IES INDOOR REPORT
PHOTOMETRIC FILENAME : HETWG-4-L30-827-A-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 16990.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 20-DEC-2022
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 4'LINEAR RECESSED ASYMMETRIC LED LUMINAIRE
[MORE] WHITE REFL w/FROSTED ACRYLIC RIBBED ASYMMETRIC DIFFUSER
[MORE] 0-10V ELECTRONIC DIMMING DRIVER
[LUMCAT] HETWG-4-L30-827-A-DIM-UNV
[LAMPCAT] HLM 80 CRI 2700K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2871
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	94
Total Luminaire Watts	30.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.44
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.24
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.35 ft
Luminous Width (90-270)	3.84 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	10216	11357	8201
55	6578	8729	6706
65	4169	6166	5541
75	2893	3914	4226
85	1853	2611	3032

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0	112.5	135.0	157.5	180.0
0	1357.199	1357.199	1357.199	1357.199	1357.199	1357.199	1357.199	1357.199	1357.199
5	1424.968	1413.978	1390.168	1358.115	1325.147	1303.168	1269.284	1244.557	1234.484
10	1487.241	1470.757	1432.294	1373.684	1302.252	1241.810	1179.536	1136.494	1118.178
15	1464.347	1446.031	1400.241	1328.810	1233.568	1142.905	1053.157	994.547	969.821
20	1568.747	1542.189	1479.915	1373.684	1238.147	1096.199	969.821	881.905	852.600
25	1465.262	1446.031	1384.673	1275.694	1128.252	975.315	839.779	751.863	723.473
30	1416.726	1397.494	1335.220	1214.336	1041.252	865.421	721.642	632.810	602.589
35	1290.347	1294.010	1256.463	1131.915	952.421	768.347	628.231	544.894	517.421
40	1089.789	1114.515	1130.084	1008.284	826.042	643.800	512.842	436.831	413.937
45	901.136	942.347	1001.873	910.294	723.473	544.894	428.589	360.821	342.505
50	670.358	719.810	806.810	763.768	598.926	445.073	348.916	295.800	279.316
55	470.716	523.831	624.568	621.821	479.873	350.747	271.989	228.947	211.547
60	325.105	359.905	460.642	487.200	378.221	276.568	213.379	174.000	165.758
65	219.789	249.095	325.105	371.810	292.137	210.631	156.600	132.789	127.295
70	144.695	159.347	209.716	255.505	206.968	146.526	106.232	94.326	91.579
75	93.410	100.737	126.379	161.179	136.453	90.663	68.684	62.274	61.358
80	54.032	57.695	70.516	89.747	80.589	47.621	39.379	35.716	35.716
85	20.147	21.979	28.389	34.800	32.968	18.316	16.484	13.737	13.737
90	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	478.55	N.A.	16.70
0-30	994.28	N.A.	34.60
0-40	1573.22	N.A.	54.80
0-60	2491.37	N.A.	86.80
0-80	2842.3	N.A.	99.00
0-90	2870.66	N.A.	100.00
10-90	2744.31	N.A.	95.60
20-40	1094.67	N.A.	38.10
20-50	1623.72	N.A.	56.60
40-70	1156.66	N.A.	40.30
60-80	350.94	N.A.	12.20
70-80	112.43	N.A.	3.90
80-90	28.35	N.A.	1.00
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	2870.66	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	126.35
10-20	352.20
20-30	515.73
30-40	578.94
40-50	529.05
50-60	389.10
60-70	238.51
70-80	112.43
80-90	28.35
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	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75
3	93	84	76	71	91	82	75	70	79	74	69	77	72	68	74	70	66	64
4	86	75	67	61	84	74	66	61	71	65	60	69	64	59	67	62	58	56
5	80	68	59	53	78	67	59	53	65	58	53	63	57	52	61	56	51	49
6	74	62	53	47	72	61	53	47	59	52	47	57	51	46	56	50	46	44
7	69	56	48	42	67	55	48	42	54	47	42	52	46	41	51	46	41	39
8	64	52	44	38	63	51	43	38	50	43	38	48	42	37	47	42	37	35
9	60	48	40	34	59	47	39	34	46	39	34	45	39	34	44	38	34	32
10	57	44	36	31	55	43	36	31	43	36	31	42	35	31	41	35	31	29

