



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 75R-4-L30-935-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 19750.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 06-JAN-2020

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO

[LUMINAIRE] 2-56 LED 22"ARRAYS 4'SURFACE MOUNT STRIP LUMINAIRE

[MORE] WHITE REFLECTOR w/FROSTED ACRYLIC ROUND LENS

[LUMCAT] 75R-4-L30-935-DIM-UNV

[LAMPCAT] HLM 90 CRI 3500K CCT

[_SEARCH_SOURCETYPE] LED

[_SEARCH_APPLICATION] Indoor, Commercial, Industrial, Manufacturing, Utility, Warehouse, Linear

[_SEARCH_MOUNTING] Surface, Suspended

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2491
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	125
Total Luminaire Watts	20
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.36
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	3.72 ft
Luminous Width (90-270)	0.21 ft
Luminous Height	0.10 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	8711	7365	7352
55	7189	6303	6473
65	5921	5294	5453
75	4001	4350	4468
85	2348	3737	3664

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CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0	797.836	797.836	797.836	797.836	797.836
5	806.595	794.789	795.170	793.266	785.269
10	793.266	783.364	785.269	784.126	776.890
15	770.035	762.800	768.131	770.416	762.800
20	734.999	733.095	742.235	746.043	741.473
25	693.870	696.535	709.484	718.243	714.815
30	646.647	650.455	672.543	685.872	685.111
35	589.142	595.997	627.986	646.647	649.313
40	527.828	532.779	573.147	601.328	607.802
45	455.471	468.038	514.499	551.821	560.961
50	380.448	400.632	457.375	498.124	509.549
55	308.471	334.748	398.728	441.380	457.756
60	248.300	272.673	342.365	385.018	402.155
65	190.795	217.453	289.811	328.655	343.507
70	133.671	169.469	239.922	273.816	288.287
75	82.259	127.958	193.842	225.831	238.399
80	45.699	88.352	154.616	184.321	192.318
85	19.422	60.933	123.388	148.904	154.236
90	2.666	41.891	95.588	118.057	125.293
95	0.381	28.562	76.547	93.684	101.300
100	0.000	18.661	59.409	76.547	82.640
105	0.000	13.329	46.080	62.456	67.407
110	0.000	9.140	35.417	51.031	55.220
115	0.000	7.617	28.943	42.653	45.699
120	0.000	5.712	22.088	35.036	38.083
125	0.000	3.427	16.376	27.800	31.228
130	0.000	2.285	11.806	21.707	24.754
135	0.000	1.142	8.759	17.137	19.422
140	0.000	1.142	6.093	13.329	15.233
145	0.000	0.000	3.808	8.378	10.663
150	0.000	0.000	2.666	6.093	7.617
155	0.000	0.000	1.904	3.047	4.951
160	0.000	0.000	0.762	2.285	2.666
165	0.000	0.000	0.000	0.762	1.142
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	291.75	N.A.	11.70
0-30	617.63	N.A.	24.80
0-40	1006.51	N.A.	40.40
0-60	1749.75	N.A.	70.20
0-80	2212.36	N.A.	88.80
0-90	2328.63	N.A.	93.50
10-90	2253.09	N.A.	90.50
20-40	714.76	N.A.	28.70
20-50	1108.79	N.A.	44.50
40-70	1017.25	N.A.	40.80
60-80	462.61	N.A.	18.60
70-80	188.59	N.A.	7.60
80-90	116.27	N.A.	4.70
90-110	110.96	N.A.	4.50
90-120	136.40	N.A.	5.50
90-130	150.83	N.A.	6.10
90-150	161.14	N.A.	6.50
90-180	162.22	N.A.	6.50
110-180	51.27	N.A.	2.10
0-180	2490.85	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	75.53
10-20	216.21
20-30	325.88
30-40	388.88
40-50	394.03
50-60	349.21
60-70	274.01
70-80	188.59
80-90	116.27
90-100	69.23
100-110	41.73
110-120	25.44
120-130	14.44
130-140	7.30
140-150	3.01
150-160	0.94
160-170	0.14
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	102	102	102	96	96	96	93
1	106	101	96	92	103	98	94	90	92	89	86	87	84	82	83	80	78	76
2	96	87	80	74	93	85	78	73	80	75	70	76	72	68	72	68	65	62
3	88	77	68	61	84	75	67	60	71	64	59	67	61	57	64	59	55	52
4	80	68	59	52	77	66	58	51	63	56	50	60	53	48	57	51	47	45
5	74	61	51	45	71	59	51	44	56	49	43	54	47	42	51	45	41	39
6	68	55	46	39	66	53	45	39	51	43	38	48	42	37	46	41	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	41	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

