IES INDOOR REPORT
PHOTOMETRIC FILENAME : 76R-4-L72-840-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] 10-FEB-2020
[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-L72/840-DRV-UNV

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	7212
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	144
Total Luminaire Watts	50.2
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	12619	11565	11868
55	10760	10022	10552
65	8655	8302	9136
75	6714	7039	7894
85	3150	6345	7350

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2328.898	2328.898	2328.898	2328.898	2328.898
5	2348.425	2317.633	2311.625	2311.625	2304.866
10	2305.617	2279.331	2280.833	2286.842	2279.331
15	2228.262	2207.985	2224.507	2242.532	2240.279
20	2128.377	2120.116	2147.153	2180.197	2181.699
25	1990.191	1999.203	2048.019	2091.578	2102.843
30	1844.494	1860.265	1930.109	1986.435	2008.215
35	1662.748	1699.548	1791.923	1865.522	1891.057
40	1489.263	1529.067	1640.217	1743.107	1767.139
45	1283.485	1341.313	1476.496	1587.646	1617.687
50	1091.225	1162.572	1310.522	1432.937	1465.982
55	901.218	971.063	1140.792	1267.714	1306.767
60	720.975	799.831	974.067	1091.225	1135.535
65	547.490	630.853	801.333	950.785	983.079
70	404.046	477.646	656.387	801.333	839.635
75	274.121	355.981	536.976	666.902	695.440
80	152.456	252.341	429.581	547.490	588.045
85	54.073	170.480	340.961	450.609	484.405
90	0.000	112.652	265.859	373.255	395.034
95	0.000	72.097	209.533	305.663	338.708
100	0.000	48.065	160.717	253.092	279.378
105	0.000	32.294	126.922	204.276	233.566
110	0.000	15.020	100.636	167.476	195.264
115	0.000	9.763	80.359	141.191	160.717
120	0.000	0.000	63.836	115.656	135.934
125	0.000	0.000	49.567	92.375	108.146
130	0.000	0.000	39.053	72.848	86.367
135	0.000	0.000	31.543	56.326	69.093
140	0.000	0.000	16.522	42.808	52.571
145	0.000	0.000	6.008	33.045	38.302
150	0.000	0.000	0.000	28.539	32.294
155	0.000	0.000	0.000	27.037	28.539
160	0.000	0.000	0.000	15.771	26.286
165	0.000	0.000	0.000	5.257	9.012
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	848.62	N.A.	11.80
0-30	1791.48	N.A.	24.80
0-40	2908.07	N.A.	40.30
0-60	5043.48	N.A.	69.90
0-80	6371.02	N.A.	88.30
0-90	6712.59	N.A.	93.10
10-90	6492.43	N.A.	90.00
20-40	2059.44	N.A.	28.60
20-50	3191.01	N.A.	44.20
40-70	2918.46	N.A.	40.50
60-80	1327.54	N.A.	18.40
70-80	544.49	N.A.	7.60
80-90	341.57	N.A.	4.70
90-110	337.67	N.A.	4.70
90-120	415.49	N.A.	5.80
90-130	460.20	N.A.	6.40
90-150	493.63	N.A.	6.80
90-180	499.14	N.A.	6.90
110-180	161.46	N.A.	2.20
0-180	7211.73	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	220.16
10-20	628.46
20-30	942.86
30-40	1116.59
40-50	1131.57
50-60	1003.84
60-70	783.05
70-80	544.49
80-90	341.57
90-100	209.04
100-110	128.63
110-120	77.81
120-130	44.71
130-140	23.65
140-150	9.79
150-160	4.56
160-170	0.94
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	276	276	276	276	268	268	268	268	252	252	252	238	238	238	225	225	225	219
1	249	237	226	216	241	230	220	211	217	208	201	205	198	192	193	188	183	177
2	226	205	189	174	218	200	184	171	188	176	164	178	168	158	169	160	152	146
3	206	180	160	144	198	175	157	142	166	150	138	157	144	133	149	138	129	123
4	188	160	138	122	182	155	136	121	147	130	117	140	125	114	133	121	111	105
5	173	143	121	105	167	139	119	104	132	115	101	126	111	99	120	107	96	91
6	160	128	107	92	154	125	105	91	119	102	89	114	98	87	109	95	85	79
7	148	116	96	81	143	114	94	80	109	91	79	104	88	77	99	86	75	70
8	138	106	86	72	133	104	85	72	99	82	70	95	80	69	91	78	67	63
9	129	97	78	65	125	95	77	64	91	75	63	88	73	62	84	71	61	56
10	121	90	71	59	117	88	70	58	85	69	57	81	67	56	78	65	55	51

