H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 76R-4-L30-835-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] 107-08-2020
[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-EM10W-DIM-UNV(EMER MODE)

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1420
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	142
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	2485	2277	2337
55	2119	1973	2078
65	1704	1635	1799
75	1322	1386	1554
85	620	1249	1447

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	458.546	458.546	458.546	458.546	458.546
5	462.391	456.328	455.145	455.145	453.815
10	453.962	448.787	449.083	450.266	448.787
15	438.732	434.739	437.992	441.541	441.098
20	419.065	417.438	422.762	429.268	429.564
25	391.857	393.631	403.243	411.819	414.037
30	363.170	366.275	380.027	391.117	395.406
35	327.385	334.631	352.819	367.310	372.338
40	293.227	301.064	322.949	343.207	347.939
45	252.711	264.097	290.713	312.598	318.513
50	214.856	228.904	258.034	282.137	288.643
55	177.445	191.197	224.615	249.605	257.295
60	141.956	157.482	191.788	214.856	223.580
65	107.798	124.211	157.778	187.204	193.562
70	79.554	94.046	129.239	157.778	165.319
75	53.973	70.091	105.727	131.309	136.928
80	30.018	49.684	84.582	107.798	115.783
85	10.647	33.567	67.133	88.722	95.376
90	0.000	22.181	52.346	73.492	77.780
95	0.000	14.196	41.256	60.183	66.690
100	0.000	9.464	31.644	49.832	55.008
105	0.000	6.358	24.990	40.221	45.988
110	0.000	2.957	19.815	32.975	38.446
115	0.000	1.922	15.822	27.800	31.644
120	0.000	0.000	12.569	22.772	26.765
125	0.000	0.000	9.759	18.188	21.293
130	0.000	0.000	7.689	14.343	17.005
135	0.000	0.000	6.211	11.090	13.604
140	0.000	0.000	3.253	8.429	10.351
145	0.000	0.000	1.183	6.506	7.541
150	0.000	0.000	0.000	5.619	6.358
155	0.000	0.000	0.000	5.323	5.619
160	0.000	0.000	0.000	3.105	5.175
165	0.000	0.000	0.000	1.035	1.774
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	167.09	N.A.	11.80
0-30	352.73	N.A.	24.80
0-40	572.58	N.A.	40.30
0-60	993.03	N.A.	69.90
0-80	1254.42	N.A.	88.30
0-90	1321.67	N.A.	93.10
10-90	1278.32	N.A.	90.00
20-40	405.49	N.A.	28.60
20-50	628.29	N.A.	44.20
40-70	574.63	N.A.	40.50
60-80	261.38	N.A.	18.40
70-80	107.21	N.A.	7.60
80-90	67.25	N.A.	4.70
90-110	66.49	N.A.	4.70
90-120	81.81	N.A.	5.80
90-130	90.61	N.A.	6.40
90-150	97.19	N.A.	6.80
90-180	98.28	N.A.	6.90
110-180	31.79	N.A.	2.20
0-180	1419.95	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	43.35
10-20	123.74
20-30	185.64
30-40	219.85
40-50	222.80
50-60	197.65
60-70	154.18
70-80	107.21
80-90	67.25
90-100	41.16
100-110	25.33
110-120	15.32
120-130	8.80
130-140	4.66
140-150	1.93
150-160	0.90
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	12.1	13.6	12.5	14.0	14.5	15.1	16.6	15.6	17.0	17.5
	3H	13.3	14.6	13.8	15.1	15.6	17.3	18.7	17.8	19.2	19.7
	4H	13.7	15.0	14.2	15.4	16.0	18.4	19.7	18.9	20.2	20.7
	6H	13.9	15.1	14.4	15.6	16.1	19.5	20.7	20.0	21.2	21.7
	8H	13.9	15.1	14.5	15.6	16.2	20.1	21.2	20.6	21.7	22.3
	12H	13.9	15.0	14.5	15.6	16.2	20.7	21.8	21.2	22.3	22.9
4H	2H	13.0	14.3	13.5	14.8	15.3	15.4	16.7	15.9	17.2	17.7
	3H	14.5	15.6	15.0	16.1	16.7	17.9	19.0	18.4	19.5	20.1
	4H	15.0	16.0	15.5	16.5	17.1	19.1	20.1	19.6	20.7	21.3
	6H	15.3	16.2	15.8	16.7	17.4	20.4	21.3	21.0	21.9	22.5
	8H	15.4	16.2	15.9	16.8	17.4	21.1	21.9	21.6	22.5	23.1
	12H	15.4	16.2	16.0	16.8	17.4	21.8	22.6	22.4	23.2	23.8
8H	4H	15.7	16.5	16.3	17.1	17.7	19.3	20.1	19.8	20.7	21.3
	6H	16.2	16.9	16.8	17.5	18.2	20.7	21.4	21.3	22.0	22.7
	8H	16.4	17.0	17.0	17.6	18.3	21.5	22.2	22.1	22.8	23.4
	12H	16.5	17.1	17.1	17.7	18.4	22.5	23.0	23.1	23.6	24.3
12H	4H	15.9	16.7	16.5	17.3	17.9	19.3	20.0	19.9	20.6	21.3
	6H	16.5	17.2	17.2	17.8	18.4	20.8	21.4	21.4	22.0	22.7
	8H	16.8	17.4	17.4	18.0	18.7	21.6	22.2	22.2	22.8	23.5