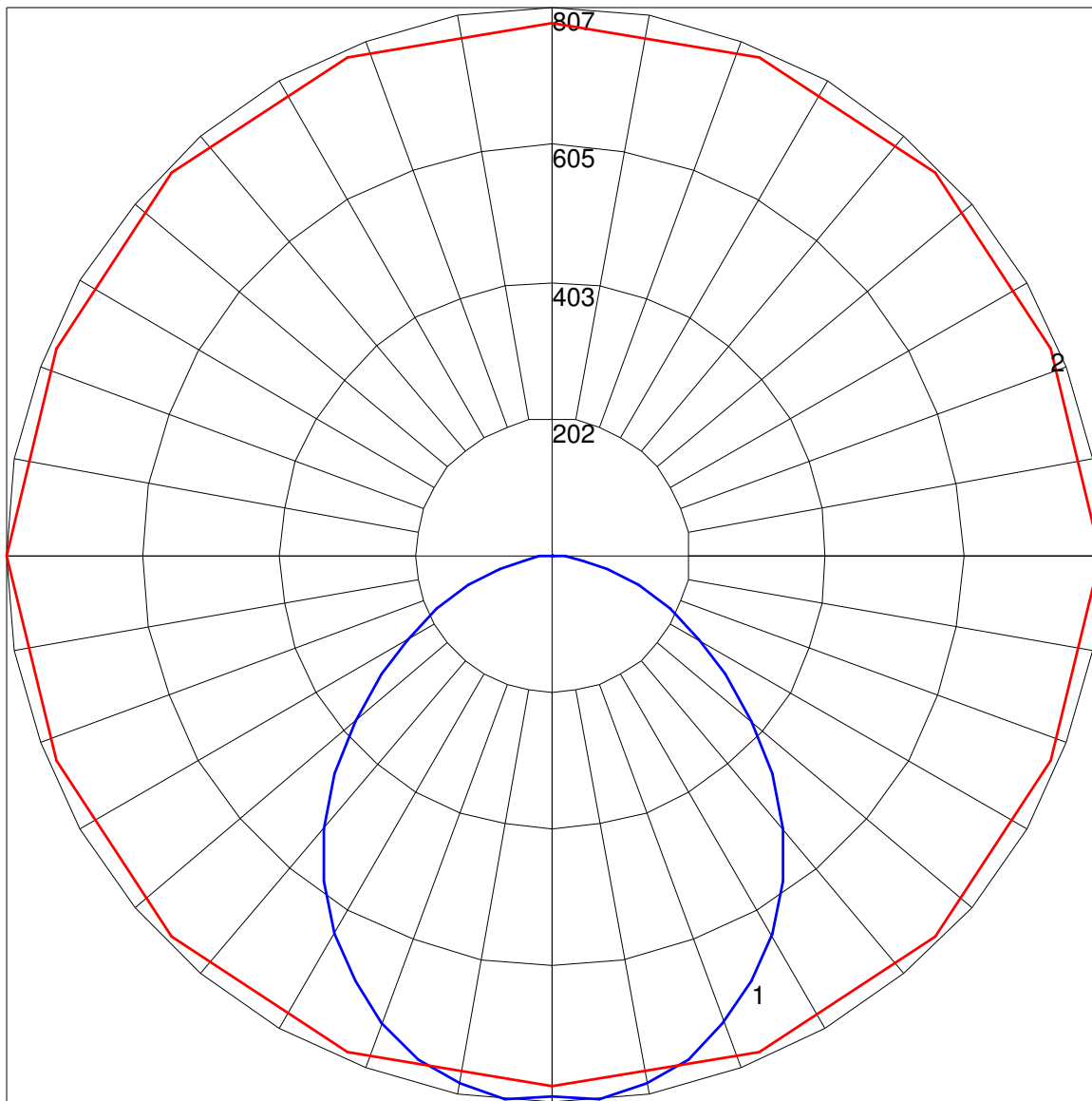
Reflectances

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	17.0	18.5	17.5	19.0	19.5	19.4	20.9	19.8	21.3	21.8
	3H	18.5	19.9	19.0	20.3	20.9	21.6	22.9	22.0	23.4	23.9
	4H	19.0	20.3	19.5	20.8	21.3	22.6	23.9	23.1	24.4	24.9
	6H	19.3	20.5	19.8	21.0	21.6	23.6	24.8	24.2	25.3	25.9
	8H	19.4	20.5	19.9	21.1	21.6	24.2	25.3	24.7	25.8	26.4
	12H	19.5	20.6	20.0	21.1	21.7	24.7	25.8	25.3	26.3	26.9
4H	2H	17.8	19.1	18.3	19.6	20.1	19.7	21.0	20.2	21.5	22.0
	3H	19.5	20.6	20.0	21.1	21.7	22.1	23.2	22.6	23.7	24.3
	4H	20.1	21.1	20.7	21.6	22.2	23.3	24.3	23.8	24.8	25.4
	6H	20.6	21.4	21.1	22.0	22.6	24.5	25.4	25.1	26.0	26.6
	8H	20.7	21.5	21.3	22.1	22.7	25.1	26.0	25.7	26.5	27.1
	12H	20.8	21.5	21.4	22.1	22.8	25.8	26.6	26.4	27.2	27.8
8H	4H	20.6	21.5	21.2	22.0	22.6	23.5	24.3	24.0	24.8	25.5
	6H	21.2	21.9	21.8	22.6	23.2	24.8	25.5	25.4	26.1	26.7
	8H	21.5	22.1	22.1	22.7	23.4	25.6	26.2	26.2	26.8	27.5
	12H	21.7	22.2	22.3	22.8	23.5	26.4	27.0	27.0	27.6	28.3
12H	4H	20.7	21.5	21.3	22.1	22.7	23.4	24.2	24.0	24.8	25.4
	6H	21.5	22.1	22.1	22.7	23.3	24.9	25.5	25.5	26.1	26.8
	8H	21.8	22.3	22.4	22.9	23.6	25.6	26.2	26.3	26.8	27.5

Maximum UGR = 28.3

POLAR GRAPH



Maximum Candela = 806.595 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.)