H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 76R-4-L52-840-DRV-UNV_.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-DRV-UNV

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5261
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	147
Total Luminaire Watts	35.8
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	9205	8436	8657
55	7849	7311	7698
65	6314	6056	6665
75	4898	5135	5759
85	2298	4629	5361

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1698.882	1698.882	1698.882	1698.882	1698.882
5	1713.126	1690.664	1686.281	1686.281	1681.351
10	1681.899	1662.724	1663.820	1668.202	1662.724
15	1625.470	1610.678	1622.731	1635.879	1634.236
20	1552.606	1546.580	1566.302	1590.408	1591.503
25	1451.802	1458.376	1493.986	1525.761	1533.979
30	1345.519	1357.024	1407.974	1449.062	1464.950
35	1212.939	1239.784	1307.169	1360.859	1379.486
40	1086.386	1115.422	1196.504	1271.559	1289.090
45	936.275	978.460	1077.073	1158.154	1180.068
50	796.026	848.071	955.998	1045.297	1069.403
55	657.420	708.370	832.184	924.770	953.259
60	525.936	583.460	710.561	796.026	828.349
65	399.382	460.194	584.556	693.578	717.135
70	294.743	348.432	478.821	584.556	612.496
75	199.965	259.681	391.713	486.491	507.309
80	111.213	184.078	313.370	399.382	428.966
85	39.445	124.362	248.724	328.710	353.363
90	0.000	82.177	193.939	272.281	288.169
95	0.000	52.594	152.850	222.975	247.080
100	0.000	35.062	117.240	184.625	203.800
105	0.000	23.558	92.587	149.015	170.381
110	0.000	10.957	73.412	122.170	142.441
115	0.000	7.122	58.620	102.996	117.240
120	0.000	0.000	46.567	84.369	99.161
125	0.000	0.000	36.158	67.386	78.890
130	0.000	0.000	28.488	53.141	63.003
135	0.000	0.000	23.010	41.089	50.402
140	0.000	0.000	12.053	31.227	38.349
145	0.000	0.000	4.383	24.105	27.940
150	0.000	0.000	0.000	20.818	23.558
155	0.000	0.000	0.000	19.723	20.818
160	0.000	0.000	0.000	11.505	19.175
165	0.000	0.000	0.000	3.835	6.574
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	619.05	N.A.	11.80
0-30	1306.85	N.A.	24.80
0-40	2121.37	N.A.	40.30
0-60	3679.11	N.A.	69.90
0-80	4647.52	N.A.	88.30
0-90	4896.69	N.A.	93.10
10-90	4736.09	N.A.	90.00
20-40	1502.32	N.A.	28.60
20-50	2327.78	N.A.	44.20
40-70	2128.95	N.A.	40.50
60-80	968.41	N.A.	18.40
70-80	397.19	N.A.	7.50
80-90	249.17	N.A.	4.70
90-110	246.32	N.A.	4.70
90-120	303.09	N.A.	5.80
90-130	335.70	N.A.	6.40
90-150	360.09	N.A.	6.80
90-180	364.11	N.A.	6.90
110-180	117.78	N.A.	2.20
0-180	5260.8	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	160.60
10-20	458.45
20-30	687.80
30-40	814.53
40-50	825.45
50-60	732.28
60-70	571.22
70-80	397.19
80-90	249.17
90-100	152.49
100-110	93.83
110-120	56.76
120-130	32.62
130-140	17.25
140-150	7.14
150-160	3.33
160-170	0.69
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	16.7	18.2	17.1	18.6	19.1	19.7	21.2	20.2	21.6	22.1
	3H	17.9	19.2	18.4	19.7	20.2	21.9	23.3	22.4	23.8	24.3
	4H	18.3	19.6	18.8	20.0	20.6	23.0	24.3	23.5	24.8	25.3
	6H	18.5	19.7	19.0	20.2	20.7	24.1	25.3	24.6	25.8	26.3
	8H	18.5	19.7	19.1	20.2	20.8	24.7	25.8	25.2	26.3	26.9
	12H	18.5	19.6	19.1	20.2	20.8	25.3	26.4	25.8	26.9	27.5
4H	2H	17.6	18.9	18.1	19.4	19.9	20.0	21.3	20.5	21.8	22.3
	3H	19.1	20.2	19.6	20.7	21.3	22.5	23.6	23.0	24.1	24.7
	4H	19.6	20.6	20.1	21.1	21.7	23.7	24.7	24.2	25.3	25.9
	6H	19.9	20.8	20.4	21.3	22.0	25.0	25.9	25.6	26.5	27.1
	8H	20.0	20.8	20.5	21.4	22.0	25.7	26.5	26.2	27.1	27.7
	12H	20.0	20.8	20.6	21.4	22.0	26.4	27.2	27.0	27.8	28.4
8H	4H	20.3	21.1	20.9	21.7	22.3	23.9	24.7	24.4	25.3	25.9
	6H	20.8	21.5	21.4	22.1	22.8	25.3	26.0	25.9	26.6	27.3
	8H	21.0	21.6	21.6	22.2	22.9	26.1	26.8	26.7	27.4	28.0
	12H	21.1	21.7	21.7	22.3	23.0	27.1	27.6	27.7	28.2	28.9
12H	4H	20.5	21.3	21.1	21.9	22.5	23.9	24.6	24.5	25.2	25.9
	6H	21.1	21.8	21.8	22.4	23.0	25.4	26.0	26.0	26.6	27.3
	8H	21.4	22.0	22.0	22.6	23.3	26.2	26.8	26.8	27.4	28.1