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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	15.6	17.1	16.1	17.6	18.1	17.8	19.3	18.3	19.7	20.2
	3H	17.1	18.4	17.6	18.9	19.4	20.0	21.4	20.5	21.9	22.4
	4H	17.6	18.9	18.1	19.4	19.9	21.1	22.4	21.6	22.9	23.4
	6H	17.9	19.2	18.5	19.7	20.2	22.2	23.4	22.7	23.9	24.4
	8H	18.1	19.2	18.6	19.7	20.3	22.8	23.9	23.3	24.4	25.0
	12H	18.1	19.2	18.6	19.7	20.3	23.4	24.5	23.9	25.0	25.6
4H	2H	16.3	17.6	16.8	18.1	18.7	18.1	19.4	18.6	19.9	20.4
	3H	18.0	19.1	18.5	19.6	20.2	20.6	21.7	21.1	22.2	22.8
	4H	18.6	19.7	19.2	20.2	20.8	21.8	22.8	22.3	23.4	24.0
	6H	19.1	20.0	19.7	20.6	21.2	23.1	24.0	23.7	24.6	25.2
	8H	19.3	20.1	19.8	20.7	21.3	23.8	24.6	24.3	25.2	25.8
	12H	19.4	20.1	20.0	20.7	21.4	24.5	25.3	25.1	25.9	26.5
8H	4H	19.2	20.0	19.7	20.6	21.2	22.0	22.8	22.5	23.4	24.0
	6H	19.8	20.5	20.4	21.1	21.8	23.4	24.1	24.0	24.7	25.4
	8H	20.1	20.7	20.7	21.3	22.0	24.2	24.9	24.8	25.5	26.1
	12H	20.3	20.8	20.9	21.4	22.2	25.2	25.7	25.8	26.3	27.0
12H	4H	19.3	20.0	19.9	20.6	21.3	22.0	22.7	22.6	23.3	24.0
	6H	20.0	20.7	20.7	21.3	22.0	23.5	24.1	24.1	24.7	25.4
	8H	20.4	20.9	21.0	21.6	22.3	24.3	24.9	24.9	25.5	26.2

Maximum UGR = 27.0

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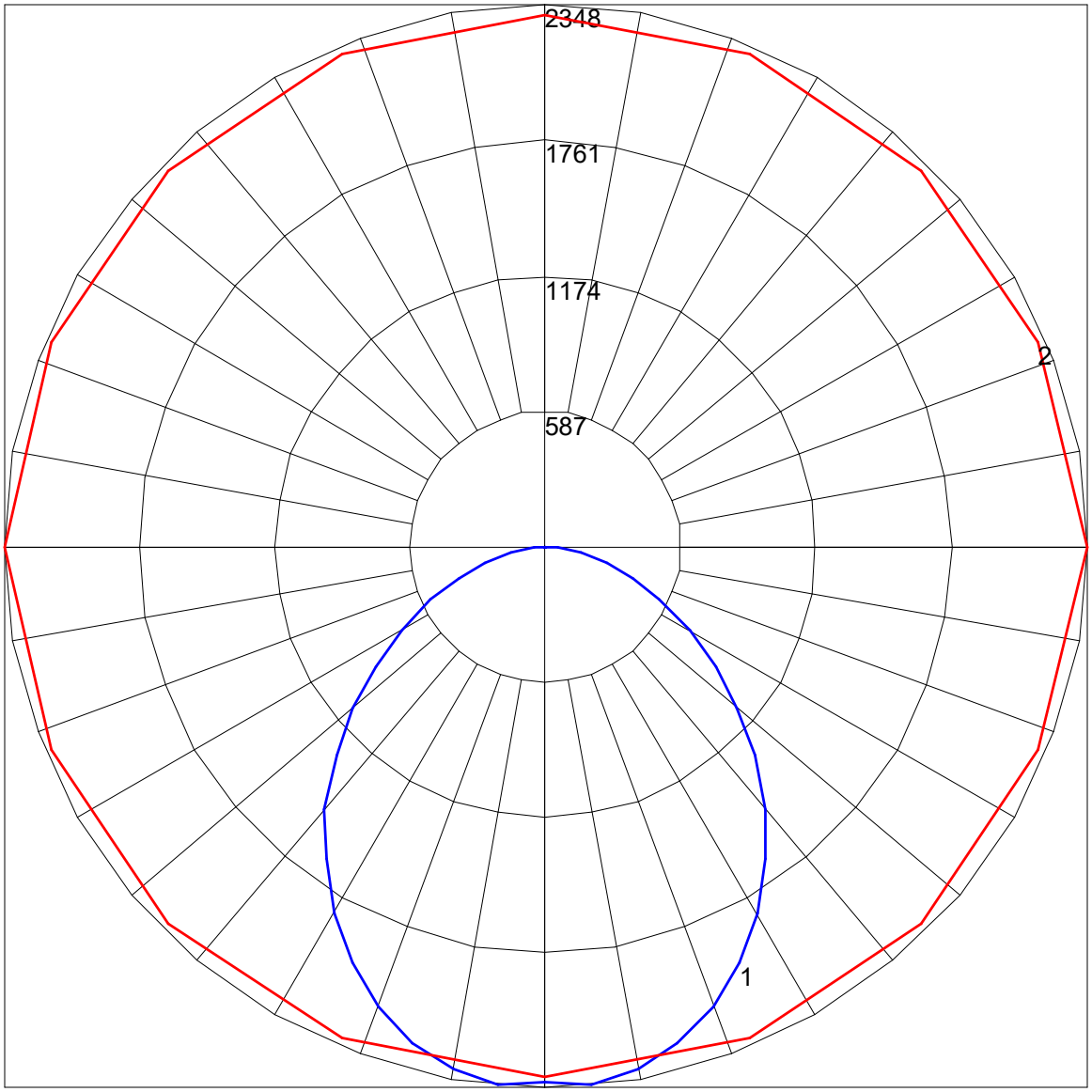
POLAR GRAPH



Maximum Candela = 2348.425 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.)