H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 76R-4-L52-840-R1015-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TESTLAB] Photopia 2022.0.0 see: www.ltioptics.com/ies
[ISSUEDATE] AUGUST 2022
[TESTDATE] Fri Aug 05 11:05:23 2022
[TEST] 76R R1015
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO. 64836
[LUMCAT] 76R-4-L52-840-R1015-DIM-UNV
[LUMINAIRE] 4' LENSED LED STRIP LUMINAIRE
[MORE] W/ASSYMMETRIC REFLECTOR
[LAMP] LED
[LAMPCAT] HLM 80 CRI, 4000K CCT
[OTHER]

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4924
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	147
Total Luminaire Watts	33.52
Ballast Factor	1.00
CIE Type	Semi-Direct
Spacing Criterion (0-180)	2.26
Spacing Criterion (90-270)	1.24
Spacing Criterion (Diagonal)	1.44
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	0.41 ft
Luminous Width (90-270)	4.00 ft
Luminous Height	0.58 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	6788	6489	5121
55	6609	5943	4385
65	6074	5616	3467
75	5293	5002	2641
85	4991	4432	1921

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0	112.5	135.0	157.5	180.0
0	1047.36	1047.36	1047.36	1047.36	1047.36	1047.36	1047.36	1047.36	1047.36
5	1474.71	1457.87	1315.69	1199.12	1018.46	896.65	792.14	691.93	690.21
10	1694.87	1653.30	1511.07	1325.41	1048.56	766.78	519.94	420.30	365.65
15	1844.90	1763.94	1639.74	1397.49	1021.22	630.47	339.35	208.81	163.45
20	1840.56	1841.52	1733.29	1468.29	992.99	489.59	193.40	82.61	52.35
25	1903.49	1840.86	1725.31	1481.28	950.83	359.75	93.84	14.12	5.46
30	1825.27	1790.96	1699.33	1450.08	867.27	279.03	37.76	3.27	0.00
35	1814.92	1763.94	1608.44	1385.29	796.96	192.32	19.22	2.97	0.00
40	1819.23	1761.88	1546.98	1299.51	718.23	139.82	18.61	5.39	0.00
45	1774.76	1745.60	1478.55	1179.95	637.04	100.06	20.57	4.21	0.00
50	1801.69	1664.59	1409.03	1075.70	550.90	67.67	19.18	4.74	0.26
55	1752.35	1640.85	1344.51	952.61	466.56	55.86	20.06	4.82	0.14
60	1724.96	1592.39	1274.70	873.35	379.65	47.80	17.09	3.92	0.06
65	1584.18	1510.36	1222.80	766.67	295.20	39.45	14.76	3.36	0.05
70	1438.73	1363.97	1142.58	699.60	229.22	33.76	14.25	3.02	0.17
75	1315.27	1244.15	1013.39	628.13	161.95	27.45	9.81	2.62	0.12
80	1204.26	1125.77	901.44	531.91	111.48	19.24	6.88	2.09	0.00
85	1141.45	1045.35	803.79	443.07	68.43	11.05	4.65	1.34	0.00
90	1068.17	990.61	746.53	421.94	41.00	5.43	3.50	1.22	0.15
95	993.04	923.03	709.10	398.68	29.90	3.45	1.97	1.27	0.71
100	940.70	855.16	647.75	319.03	19.57	1.76	1.56	0.87	0.85
105	868.88	792.90	562.53	213.80	16.16	1.38	1.47	0.82	0.37
110	778.63	678.54	448.95	140.81	14.89	1.64	0.95	0.78	0.45
115	641.81	561.73	344.13	93.52	14.84	2.05	0.83	0.62	0.26
120	521.76	442.92	255.48	62.84	15.02	4.49	0.82	0.85	0.82
125	377.17	324.85	176.57	41.96	13.60	5.86	0.79	0.69	0.59
130	279.42	240.33	126.76	22.54	11.12	6.44	0.88	0.97	0.18
135	203.68	178.94	78.70	12.94	10.31	7.15	1.43	1.05	0.94
140	149.74	117.41	46.26	10.09	9.01	8.57	2.24	1.03	0.86
145	92.45	66.37	17.59	8.07	7.14	6.20	3.58	1.78	1.70
150	33.86	17.91	5.26	5.45	8.07	8.12	4.41	1.76	1.24
155	4.09	4.16	3.99	4.94	4.71	6.77	5.15	2.98	2.04
160	1.40	2.42	2.65	2.75	3.06	5.48	5.94	5.88	3.15
165	0.46	0.48	1.59	1.85	3.31	4.89	5.55	5.99	6.10
170	0.00	0.73	0.46	0.79	2.65	4.29	4.70	4.85	6.80
175	0.00	0.44	1.24	0.90	3.40	1.32	2.03	3.10	3.09
180	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	382.97	N.A.	7.80
0-30	810.59	N.A.	16.50
0-40	1335.8	N.A.	27.10
0-60	2522.02	N.A.	51.20
0-80	3592.25	N.A.	73.00
0-90	3999.35	N.A.	81.20
10-90	3899.39	N.A.	79.20
20-40	952.82	N.A.	19.40
20-50	1537.74	N.A.	31.20
40-70	1761.00	N.A.	35.80
60-80	1070.22	N.A.	21.70
70-80	495.45	N.A.	10.10
80-90	407.10	N.A.	8.30
90-110	613.52	N.A.	12.50
90-120	781.34	N.A.	15.90
90-130	868.65	N.A.	17.60
90-150	920.86	N.A.	18.70
90-180	924.54	N.A.	18.80
110-180	311.02	N.A.	6.30
0-180	4923.89	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	99.96
10-20	283.01
20-30	427.62
30-40	525.21
40-50	584.92
50-60	601.31
60-70	574.77
70-80	495.45
80-90	407.10
90-100	347.47
100-110	266.05
110-120	167.82
120-130	87.31
130-140	39.12
140-150	13.09
150-160	2.52
160-170	0.95
170-180	0.21

