IES INDOOR REPORT
PHOTOMETRIC FILENAME : 76R-4-L94-835-(L85)-DIM1-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] 6-7-2023
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 48 INCH LENSED LED SURFACE LUMINAIRE
[MORE] WHITE REFLECTOR w/RADIAL RIBBED FROST ACRYLIC LENS
[MORE] EVERLINE #D21CC80UNVPW-C
[LUMCAT] 76R-4-L94-835-(L85)-DIM1-UNV
[LAMPCAT] HLMX 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	8420
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	141
Total Luminaire Watts	59.61
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	14732	13502	13855
55	12562	11701	12320
65	10105	9693	10667
75	7838	8218	9217
85	3678	7408	8581

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2718.986	2718.986	2718.986	2718.986	2718.986
5	2741.783	2705.834	2698.819	2698.819	2690.928
10	2691.805	2661.117	2662.870	2669.885	2661.117
15	2601.494	2577.820	2597.109	2618.153	2615.522
20	2484.878	2475.233	2506.798	2545.378	2547.131
25	2323.545	2334.067	2391.059	2441.914	2455.066
30	2153.444	2171.857	2253.400	2319.161	2344.588
35	1941.256	1984.220	2092.067	2177.995	2207.806
40	1738.713	1785.184	1914.952	2035.075	2063.133
45	1498.467	1565.982	1723.807	1853.575	1888.647
50	1274.004	1357.301	1530.032	1672.952	1711.532
55	1052.171	1133.715	1331.874	1480.054	1525.648
60	841.737	933.802	1137.222	1274.004	1325.736
65	639.194	736.520	935.556	1110.041	1147.744
70	471.723	557.651	766.331	935.556	980.273
75	320.035	415.608	626.919	778.607	811.926
80	177.992	294.608	501.535	639.194	686.542
85	63.130	199.036	398.071	526.086	565.542
90	0.000	131.521	310.391	435.774	461.202
95	0.000	84.174	244.630	356.861	395.441
100	0.000	56.116	187.637	295.485	326.173
105	0.000	37.703	148.181	238.492	272.688
110	0.000	17.536	117.492	195.529	227.970
115	0.000	11.399	93.819	164.840	187.637
120	0.000	0.000	74.529	135.029	158.703
125	0.000	0.000	57.869	107.848	126.261
130	0.000	0.000	45.594	85.051	100.833
135	0.000	0.000	36.826	65.761	80.666
140	0.000	0.000	19.290	49.978	61.377
145	0.000	0.000	7.014	38.580	44.717
150	0.000	0.000	0.000	33.319	37.703
155	0.000	0.000	0.000	31.565	33.319
160	0.000	0.000	0.000	18.413	30.688
165	0.000	0.000	0.000	6.138	10.522
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	990.77	N.A.	11.80
0-30	2091.55	N.A.	24.80
0-40	3395.17	N.A.	40.30
0-60	5888.26	N.A.	69.90
0-80	7438.15	N.A.	88.30
0-90	7836.94	N.A.	93.10
10-90	7579.91	N.A.	90.00
20-40	2404.4	N.A.	28.60
20-50	3725.5	N.A.	44.20
40-70	3407.3	N.A.	40.50
60-80	1549.9	N.A.	18.40
70-80	635.69	N.A.	7.60
80-90	398.79	N.A.	4.70
90-110	394.23	N.A.	4.70
90-120	485.08	N.A.	5.80
90-130	537.28	N.A.	6.40
90-150	576.32	N.A.	6.80
90-180	582.74	N.A.	6.90
110-180	188.51	N.A.	2.20
0-180	8419.68	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	257.03
10-20	733.73
20-30	1100.79
30-40	1303.61
40-50	1321.1
50-60	1171.99
60-70	914.21
70-80	635.69
80-90	398.79
90-100	244.05
100-110	150.18
110-120	90.85
120-130	52.20
130-140	27.61
140-150	11.43
150-160	5.33
160-170	1.10
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	18.3	19.8	18.7	20.2	20.7	21.3	22.8	21.8	23.2	23.7
	3H	19.5	20.8	20.0	21.3	21.8	23.5	24.9	24.0	25.4	25.9
	4H	19.9	21.2	20.4	21.6	22.2	24.6	25.9	25.1	26.4	26.9
	6H	20.1	21.3	20.6	21.8	22.3	25.7	26.9	26.2	27.4	27.9
	8H	20.1	21.3	20.7	21.8	22.4	26.3	27.4	26.8	27.9	28.5
	12H	20.1	21.2	20.7	21.8	22.4	26.9	28.0	27.4	28.5	29.1
4H	2H	19.2	20.5	19.7	21.0	21.5	21.6	22.9	22.1	23.4	23.9
	3H	20.7	21.8	21.2	22.3	22.9	24.1	25.2	24.6	25.7	26.3
	4H	21.2	22.2	21.7	22.7	23.3	25.3	26.3	25.8	26.9	27.5
	6H	21.5	22.4	22.0	22.9	23.6	26.6	27.5	27.2	28.1	28.7
	8H	21.6	22.4	22.1	23.0	23.6	27.3	28.1	27.8	28.7	29.3
	12H	21.6	22.4	22.2	23.0	23.6	28.0	28.8	28.6	29.4	30.0
8H	4H	21.9	22.7	22.5	23.3	23.9	25.5	26.3	26.0	26.9	27.5
	6H	22.4	23.1	23.0	23.7	24.4	26.9	27.6	27.5	28.2	28.9
	8H	22.6	23.2	23.2	23.8	24.5	27.7	28.4	28.3	29.0	29.6
	12H	22.7	23.3	23.3	23.9	24.6	28.7	29.2	29.3	29.8	30.5
12H	4H	22.1	22.9	22.7	23.5	24.1	25.5	26.2	26.1	26.8	27.5
	6H	22.7	23.4	23.4	24.0	24.6	27.0	27.6	27.6	28.2	28.9
	8H	23.0	23.6	23.6	24.2	24.9	27.8	28.4	28.4	29.0	29.7

