



IES INDOOR REPORT

PHOTOMETRIC FILENAME : PTS-14-L27-840-RA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM BALLABS TEST NO. 19323.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 21-DEC-2020
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] 2-22" LED ARRAYS 1x4' LUMINAIRE
 [MORE] WHITE REFLECTOR w/WHITE RIBBED ACRYLIC LENS
 [LUMCAT] PTS-14-L27-840-RA-DIM-UNV
 [LAMPCAT] HLM 80 CRI 4000K CCT
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] Indoor, Architectural, Office, Direct
 [_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2787
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	133
Total Luminaire Watts	21
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.26
Spacing Criterion (90-270)	1.26
Spacing Criterion (Diagonal)	1.36
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.92 ft
Luminous Width (90-270)	0.94 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2608	2724	2764
55	2302	2530	2637
65	2003	2374	2436
75	1456	2039	2126
85	663	1091	1284

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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	1015.656	1015.656	1015.656	1015.656	1015.656
5	1038.594	1030.948	1027.125	1017.567	1011.833
10	1020.753	1015.018	1013.107	1002.912	997.815
15	992.717	987.620	990.169	978.062	978.062
20	952.575	950.664	955.124	943.655	947.478
25	907.973	903.513	912.433	904.150	901.601
30	855.725	847.442	860.185	855.725	854.451
35	790.096	783.724	800.291	797.105	800.928
40	713.635	712.361	730.202	732.750	729.564
45	630.165	632.077	658.201	663.936	667.759
50	541.598	551.156	578.554	592.572	592.572
55	451.119	468.960	495.722	523.120	516.748
60	369.561	384.853	416.712	439.013	435.827
65	289.277	302.658	342.800	358.729	351.720
70	206.444	231.294	264.427	272.073	268.888
75	128.709	161.842	180.320	187.966	187.966
80	65.629	96.213	103.222	108.957	104.497
85	19.752	37.593	32.496	35.682	38.230
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	375.06	N.A.	13.50
0-30	792.56	N.A.	28.40
0-40	1288.69	N.A.	46.20
0-60	2230.96	N.A.	80.00
0-80	2741.91	N.A.	98.40
0-90	2787.01	N.A.	100.00
10-90	2689.81	N.A.	96.50
20-40	913.63	N.A.	32.80
20-50	1415.38	N.A.	50.80
40-70	1270.16	N.A.	45.60
60-80	510.95	N.A.	18.30
70-80	183.06	N.A.	6.60
80-90	45.11	N.A.	1.60
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	2787.01	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	97.21
10-20	277.85
20-30	417.50
30-40	496.12
40-50	501.75
50-60	440.53
60-70	327.88
70-80	183.06
80-90	45.11
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70
3	91	80	72	66	88	78	71	65	76	69	64	73	67	63	70	66	62	59
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	57	53	51
5	76	64	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44
6	71	57	48	42	69	56	48	42	54	47	41	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	38	33	43	37	32	31
9	57	44	35	30	56	43	35	30	42	35	30	41	34	29	40	34	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25

