H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 76R-4-L52-840-EM10W-DIM-UNV_EMER MODE.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN from BALLABS TEST NO. 20990.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 04-18-2022
[MANUFAC] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 72 LED 23.75", 68 LED 22.375"ARRAYS 4' 76R SURFACE LUMINAIRE
[MORE] WHITE REFLECTOR w/RADIAL RIBBED FROST ACRYLIC LENS
[LUMCAT] 76R-4-L52/840-EM10W-DIM-UNV

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1470
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	147
Total Luminaire Watts	10
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.36
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	3.98 ft
Luminous Width (90-270)	0.38 ft
Luminous Height	0.15 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2572	2357	2419
55	2193	2043	2151
65	1764	1692	1862
75	1368	1435	1609
85	642	1293	1498

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	474.692	474.692	474.692	474.692	474.692
5	478.672	472.396	471.172	471.172	469.794
10	469.947	464.589	464.895	466.120	464.589
15	454.180	450.047	453.415	457.089	456.629
20	433.821	432.137	437.648	444.383	444.689
25	405.655	407.492	417.442	426.320	428.616
30	375.958	379.172	393.408	404.889	409.328
35	338.913	346.414	365.242	380.244	385.448
40	303.552	311.665	334.321	355.292	360.191
45	261.609	273.396	300.950	323.605	329.728
50	222.421	236.964	267.120	292.071	298.807
55	183.693	197.929	232.524	258.394	266.354
60	146.954	163.027	198.541	222.421	231.453
65	111.593	128.585	163.333	193.796	200.378
70	82.356	97.357	133.789	163.333	171.140
75	55.873	72.559	109.450	135.933	141.749
80	31.075	51.434	87.560	111.593	119.859
85	11.022	34.749	69.497	91.846	98.735
90	0.000	22.962	54.189	76.079	80.519
95	0.000	14.695	42.709	62.302	69.038
100	0.000	9.797	32.759	51.587	56.945
105	0.000	6.582	25.870	41.637	47.607
110	0.000	3.062	20.512	34.136	39.800
115	0.000	1.990	16.379	28.779	32.759
120	0.000	0.000	13.012	23.574	27.707
125	0.000	0.000	10.103	18.828	22.043
130	0.000	0.000	7.960	14.848	17.604
135	0.000	0.000	6.429	11.481	14.083
140	0.000	0.000	3.368	8.725	10.715
145	0.000	0.000	1.225	6.735	7.807
150	0.000	0.000	0.000	5.817	6.582
155	0.000	0.000	0.000	5.511	5.817
160	0.000	0.000	0.000	3.215	5.358
165	0.000	0.000	0.000	1.072	1.837
170	0.000	0.000	0.000	0.000	0.000
175	0.000	0.000	0.000	0.000	0.000
180	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	172.97	N.A.	11.80
0-30	365.15	N.A.	24.80
0-40	592.74	N.A.	40.30
0-60	1028.00	N.A.	69.90
0-80	1298.59	N.A.	88.30
0-90	1368.21	N.A.	93.10
10-90	1323.33	N.A.	90.00
20-40	419.77	N.A.	28.60
20-50	650.41	N.A.	44.20
40-70	594.86	N.A.	40.50
60-80	270.59	N.A.	18.40
70-80	110.98	N.A.	7.50
80-90	69.62	N.A.	4.70
90-110	68.83	N.A.	4.70
90-120	84.69	N.A.	5.80
90-130	93.80	N.A.	6.40
90-150	100.62	N.A.	6.80
90-180	101.74	N.A.	6.90
110-180	32.91	N.A.	2.20
0-180	1469.94	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	44.87
10-20	128.10
20-30	192.18
30-40	227.59
40-50	230.64
50-60	204.61
60-70	159.61
70-80	110.98
80-90	69.62
90-100	42.61
100-110	26.22
110-120	15.86
120-130	9.11
130-140	4.82
140-150	1.99
150-160	0.93
160-170	0.19
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	117	117	117	117	114	114	114	114	107	107	107	101	101	101	96	96	96	93
1	106	101	96	92	102	98	93	90	92	89	85	87	84	82	82	80	78	75
2	96	87	80	74	93	85	78	73	80	75	70	76	71	67	72	68	65	62
3	88	77	68	61	84	74	67	60	70	64	58	67	61	57	63	59	55	52
4	80	68	59	52	77	66	58	51	63	55	50	59	53	48	57	51	47	45
5	74	61	51	45	71	59	51	44	56	49	43	53	47	42	51	45	41	39
6	68	55	46	39	66	53	45	39	51	43	38	48	42	37	46	40	36	34
7	63	49	41	34	61	48	40	34	46	39	33	44	38	33	42	36	32	30
8	59	45	37	31	57	44	36	30	42	35	30	40	34	29	39	33	29	27
9	55	41	33	28	53	41	33	27	39	32	27	37	31	26	36	30	26	24
10	51	38	30	25	50	37	30	25	36	29	24	35	28	24	33	28	24	22

