



**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : 80R-4-L30-840-DIM-UNV\_.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
[TEST] GEN from BALLABS TEST NO. 21046.0  
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC  
[ISSUEDATE] 18-SEP-2020  
[MANUFAC] H.E. WILLIAMS, INC - CARTHAGE, MO  
[LUMINAIRE] 22" LED ARRAY 4' WHITE INDUSTRIAL LUMINAIRE  
[MORE] WHITE SIDE REFL w/CENTER 4.5" RADIUS FROST/RIB ACRYLIC LEN  
[LUMCAT] 80R-4-L30/840-DIM-UNV

**CHARACTERISTICS**

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3031
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	148
Total Luminaire Watts	20.5
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.30
Spacing Criterion (Diagonal)	1.36
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	3.98 ft
Luminous Width (90-270)	1.05 ft
Luminous Height	0.21 ft

**LUMINANCE DATA (cd/sq.m)**

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2014	2041	2199
55	1735	1836	2066
65	1421	1621	1877
75	1102	1458	1755
85	494	1299	1554

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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>
<b>0</b>	1037.083	1037.083	1037.083	1037.083	1037.083
<b>5</b>	1045.314	1029.195	1028.852	1027.138	1027.824
<b>10</b>	1026.109	1012.734	1014.448	1015.477	1016.506
<b>15</b>	994.900	982.211	990.785	996.615	998.673
<b>20</b>	950.317	942.086	957.862	967.807	973.980
<b>25</b>	894.073	892.358	914.307	931.797	936.599
<b>30</b>	829.255	834.399	864.579	885.842	892.358
<b>35</b>	750.719	764.780	806.277	835.771	847.774
<b>40</b>	672.869	689.331	737.344	778.155	791.873
<b>45</b>	583.359	612.510	661.209	709.565	724.998
<b>50</b>	501.394	528.830	591.933	646.805	659.837
<b>55</b>	416.342	448.580	513.397	571.699	591.590
<b>60</b>	339.178	367.986	442.407	502.080	513.740
<b>65</b>	259.957	296.309	367.643	421.144	439.663
<b>70</b>	194.453	228.748	296.309	355.640	370.387
<b>75</b>	132.722	169.075	243.838	290.479	307.284
<b>80</b>	76.478	118.318	191.024	231.835	245.210
<b>85</b>	26.750	75.792	133.065	163.245	171.818
<b>90</b>	0.686	30.180	74.420	99.456	104.600
<b>95</b>	0.000	3.430	20.234	43.212	55.215
<b>100</b>	0.000	1.715	2.744	1.715	4.458
<b>105</b>	0.000	0.000	2.058	1.372	0.686
<b>110</b>	0.000	0.000	1.372	1.372	1.372
<b>115</b>	0.000	0.000	0.686	0.343	0.343
<b>120</b>	0.000	0.000	0.686	0.000	0.000
<b>125</b>	0.000	0.000	0.343	0.000	0.000
<b>130</b>	0.000	0.000	0.000	0.000	0.000
<b>135</b>	0.000	0.000	0.000	0.000	0.000
<b>140</b>	0.000	0.000	0.000	0.000	0.000
<b>145</b>	0.000	0.000	0.000	0.000	0.000
<b>150</b>	0.000	0.000	0.000	0.000	0.000
<b>155</b>	0.000	0.000	0.000	0.000	0.000
<b>160</b>	0.000	0.000	0.000	0.000	0.000
<b>165</b>	0.000	0.000	0.000	0.000	0.000
<b>170</b>	0.000	0.000	0.000	0.000	0.000
<b>175</b>	0.000	0.000	0.000	0.000	0.000
<b>180</b>	0.000	0.000	0.000	0.000	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	377.64	N.A.	12.50
0-30	798.48	N.A.	26.30
0-40	1299.6	N.A.	42.90
0-60	2266.14	N.A.	74.80
0-80	2868.57	N.A.	94.60
0-90	2998.12	N.A.	98.90
10-90	2900.19	N.A.	95.70
20-40	921.95	N.A.	30.40
20-50	1431.86	N.A.	47.20
40-70	1323.9	N.A.	43.70
60-80	602.42	N.A.	19.90
70-80	245.07	N.A.	8.10
80-90	129.55	N.A.	4.30
90-110	32.31	N.A.	1.10
90-120	32.72	N.A.	1.10
90-130	32.80	N.A.	1.10
90-150	32.80	N.A.	1.10
90-180	32.80	N.A.	1.10
110-180	0.49	N.A.	0.00
0-180	3030.92	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	97.92
10-20	279.72
20-30	420.84
30-40	501.12
40-50	509.90
50-60	456.64
60-70	357.35
70-80	245.07
80-90	129.55
90-100	31.03
100-110	1.29
110-120	0.41
120-130	0.08
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	41	41	41	41	40	40	40	40	38	38	38	36	36	36	35	35	35	34
1	37	35	33	32	36	34	33	31	33	31	30	31	30	29	30	29	28	28
2	33	30	28	26	32	30	27	25	28	26	25	27	26	24	26	25	24	23
3	30	27	24	21	30	26	23	21	25	23	21	24	22	20	23	21	20	19
4	28	24	20	18	27	23	20	18	22	20	18	21	19	17	21	19	17	16
5	26	21	18	16	25	21	18	15	20	17	15	19	17	15	18	16	15	14
6	24	19	16	14	23	19	16	14	18	15	13	17	15	13	17	15	13	12
7	22	17	14	12	21	17	14	12	16	14	12	16	13	12	15	13	12	11
8	20	16	13	11	20	15	13	11	15	12	11	14	12	10	14	12	10	10
9	19	14	12	10	19	14	11	10	14	11	10	13	11	9	13	11	9	9
10	18	13	11	9	17	13	10	9	13	10	9	12	10	9	12	10	9	8

