H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 76R-4-L30-840-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] 02-13-2023
[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-L30/840-EM10W-DIM-UNV

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1510
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	151
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	2642	2421	2485
55	2253	2098	2209
65	1812	1738	1913
75	1406	1474	1653
85	660	1329	1539

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	487.609	487.609	487.609	487.609	487.609
5	491.697	485.250	483.992	483.992	482.577
10	482.734	477.231	477.545	478.803	477.231
15	466.539	462.293	465.752	469.526	469.054
20	445.625	443.896	449.556	456.475	456.789
25	416.693	418.580	428.800	437.920	440.279
30	386.188	389.490	404.113	415.906	420.466
35	348.135	355.840	375.181	390.590	395.937
40	311.812	320.146	343.418	364.960	369.992
45	268.727	280.835	309.139	332.411	338.700
50	228.473	243.411	274.388	300.019	306.937
55	188.691	203.315	238.851	265.425	273.602
60	150.953	167.463	203.944	228.473	237.751
65	114.630	132.084	167.778	199.069	205.830
70	84.596	100.006	137.430	167.778	175.797
75	57.394	74.533	112.428	139.631	145.607
80	31.920	52.833	89.943	114.630	123.121
85	11.321	35.694	71.388	94.346	101.421
90	0.000	23.586	55.664	78.150	82.710
95	0.000	15.095	43.871	63.998	70.916
100	0.000	10.064	33.650	52.991	58.494
105	0.000	6.761	26.574	42.770	48.902
110	0.000	3.145	21.070	35.065	40.883
115	0.000	2.044	16.825	29.562	33.650
120	0.000	0.000	13.366	24.215	28.461
125	0.000	0.000	10.378	19.341	22.643
130	0.000	0.000	8.177	15.253	18.083
135	0.000	0.000	6.604	11.793	14.466
140	0.000	0.000	3.459	8.963	11.007
145	0.000	0.000	1.258	6.919	8.019
150	0.000	0.000	0.000	5.975	6.761
155	0.000	0.000	0.000	5.661	5.975
160	0.000	0.000	0.000	3.302	5.503
165	0.000	0.000	0.000	1.101	1.887
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	177.68	N.A.	11.80
0-30	375.09	N.A.	24.80
0-40	608.87	N.A.	40.30
0-60	1055.97	N.A.	69.90
0-80	1333.92	N.A.	88.30
0-90	1405.44	N.A.	93.10
10-90	1359.34	N.A.	90.00
20-40	431.19	N.A.	28.60
20-50	668.11	N.A.	44.20
40-70	611.05	N.A.	40.50
60-80	277.95	N.A.	18.40
70-80	114.00	N.A.	7.50
80-90	71.52	N.A.	4.70
90-110	70.70	N.A.	4.70
90-120	86.99	N.A.	5.80
90-130	96.35	N.A.	6.40
90-150	103.35	N.A.	6.80
90-180	104.51	N.A.	6.90
110-180	33.81	N.A.	2.20
0-180	1509.94	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	46.10
10-20	131.58
20-30	197.41
30-40	233.78
40-50	236.92
50-60	210.18
60-70	163.95
70-80	114.00
80-90	71.52
90-100	43.77
100-110	26.93
110-120	16.29
120-130	9.36
130-140	4.95
140-150	2.05
150-160	0.96
160-170	0.20
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	12.3	13.8	12.7	14.2	14.7	15.3	16.8	15.8	17.2	17.7
	3H	13.5	14.8	14.0	15.3	15.8	17.5	18.9	18.0	19.4	19.9
	4H	13.9	15.2	14.4	15.6	16.2	18.6	19.9	19.1	20.4	20.9
	6H	14.1	15.3	14.6	15.8	16.3	19.7	20.9	20.2	21.4	21.9
	8H	14.1	15.3	14.7	15.8	16.4	20.3	21.4	20.8	21.9	22.5
	12H	14.1	15.2	14.7	15.8	16.4	20.9	22.0	21.4	22.5	23.1
4H	2H	13.2	14.5	13.7	15.0	15.5	15.6	16.9	16.1	17.4	17.9
	3H	14.7	15.8	15.2	16.3	16.9	18.1	19.2	18.6	19.7	20.3
	4H	15.2	16.2	15.7	16.7	17.3	19.3	20.3	19.8	20.9	21.5
	6H	15.5	16.4	16.0	16.9	17.6	20.6	21.5	21.2	22.1	22.7
	8H	15.6	16.4	16.1	17.0	17.6	21.3	22.1	21.8	22.7	23.3
	12H	15.6	16.4	16.2	17.0	17.6	22.0	22.8	22.6	23.4	24.0
8H	4H	15.9	16.7	16.5	17.3	17.9	19.5	20.3	20.0	20.9	21.5
	6H	16.4	17.1	17.0	17.7	18.4	20.9	21.6	21.5	22.2	22.9
	8H	16.6	17.2	17.2	17.8	18.5	21.7	22.4	22.3	23.0	23.6
	12H	16.7	17.3	17.3	17.9	18.6	22.7	23.2	23.3	23.8	24.5
12H	4H	16.1	16.9	16.7	17.5	18.1	19.5	20.2	20.1	20.8	21.5
	6H	16.7	17.4	17.4	18.0	18.6	21.0	21.6	21.6	22.2	22.9
	8H	17.0	17.6	17.6	18.2	18.9	21.8	22.4	22.4	23.0	23.7