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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	12.2	13.7	12.6	14.1	14.6	15.2	16.7	15.7	17.1	17.6
	3H	13.4	14.7	13.9	15.2	15.7	17.4	18.8	17.9	19.3	19.8
	4H	13.8	15.1	14.3	15.5	16.1	18.5	19.8	19.0	20.3	20.8
	6H	14.0	15.2	14.5	15.7	16.2	19.6	20.8	20.1	21.3	21.8
	8H	14.0	15.2	14.6	15.7	16.3	20.2	21.3	20.7	21.8	22.4
	12H	14.0	15.1	14.6	15.7	16.3	20.8	21.9	21.3	22.4	23.0
4H	2H	13.1	14.4	13.6	14.9	15.4	15.5	16.8	16.0	17.3	17.8
	3H	14.6	15.7	15.1	16.2	16.8	18.0	19.1	18.5	19.6	20.2
	4H	15.1	16.1	15.6	16.6	17.2	19.2	20.2	19.7	20.8	21.4
	6H	15.4	16.3	15.9	16.8	17.5	20.5	21.4	21.1	22.0	22.6
	8H	15.5	16.3	16.0	16.9	17.5	21.2	22.0	21.7	22.6	23.2
	12H	15.5	16.3	16.1	16.9	17.5	21.9	22.7	22.5	23.3	23.9
8H	4H	15.8	16.6	16.4	17.2	17.8	19.4	20.2	19.9	20.8	21.4
	6H	16.3	17.0	16.9	17.6	18.3	20.8	21.5	21.4	22.1	22.8
	8H	16.5	17.1	17.1	17.7	18.4	21.6	22.3	22.2	22.9	23.5
	12H	16.6	17.2	17.2	17.8	18.5	22.6	23.1	23.2	23.7	24.4
12H	4H	16.0	16.8	16.6	17.4	18.0	19.4	20.1	20.0	20.7	21.4
	6H	16.6	17.3	17.3	17.9	18.5	20.9	21.5	21.5	22.1	22.8
	8H	16.9	17.5	17.5	18.1	18.8	21.7	22.3	22.3	22.9	23.6

Maximum UGR = 24.4

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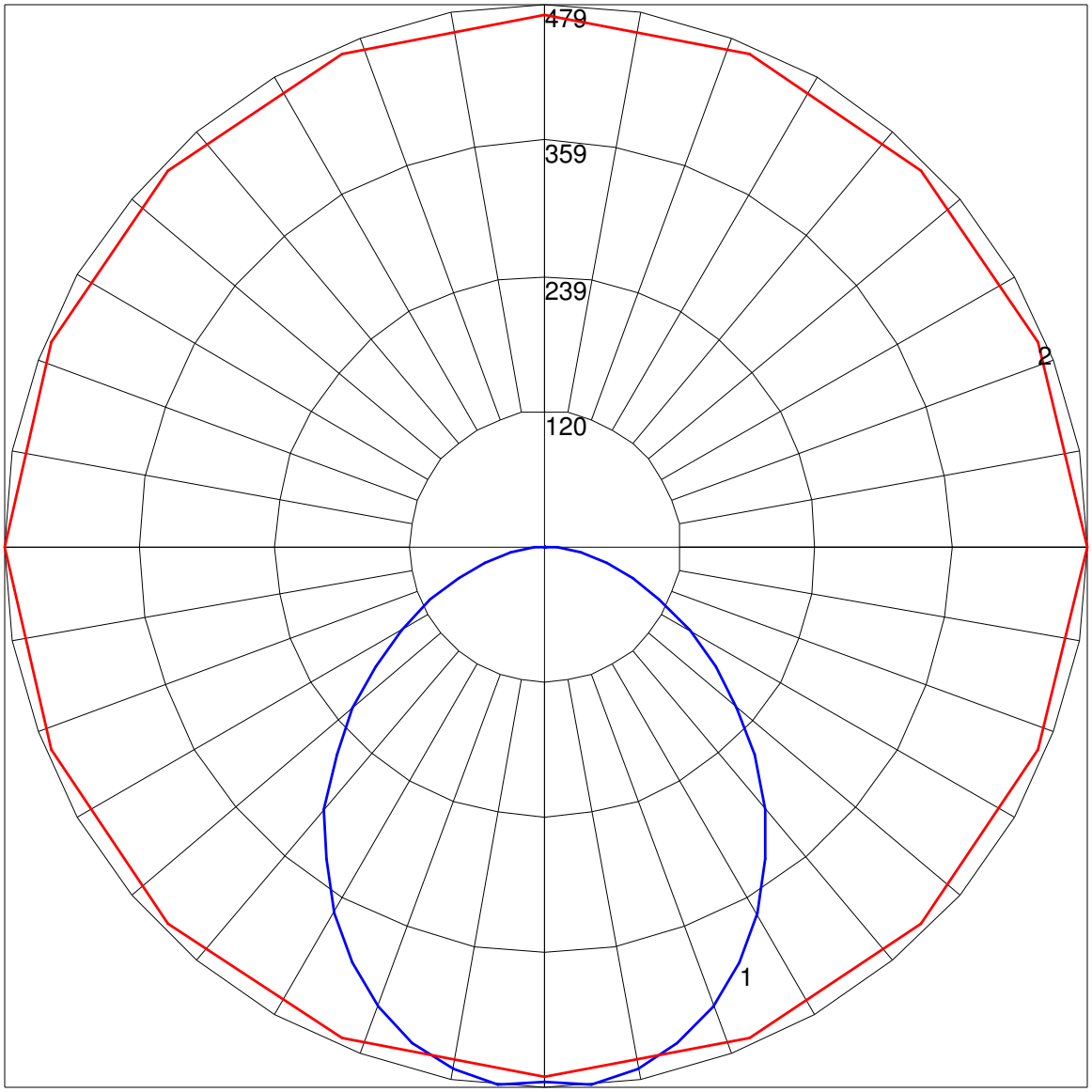
POLAR GRAPH



Maximum Candela = 478.672 Located At Horizontal Angle = 0, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)

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