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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	115	115	115	115	110	110	110	110	101	101	101	92	92	92	85	85	85	81
1	101	95	89	84	96	91	86	81	83	79	75	76	72	69	69	66	64	61
2	91	81	73	66	86	77	70	64	71	65	59	64	59	55	59	55	51	48
3	82	70	61	53	78	67	59	52	61	54	48	56	50	45	51	46	42	39
4	74	61	52	44	71	59	50	43	54	46	40	49	43	38	45	40	35	32
5	68	54	45	38	65	52	43	37	48	40	34	44	37	32	40	35	30	28
6	63	49	39	32	59	47	38	32	43	35	30	39	33	28	36	31	26	24
7	58	44	35	28	55	42	34	28	39	31	26	36	29	25	33	27	23	21
8	54	40	31	25	51	38	30	24	35	28	23	33	26	22	30	25	21	18
9	50	36	28	22	48	35	27	22	33	26	21	30	24	20	28	22	19	16
10	47	34	25	20	45	32	25	20	30	23	19	28	22	18	26	21	17	15

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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	22.0	23.3	22.6	24.0	24.7	13.1	14.5	13.7	15.1	15.8
	3H	24.8	26.1	25.5	26.7	27.5	14.3	15.6	15.0	16.2	17.0
	4H	26.2	27.4	26.9	28.1	28.9	14.7	15.9	15.4	16.6	17.4
	6H	27.7	28.8	28.3	29.5	30.3	15.0	16.1	15.7	16.8	17.6
	8H	28.4	29.5	29.1	30.2	31.0	15.1	16.1	15.7	16.8	17.6
	12H	29.2	30.3	29.9	30.9	31.8	15.1	16.1	15.8	16.8	17.7
4H	2H	22.2	23.4	22.9	24.1	24.9	15.2	16.4	15.9	17.1	17.9
	3H	25.3	26.3	26.0	27.0	27.8	16.8	17.9	17.5	18.6	19.4
	4H	26.8	27.8	27.5	28.5	29.3	17.4	18.4	18.1	19.1	19.9
	6H	28.5	29.3	29.2	30.0	30.9	17.9	18.7	18.6	19.4	20.3
	8H	29.3	30.1	30.0	30.9	31.7	18.0	18.8	18.7	19.5	20.4
	12H	30.3	31.0	31.0	31.8	32.6	18.0	18.8	18.8	19.5	20.4
8H	4H	27.0	27.8	27.7	28.5	29.4	18.9	19.7	19.6	20.5	21.3
	6H	28.8	29.4	29.5	30.2	31.1	19.7	20.3	20.4	21.1	22.0
	8H	29.7	30.4	30.5	31.1	32.0	19.9	20.5	20.7	21.3	22.2
	12H	30.9	31.4	31.6	32.2	33.1	20.1	20.7	20.8	21.4	22.3
12H	4H	27.0	27.7	27.7	28.5	29.3	19.3	20.1	20.1	20.8	21.7
	6H	28.8	29.4	29.5	30.2	31.1	20.2	20.9	21.0	21.6	22.5
	8H	29.8	30.4	30.6	31.1	32.1	20.6	21.2	21.4	22.0	22.9