Maximum UGR = 28.9

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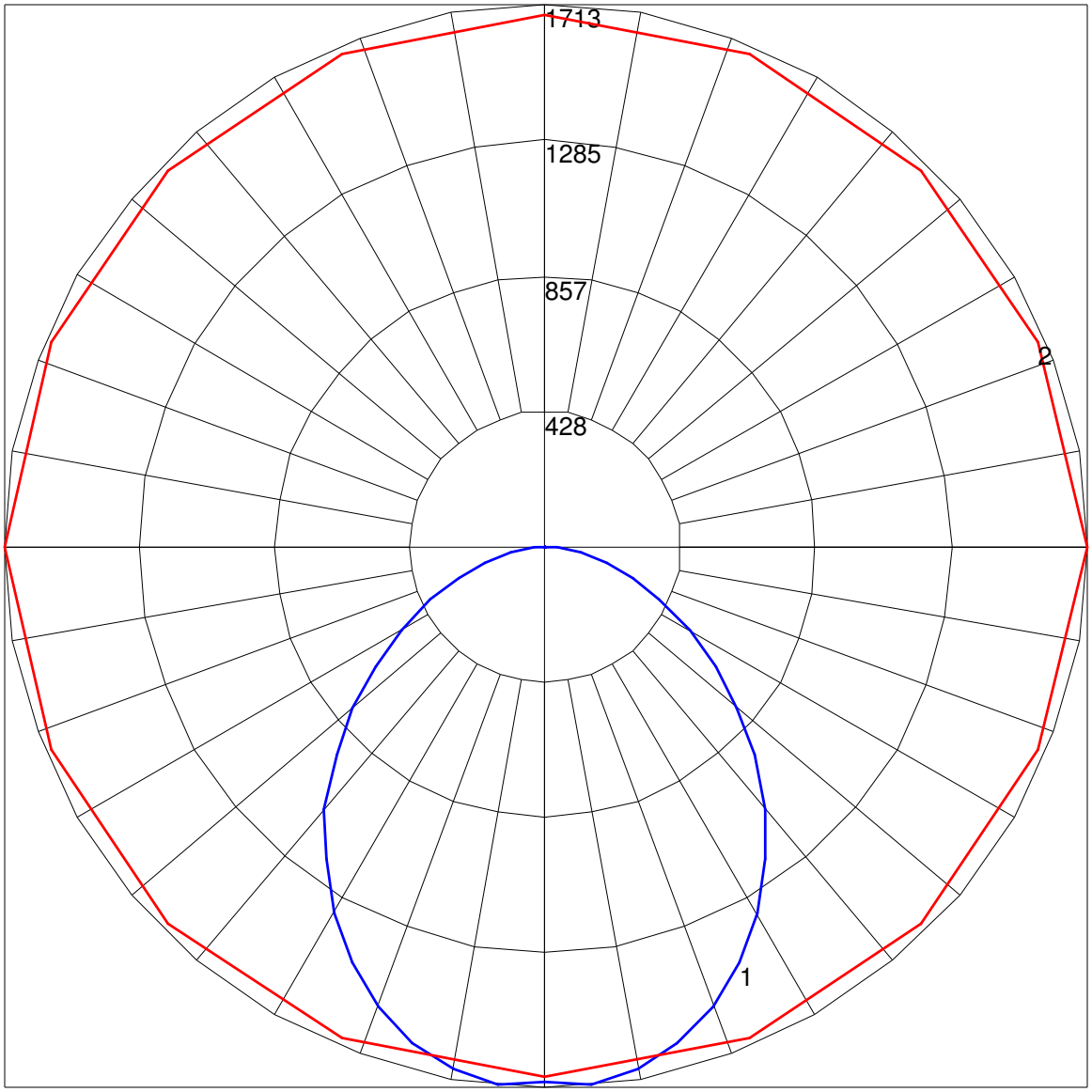
POLAR GRAPH



Maximum Candela = 1713.126 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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