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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

X=2H	Y=2H	16.4	18.0	16.8	18.4	18.7	18.8	20.5	19.2	20.8	21.2
	3H	17.8	19.3	18.2	19.6	20.0	21.0	22.5	21.4	22.8	23.2
	4H	18.3	19.7	18.7	20.0	20.4	22.0	23.4	22.4	23.8	24.2
	6H	18.6	19.9	19.0	20.3	20.7	23.0	24.3	23.4	24.7	25.1
	8H	18.6	19.9	19.1	20.3	20.7	23.4	24.7	23.9	25.1	25.5
	12H	18.7	19.9	19.1	20.3	20.7	23.8	25.0	24.3	25.5	25.9

UGR Viewed Endwise

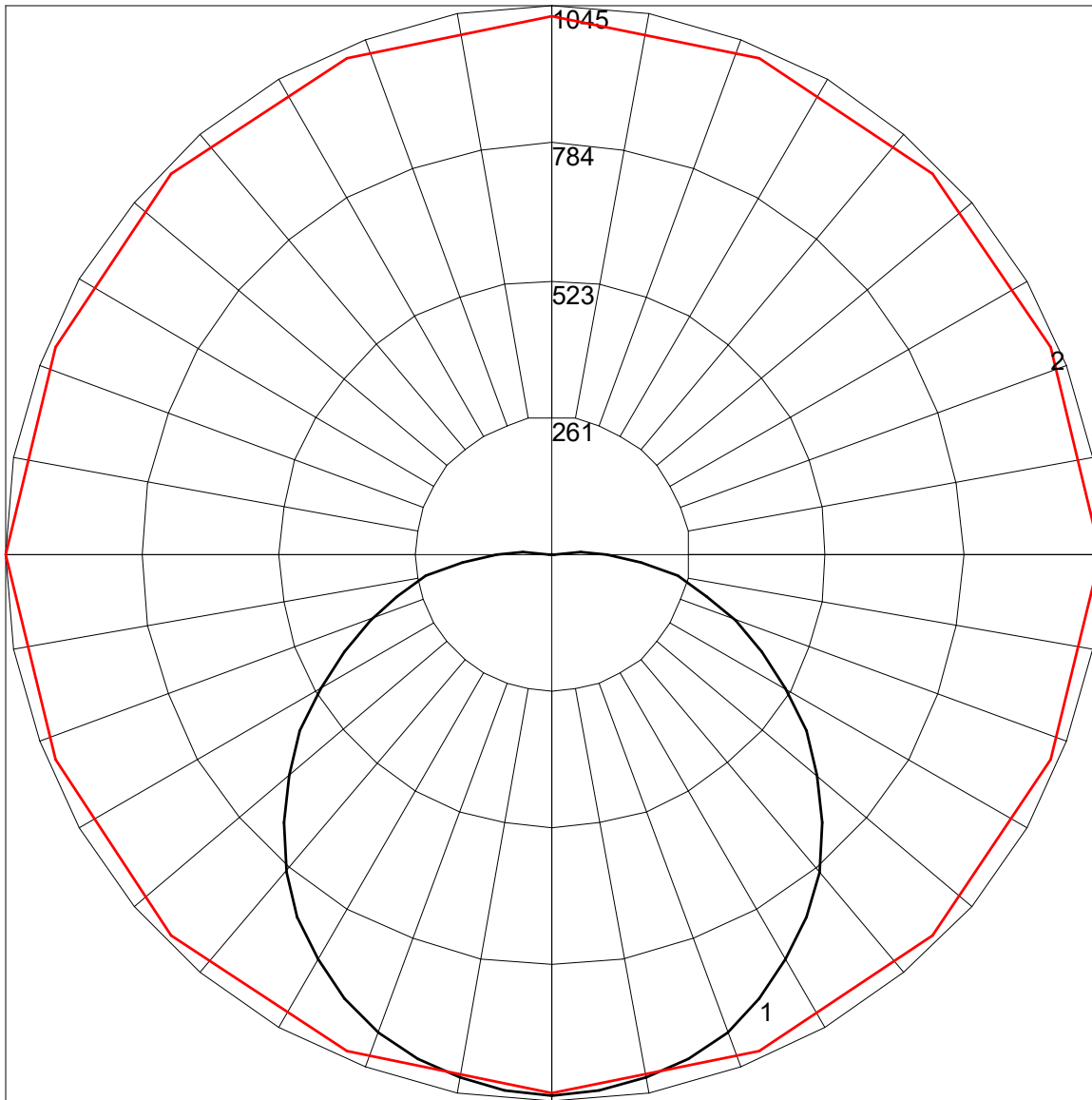
4H	2H	17.3	18.7	17.7	19.1	19.5	19.3	20.7	19.7	21.0	21.4
	3H	19.0	20.2	19.4	20.6	21.0	21.7	22.9	22.1	23.3	23.7
	4H	19.6	20.6	20.0	21.1	21.5	22.8	23.9	23.3	24.4	24.8
	6H	20.0	20.9	20.4	21.4	21.9	24.0	25.0	24.5	25.4	25.9
	8H	20.1	21.0	20.6	21.5	21.9	24.6	25.5	25.0	25.9	26.4
	12H	20.1	21.0	20.6	21.5	22.0	25.1	25.9	25.6	26.4	26.9

8H	4H	20.3	21.2	20.7	21.6	22.1	23.1	24.0	23.5	24.4	24.9
	6H	20.9	21.6	21.4	22.1	22.6	24.4	25.2	24.9	25.7	26.2
	8H	21.1	21.7	21.6	22.3	22.8	25.1	25.8	25.6	26.3	26.8
	12H	21.2	21.8	21.7	22.3	22.9	25.8	26.4	26.3	26.9	27.5

12H	4H	20.4	21.2	20.9	21.7	22.2	23.1	23.9	23.6	24.4	24.9
	6H	21.1	21.8	21.7	22.3	22.9	24.5	25.2	25.0	25.6	26.2
	8H	21.4	22.0	21.9	22.6	23.1	25.2	25.8	25.7	26.3	26.9

Maximum UGR = 27.5

POLAR GRAPH



Maximum Candela = 1045.314 Located At Horizontal Angle = 0, Vertical Angle = 5  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)  
# 2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)