H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 76R-4-L30-835-DIM-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] 08-10-2022
[MANUFAC] H.E. WILLIAMS, INC - CARTHAGE, MO. 64836
[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-L30/835-DIM-UNV

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2975
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	147
Total Luminaire Watts	20.3
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	5205	4771	4895
55	4439	4134	4353
65	3570	3425	3769
75	2769	2904	3257
85	1299	2618	3032

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	960.684	960.684	960.684	960.684	960.684
5	968.738	956.037	953.558	953.558	950.770
10	951.080	940.237	940.857	943.335	940.237
15	919.171	910.806	917.622	925.057	924.127
20	877.968	874.560	885.712	899.344	899.963
25	820.965	824.682	844.819	862.787	867.434
30	760.864	767.370	796.181	819.416	828.400
35	685.893	701.073	739.178	769.538	780.071
40	614.329	630.749	676.599	719.041	728.955
45	529.445	553.299	609.063	654.913	667.305
50	450.136	479.567	540.598	591.095	604.726
55	371.758	400.569	470.583	522.939	539.049
60	297.406	329.935	401.808	450.136	468.415
65	225.843	260.230	330.554	392.204	405.526
70	166.671	197.032	270.763	330.554	346.354
75	113.076	146.844	221.506	275.101	286.873
80	62.889	104.092	177.204	225.843	242.572
85	22.305	70.324	140.648	185.879	199.820
90	0.000	46.470	109.668	153.970	162.954
95	0.000	29.741	86.434	126.088	139.719
100	0.000	19.827	66.297	104.402	115.245
105	0.000	13.321	52.356	84.265	96.347
110	0.000	6.196	41.513	69.085	80.547
115	0.000	4.027	33.148	58.242	66.297
120	0.000	0.000	26.333	47.709	56.073
125	0.000	0.000	20.447	38.105	44.611
130	0.000	0.000	16.109	30.050	35.627
135	0.000	0.000	13.012	23.235	28.501
140	0.000	0.000	6.816	17.658	21.686
145	0.000	0.000	2.478	13.631	15.800
150	0.000	0.000	0.000	11.772	13.321
155	0.000	0.000	0.000	11.153	11.772
160	0.000	0.000	0.000	6.506	10.843
165	0.000	0.000	0.000	2.169	3.718
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	350.06	N.A.	11.80
0-30	739.00	N.A.	24.80
0-40	1199.59	N.A.	40.30
0-60	2080.46	N.A.	69.90
0-80	2628.08	N.A.	88.30
0-90	2768.98	N.A.	93.10
10-90	2678.16	N.A.	90.00
20-40	849.53	N.A.	28.60
20-50	1316.31	N.A.	44.20
40-70	1203.88	N.A.	40.50
60-80	547.62	N.A.	18.40
70-80	224.61	N.A.	7.60
80-90	140.90	N.A.	4.70
90-110	139.29	N.A.	4.70
90-120	171.39	N.A.	5.80
90-130	189.83	N.A.	6.40
90-150	203.63	N.A.	6.80
90-180	205.90	N.A.	6.90
110-180	66.60	N.A.	2.20
0-180	2974.88	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	90.82
10-20	259.25
20-30	388.93
30-40	460.60
40-50	466.78
50-60	414.09
60-70	323.01
70-80	224.61
80-90	140.90
90-100	86.23
100-110	53.06
110-120	32.10
120-130	18.44
130-140	9.75
140-150	4.04
150-160	1.88
160-170	0.39
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	14.7	16.2	15.1	16.6	17.1	17.7	19.2	18.2	19.6	20.1
	3H	15.9	17.2	16.4	17.7	18.2	19.9	21.3	20.4	21.8	22.3
	4H	16.3	17.6	16.8	18.0	18.6	21.0	22.3	21.5	22.8	23.3
	6H	16.5	17.7	17.0	18.2	18.7	22.1	23.3	22.6	23.8	24.3
	8H	16.5	17.7	17.1	18.2	18.8	22.7	23.8	23.2	24.3	24.9
	12H	16.5	17.6	17.1	18.2	18.8	23.3	24.4	23.8	24.9	25.5
4H	2H	15.6	16.9	16.1	17.4	17.9	18.0	19.3	18.5	19.8	20.3
	3H	17.1	18.2	17.6	18.7	19.3	20.5	21.6	21.0	22.1	22.7
	4H	17.6	18.6	18.1	19.1	19.7	21.7	22.7	22.2	23.3	23.9
	6H	17.9	18.8	18.4	19.3	20.0	23.0	23.9	23.6	24.5	25.1
	8H	18.0	18.8	18.5	19.4	20.0	23.7	24.5	24.2	25.1	25.7
	12H	18.0	18.8	18.6	19.4	20.0	24.4	25.2	25.0	25.8	26.4
8H	4H	18.3	19.1	18.9	19.7	20.3	21.9	22.7	22.4	23.3	23.9
	6H	18.8	19.5	19.4	20.1	20.8	23.3	24.0	23.9	24.6	25.3
	8H	19.0	19.6	19.6	20.2	20.9	24.1	24.8	24.7	25.4	26.0
	12H	19.1	19.7	19.7	20.3	21.0	25.1	25.6	25.7	26.2	26.9
12H	4H	18.5	19.3	19.1	19.9	20.5	21.9	22.6	22.5	23.2	23.9
	6H	19.1	19.8	19.8	20.4	21.0	23.4	24.0	24.0	24.6	25.3
	8H	19.4	20.0	20.0	20.6	21.3	24.2	24.8	24.8	25.4	26.1