Maximum UGR = 24.3

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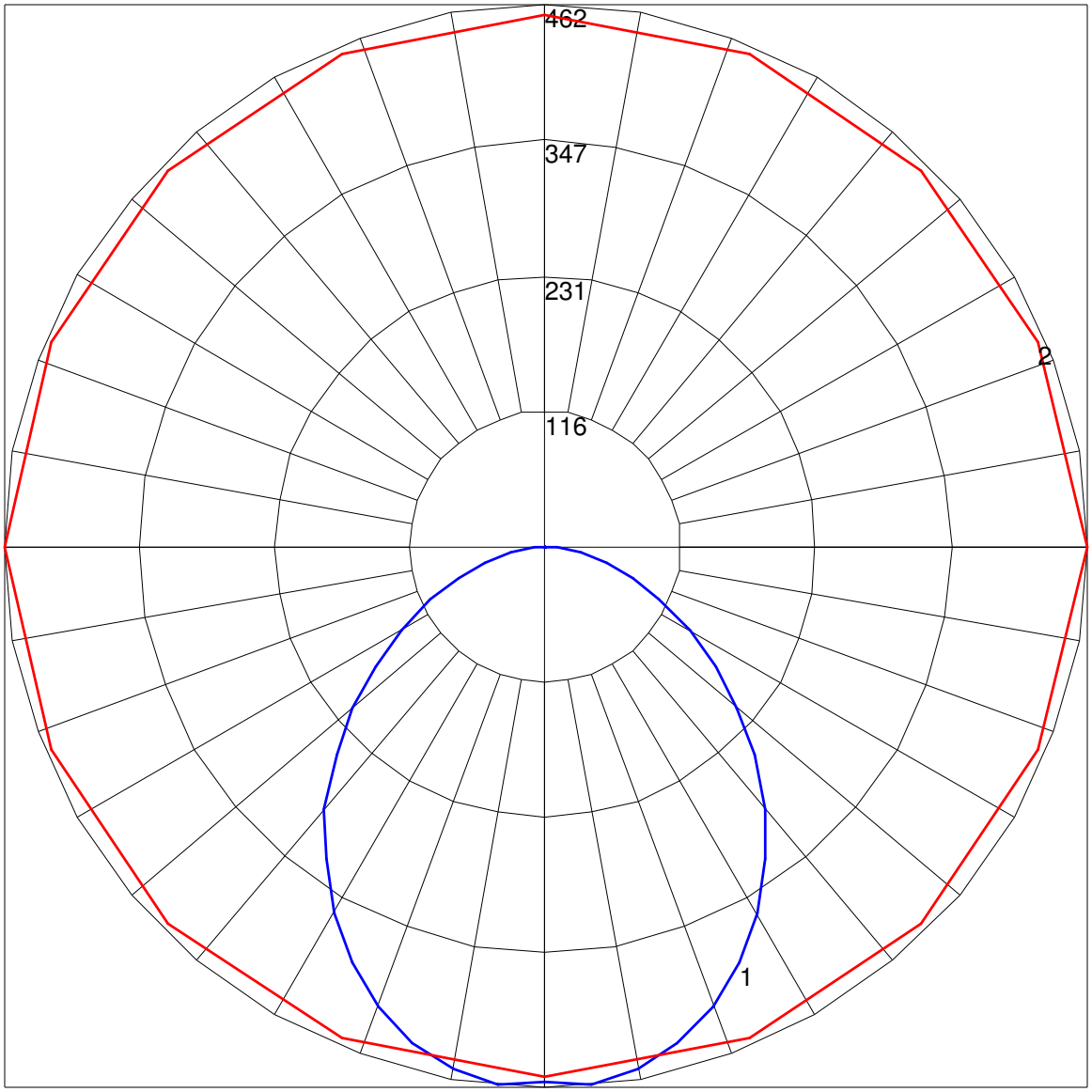
POLAR GRAPH



Maximum Candela = 462.391 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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