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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	18.5	20.0	18.9	20.3	20.6	18.7	20.2	19.1	20.5	20.8
	3H	19.3	20.7	19.7	21.0	21.4	20.1	21.4	20.4	21.7	22.1
	4H	19.6	20.9	20.0	21.2	21.6	20.5	21.8	20.9	22.1	22.5
	6H	19.8	21.0	20.2	21.3	21.7	20.8	22.0	21.2	22.3	22.7
	8H	19.8	21.0	20.3	21.3	21.7	20.9	22.0	21.3	22.4	22.8
	12H	19.9	20.9	20.3	21.3	21.7	21.0	22.0	21.4	22.4	22.8
4H	2H	19.2	20.4	19.6	20.8	21.2	19.0	20.3	19.4	20.6	21.0
	3H	20.2	21.2	20.6	21.6	22.0	20.6	21.6	21.0	22.0	22.4
	4H	20.5	21.5	21.0	21.9	22.3	21.1	22.1	21.6	22.5	22.9
	6H	20.8	21.6	21.2	22.0	22.5	21.6	22.4	22.0	22.8	23.3
	8H	20.8	21.6	21.3	22.1	22.5	21.7	22.5	22.2	22.9	23.4
	12H	20.9	21.6	21.4	22.0	22.5	21.8	22.5	22.3	23.0	23.4
8H	4H	20.8	21.5	21.2	22.0	22.4	21.2	22.0	21.7	22.4	22.9
	6H	21.1	21.7	21.6	22.2	22.7	21.7	22.4	22.2	22.8	23.3
	8H	21.2	21.8	21.8	22.3	22.8	21.9	22.5	22.5	23.0	23.5
	12H	21.3	21.8	21.8	22.3	22.9	22.1	22.6	22.6	23.1	23.6
12H	4H	20.8	21.5	21.3	22.0	22.4	21.2	21.9	21.7	22.4	22.8
	6H	21.2	21.7	21.7	22.2	22.7	21.7	22.3	22.2	22.8	23.3
	8H	21.3	21.8	21.8	22.3	22.9	22.0	22.5	22.5	22.9	23.5

Maximum UGR = 23.6

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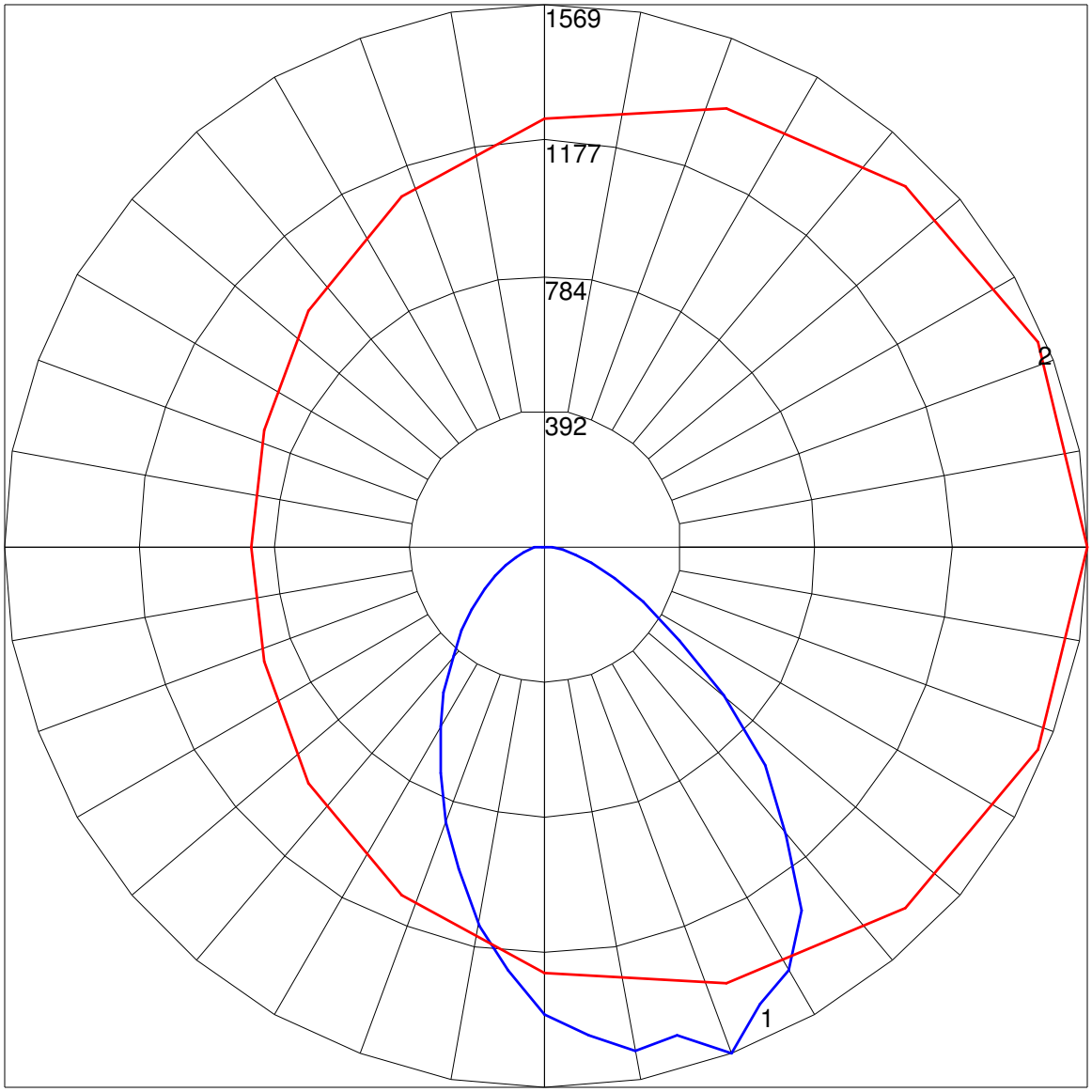
POLAR GRAPH



Maximum Candela = 1568.747 Located At Horizontal Angle = 0, Vertical Angle = 20
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (20) (Through Max. Cd.)

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