IES INDOOR REPORT
PHOTOMETRIC FILENAME : 76R-8-L188-940-(L164)-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] 05/15/2023
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 96 INCH LENSED LED SURFACE LUMINAIRE
[MORE] WHITE REFLECTOR w/RADIAL RIBBED FROST ACRYLIC LENS
[LUMCAT] 76R-8-L188-940-(L164)-DIM-UNV
[LAMPCAT] HLMX 90 CRI 4000K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	13610
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	121
Total Luminaire Watts	112.88
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)	8.00 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	12059	10966	11140
55	10360	9532	9905
65	8434	7928	8576
75	6708	6762	7410
85	3473	6163	6899

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	4395.264	4395.264	4395.264	4395.264	4395.264
5	4432.116	4374.004	4362.665	4362.665	4349.908
10	4351.326	4301.718	4304.553	4315.892	4301.718
15	4205.337	4167.068	4198.250	4232.267	4228.015
20	4016.826	4001.235	4052.261	4114.625	4117.460
25	3756.030	3773.039	3865.168	3947.375	3968.636
30	3481.061	3510.825	3642.641	3748.944	3790.047
35	3138.057	3207.508	3381.845	3520.747	3568.938
40	2810.645	2885.765	3095.536	3289.716	3335.072
45	2422.285	2531.423	2786.549	2996.320	3053.015
50	2059.439	2194.089	2473.311	2704.342	2766.706
55	1700.844	1832.659	2152.985	2392.520	2466.224
60	1360.675	1509.499	1838.329	2059.439	2143.063
65	1033.263	1190.591	1512.334	1794.390	1855.337
70	762.545	901.447	1238.781	1512.334	1584.620
75	517.340	671.833	1013.420	1258.625	1312.485
80	287.726	476.236	810.736	1033.263	1109.801
85	102.051	321.743	643.486	850.422	914.204
90	0.000	212.605	501.749	704.433	745.537
95	0.000	136.068	395.446	576.870	639.234
100	0.000	90.712	303.317	477.654	527.262
105	0.000	60.947	239.536	385.525	440.802
110	0.000	28.347	189.928	316.074	368.516
115	0.000	18.426	151.659	266.466	303.317
120	0.000	0.000	120.476	218.275	256.544
125	0.000	0.000	93.546	174.337	204.101
130	0.000	0.000	73.703	137.485	162.998
135	0.000	0.000	59.530	106.303	130.398
140	0.000	0.000	31.182	80.790	99.216
145	0.000	0.000	11.339	62.364	72.286
150	0.000	0.000	0.000	53.860	60.947
155	0.000	0.000	0.000	51.025	53.860
160	0.000	0.000	0.000	29.765	49.608
165	0.000	0.000	0.000	9.922	17.008
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	1601.58	N.A.	11.80
0-30	3381.01	N.A.	24.80
0-40	5488.31	N.A.	40.30
0-60	9518.42	N.A.	69.90
0-80	12023.84	N.A.	88.30
0-90	12668.48	N.A.	93.10
10-90	12252.98	N.A.	90.00
20-40	3886.73	N.A.	28.60
20-50	6022.31	N.A.	44.20
40-70	5507.92	N.A.	40.50
60-80	2505.42	N.A.	18.40
70-80	1027.6	N.A.	7.60
80-90	644.64	N.A.	4.70
90-110	637.28	N.A.	4.70
90-120	784.13	N.A.	5.80
90-130	868.52	N.A.	6.40
90-150	931.62	N.A.	6.80
90-180	942.01	N.A.	6.90
110-180	304.73	N.A.	2.20
0-180	13610.49	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	415.50
10-20	1186.08
20-30	1779.43
30-40	2107.3
40-50	2135.57
50-60	1894.53
60-70	1477.82
70-80	1027.6
80-90	644.64
90-100	394.51
100-110	242.77
110-120	146.86
120-130	84.38
130-140	44.63
140-150	18.47
150-160	8.61
160-170	1.78
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	17.6	19.1	18.0	19.5	20.0	20.6	22.1	21.1	22.6	23.1
	3H	18.8	20.1	19.3	20.6	21.1	22.9	24.3	23.4	24.7	25.3
	4H	19.1	20.5	19.7	20.9	21.5	24.0	25.3	24.5	25.8	26.3
	6H	19.4	20.6	19.9	21.1	21.6	25.1	26.3	25.6	26.8	27.4
	8H	19.4	20.6	20.0	21.1	21.7	25.7	26.9	26.2	27.4	27.9
	12H	19.4	20.5	20.0	21.1	21.6	26.4	27.5	26.9	28.0	28.6
4H	2H	18.5	19.8	19.0	20.3	20.8	20.9	22.2	21.4	22.7	23.3
	3H	20.0	21.1	20.5	21.6	22.2	23.5	24.6	24.0	25.1	25.6
	4H	20.5	21.5	21.0	22.0	22.6	24.7	25.7	25.2	26.3	26.8
	6H	20.8	21.7	21.4	22.2	22.9	26.0	26.9	26.6	27.5	28.1
	8H	20.9	21.7	21.4	22.3	22.9	26.7	27.6	27.3	28.1	28.7
	12H	20.9	21.7	21.5	22.3	22.9	27.5	28.3	28.1	28.9	29.5
8H	4H	21.2	22.1	21.8	22.6	23.2	24.9	25.7	25.4	26.3	26.9
	6H	21.7	22.4	22.3	23.0	23.7	26.4	27.1	27.0	27.7	28.3
	8H	21.9	22.5	22.5	23.1	23.8	27.2	27.8	27.8	28.4	29.1
	12H	22.0	22.6	22.6	23.2	23.9	28.2	28.7	28.8	29.3	30.0
12H	4H	21.4	22.2	22.0	22.8	23.4	24.9	25.6	25.4	26.2	26.8
	6H	22.1	22.7	22.7	23.3	24.0	26.4	27.0	27.0	27.6	28.3
	8H	22.3	22.9	22.9	23.5	24.2	27.3	27.8	27.9	28.5	29.2