Maximum UGR = 30.5

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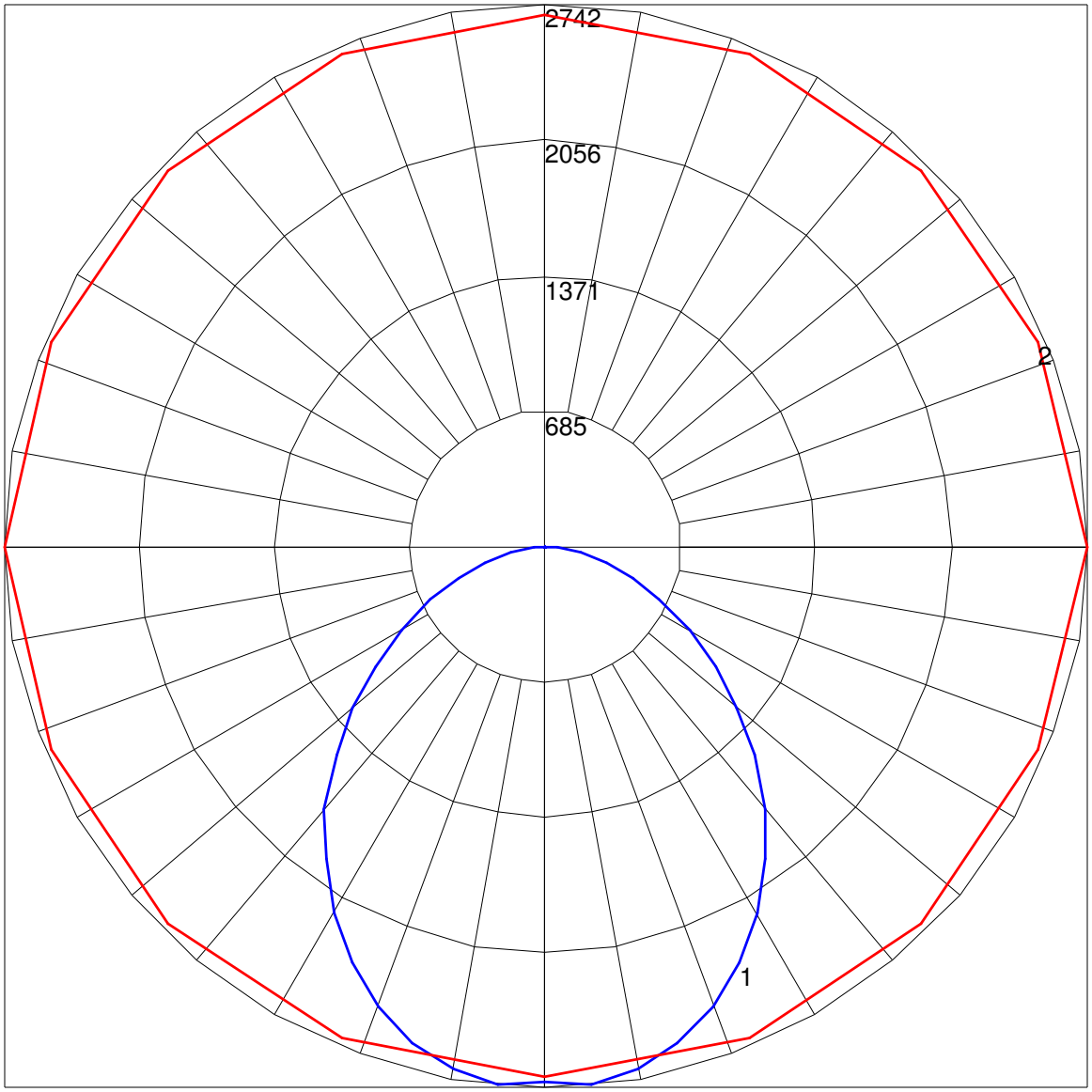
POLAR GRAPH



Maximum Candela = 2741.783 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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