Maximum UGR = 24.5

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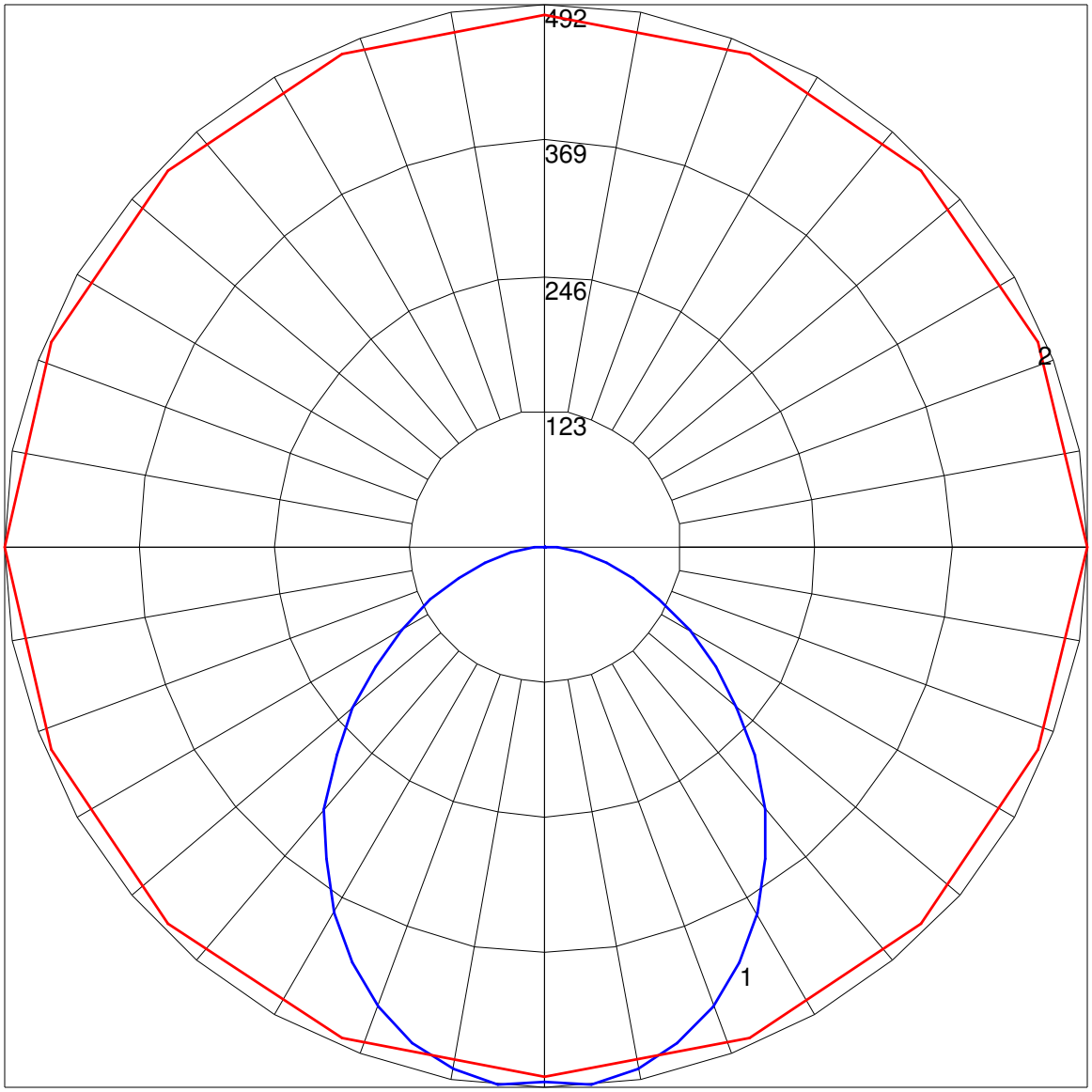
POLAR GRAPH



Maximum Candela = 491.697 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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