Maximum UGR = 30.0

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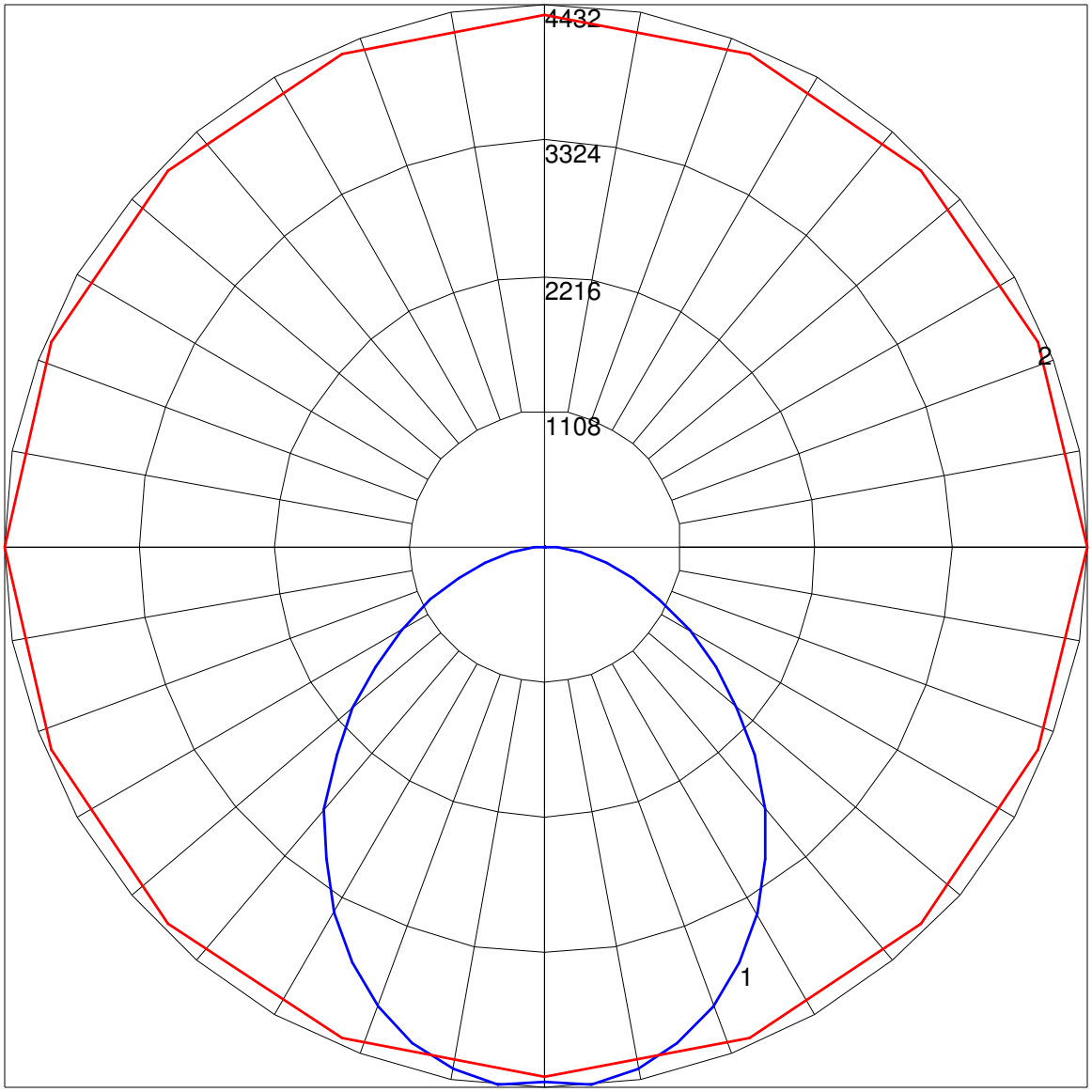
POLAR GRAPH



Maximum Candela = 4432.116 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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