Maximum UGR = 33.1

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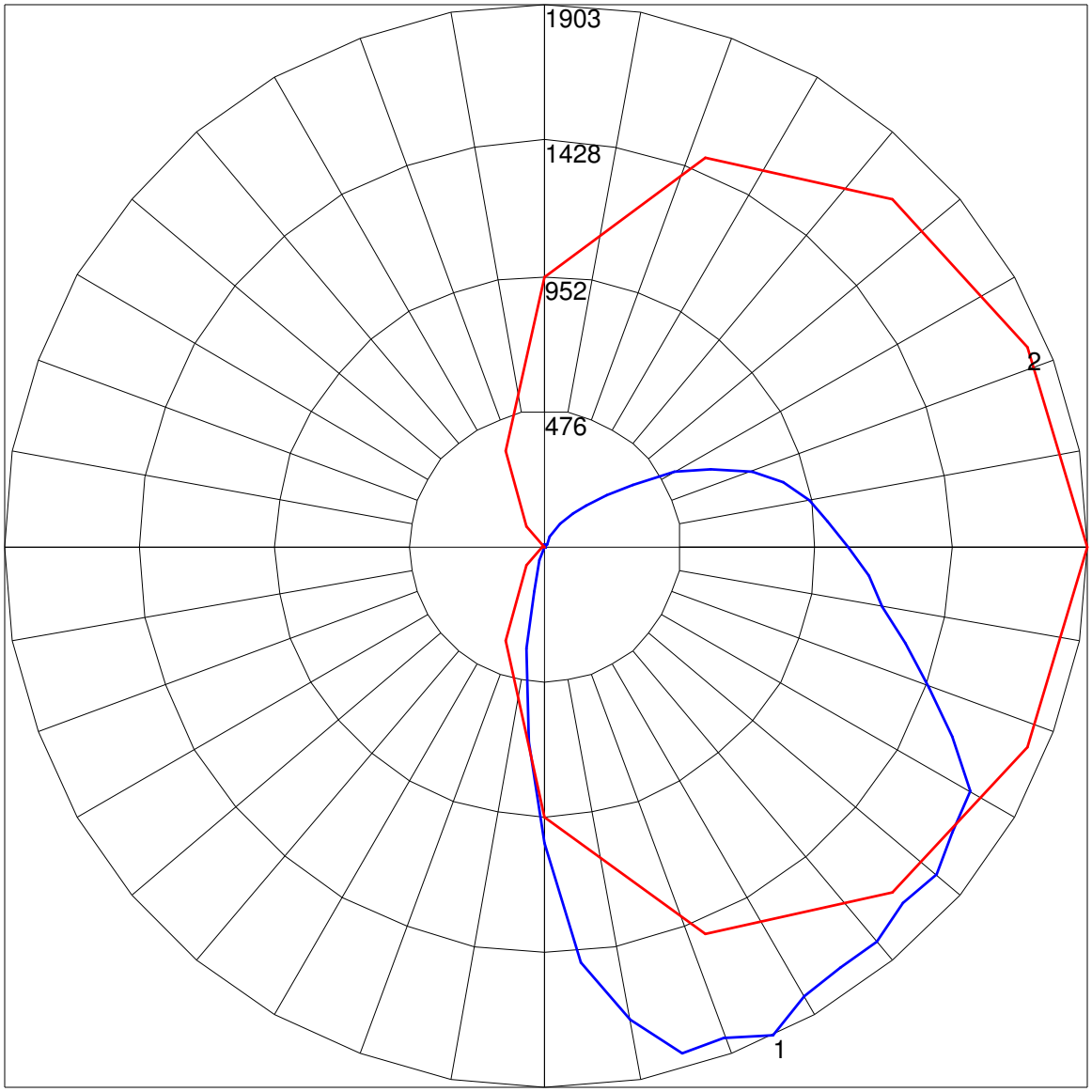
POLAR GRAPH



Maximum Candela = 1903.49 Located At Horizontal Angle = 0, Vertical Angle = 25
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (25) (Through Max. Cd.)

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