 10.0

POLAR GRAPH



Maximum Candela = 4170.437 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.)