H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-14-L45-827-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] 2023-06-23
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 1x4'RECESSED LED LUMINAIRE
[MORE] WHITE REFLECTOR w/WHITE RIBBED ACRYLIC LENS
[MORE] 0-10V LED DRIVER
[LUMCAT] PT-14-L45-827-RA-DIM-UNV
[LAMPCAT] 22" LED ARRAYS
[_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	4187
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	138
Total Luminaire Watts	30.4
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	3918	4093	4152
55	3458	3800	3961
65	3009	3566	3659
75	2186	3063	3193
85	996	1639	1929

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1525.677	1525.677	1525.677	1525.677	1525.677
5	1560.134	1548.649	1542.906	1528.549	1519.934
10	1533.334	1524.720	1521.849	1506.535	1498.877
15	1491.220	1483.563	1487.392	1469.206	1469.206
20	1430.921	1428.049	1434.749	1417.521	1423.264
25	1363.921	1357.221	1370.621	1358.178	1354.350
30	1285.436	1272.993	1292.136	1285.436	1283.522
35	1186.851	1177.279	1202.165	1197.379	1203.122
40	1071.994	1070.080	1096.880	1100.708	1095.923
45	946.609	949.480	988.723	997.337	1003.080
50	813.567	827.924	869.081	890.138	890.138
55	677.653	704.453	744.653	785.810	776.239
60	555.140	578.111	625.968	659.468	654.682
65	434.540	454.640	514.940	538.868	528.340
70	310.113	347.441	397.212	408.698	403.912
75	193.342	243.113	270.870	282.356	282.356
80	98.585	144.528	155.056	163.671	156.971
85	29.671	56.471	48.814	53.600	57.428
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	563.40	N.A.	13.50
0-30	1190.55	N.A.	28.40
0-40	1935.81	N.A.	46.20
0-60	3351.26	N.A.	80.00
0-80	4118.78	N.A.	98.40
0-90	4186.54	N.A.	100.00
10-90	4040.52	N.A.	96.50
20-40	1372.42	N.A.	32.80
20-50	2126.12	N.A.	50.80
40-70	1907.98	N.A.	45.60
60-80	767.52	N.A.	18.30
70-80	274.99	N.A.	6.60
80-90	67.76	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	4186.54	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	146.02
10-20	417.38
20-30	627.16
30-40	745.26
40-50	753.71
50-60	661.74
60-70	492.53
70-80	274.99
80-90	67.76
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	72	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	54	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	16.3	17.9	16.6	18.2	18.5	17.1	18.7	17.5	19.1	19.4
	3H	17.8	19.3	18.2	19.6	20.0	18.9	20.4	19.3	20.7	21.1
	4H	18.3	19.7	18.7	20.1	20.4	19.6	20.9	20.0	21.3	21.7
	6H	18.6	19.9	19.1	20.3	20.7	20.0	21.3	20.4	21.6	22.0
	8H	18.7	19.9	19.1	20.3	20.7	20.1	21.3	20.5	21.7	22.1
	12H	18.7	19.9	19.2	20.3	20.7	20.2	21.4	20.6	21.7	22.2
4H	2H	17.0	18.4	17.4	18.7	19.1	17.7	19.1	18.1	19.4	19.8
	3H	18.8	20.0	19.2	20.4	20.8	19.7	20.9	20.1	21.3	21.7
	4H	19.5	20.5	19.9	20.9	21.4	20.5	21.5	20.9	22.0	22.4
	6H	19.9	20.8	20.4	21.3	21.7	21.1	22.0	21.5	22.4	22.9
	8H	20.0	20.9	20.5	21.3	21.8	21.2	22.1	21.7	22.5	23.0
	12H	20.1	20.9	20.6	21.3	21.8	21.3	22.1	21.8	22.6	23.1
8H	4H	19.9	20.7	20.3	21.2	21.6	20.8	21.6	21.2	22.1	22.5
	6H	20.5	21.2	20.9	21.6	22.1	21.5	22.2	22.0	22.7	23.1
	8H	20.6	21.3	21.1	21.8	22.3	21.7	22.3	22.2	22.8	23.3
	12H	20.8	21.3	21.3	21.8	22.4	21.8	22.4	22.3	22.9	23.5
12H	4H	19.9	20.7	20.4	21.2	21.6	20.8	21.6	21.3	22.0	22.5
	6H	20.5	21.2	21.0	21.6	22.2	21.5	22.1	22.0	22.6	23.1
	8H	20.8	21.3	21.3	21.8	22.4	21.8	22.3	22.3	22.8	23.4