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UGR TABLE - CORRECTED

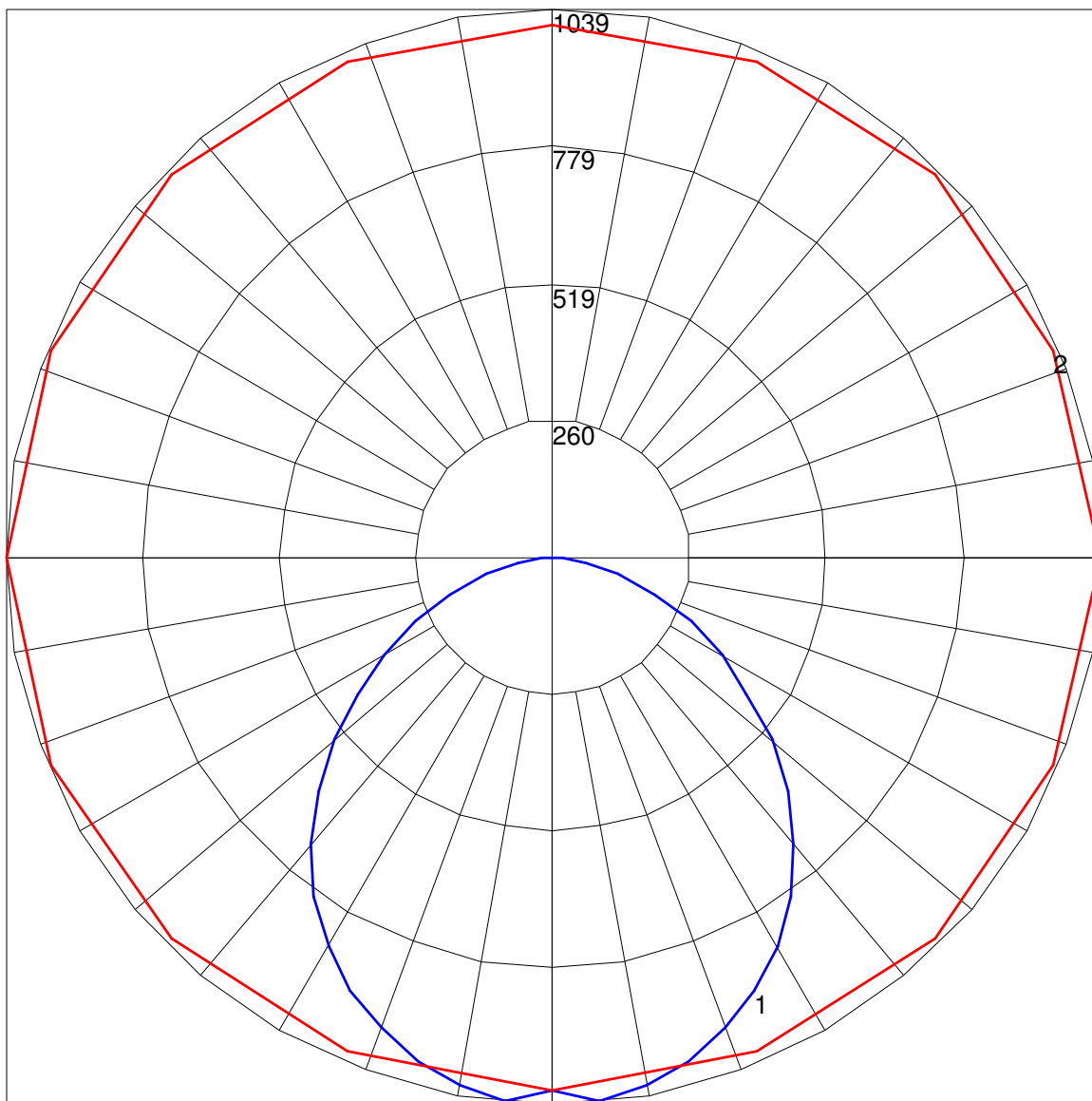
Reflectances

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	14.9	16.5	15.2	16.8	17.1	15.7	17.3	16.1	17.7	18.0
	3H	16.4	17.9	16.8	18.2	18.6	17.5	19.0	17.9	19.3	19.7
	4H	16.9	18.3	17.3	18.7	19.0	18.2	19.5	18.6	19.9	20.3
	6H	17.2	18.5	17.7	18.9	19.3	18.6	19.9	19.0	20.2	20.6
	8H	17.3	18.5	17.7	18.9	19.3	18.7	19.9	19.1	20.3	20.7
	12H	17.3	18.5	17.8	18.9	19.3	18.8	20.0	19.2	20.3	20.8
4H	2H	15.6	17.0	16.0	17.3	17.7	16.3	17.7	16.7	18.0	18.4
	3H	17.4	18.6	17.8	19.0	19.4	18.3	19.5	18.7	19.9	20.3
	4H	18.1	19.1	18.5	19.5	20.0	19.1	20.1	19.5	20.6	21.0
	6H	18.5	19.4	19.0	19.9	20.3	19.7	20.6	20.1	21.0	21.5
	8H	18.6	19.5	19.1	19.9	20.4	19.8	20.7	20.3	21.1	21.6
	12H	18.7	19.5	19.2	19.9	20.4	19.9	20.7	20.4	21.2	21.7
8H	4H	18.5	19.3	18.9	19.8	20.2	19.4	20.2	19.8	20.7	21.1
	6H	19.1	19.8	19.5	20.2	20.7	20.1	20.8	20.6	21.3	21.7
	8H	19.2	19.9	19.7	20.4	20.9	20.3	20.9	20.8	21.4	21.9
	12H	19.4	19.9	19.9	20.4	21.0	20.4	21.0	20.9	21.5	22.1
12H	4H	18.5	19.3	19.0	19.8	20.2	19.4	20.2	19.9	20.6	21.1
	6H	19.1	19.8	19.6	20.2	20.8	20.1	20.7	20.6	21.2	21.7
	8H	19.4	19.9	19.9	20.4	21.0	20.4	20.9	20.9	21.4	22.0

Maximum UGR = 22.1

POLAR GRAPH



Maximum Candela = 1038.594 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.)