Maximum UGR = 26.9

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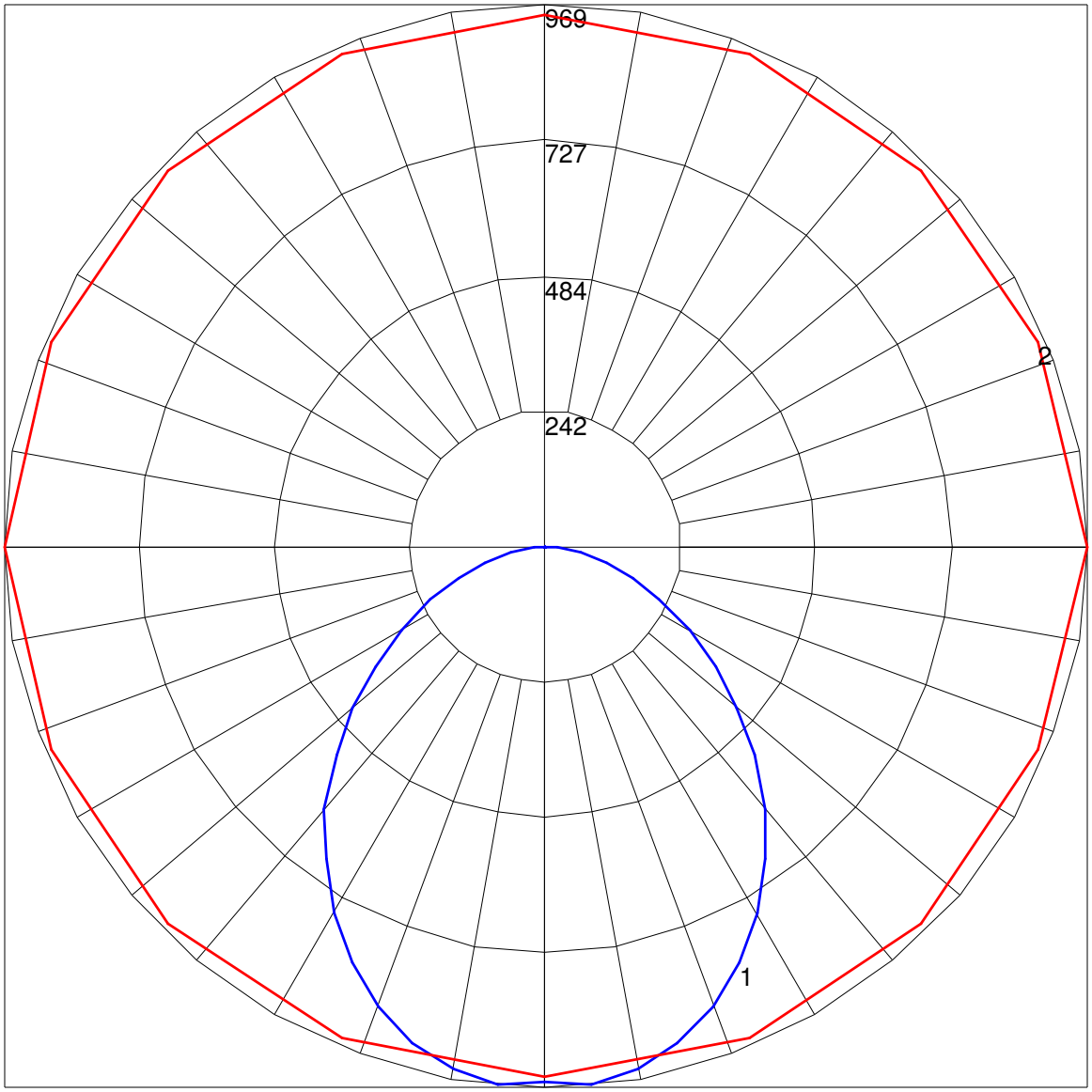
POLAR GRAPH



Maximum Candela = 968.738 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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