Maximum UGR = 23.5

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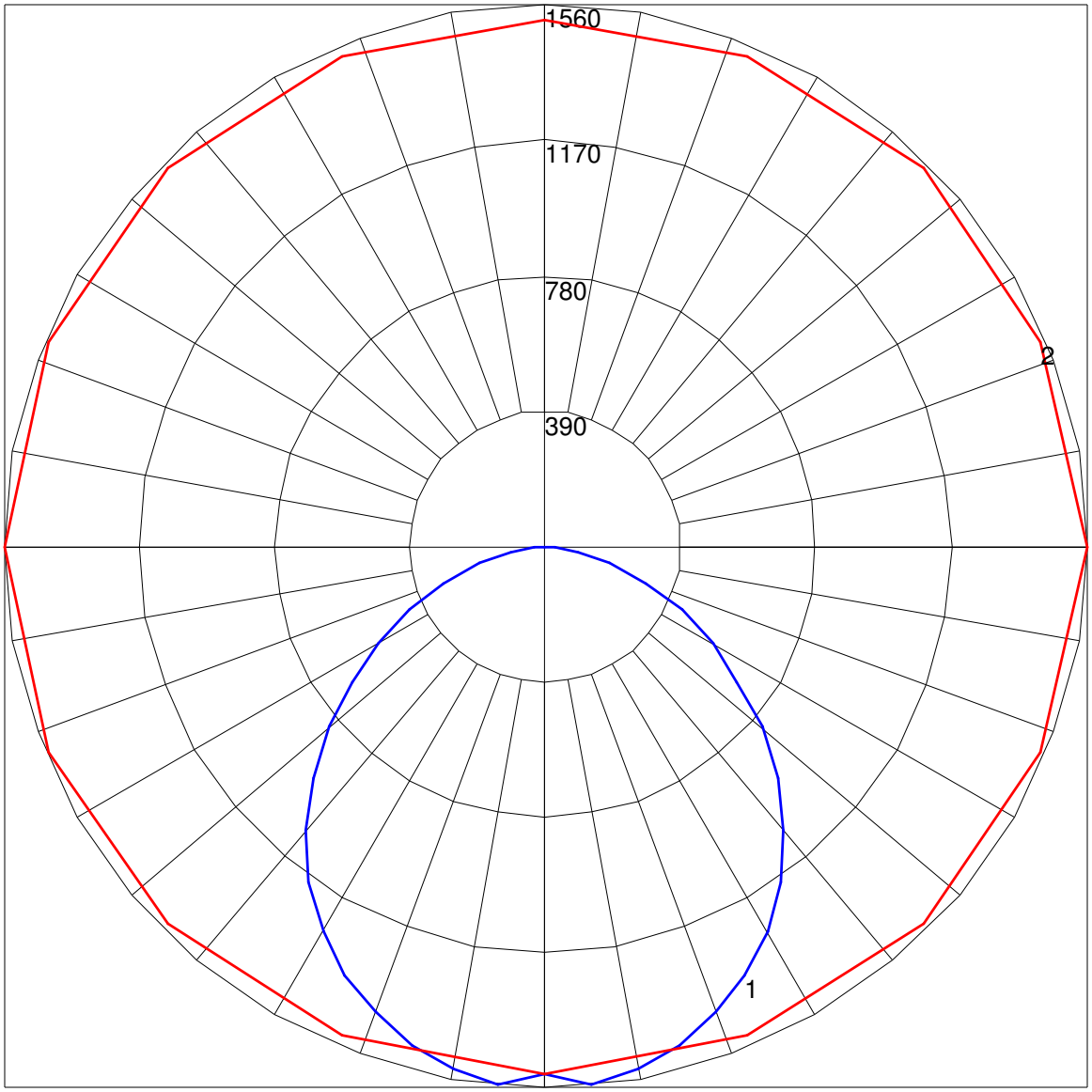
POLAR GRAPH



Maximum Candela = 1560.134 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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