



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : HRZ-4-LED-2080-FL-HO-30.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST] L250\_3000K\_HO(950)\_2080\_N2S\_5-16-2016  
[TESTLAB] Orb Optronix, Inc.  
[ISSUE DATE] 05-16-2016  
[TEST DATE] 01-12-2017  
[MANUFACTURER] LSI INDUSTRIES, INC  
[LUMEN CATEGORY] HRZ-4-LED-2080-FL-HO-30  
[OTHER] TEST PROCEDURE: IESNA LM-79-08  
[ABSOLUTE] NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED  
[SEARCH SOURCE TYPE] LED  
[SEARCH APPLICATION] Indoor

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4141
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	93
Total Luminaire Watts	44.7
Ballast Factor	1.00
CIE Type	Semi-Direct
Spacing Criterion (0-180)	1.30
Spacing Criterion (90-270)	1.24
Spacing Criterion (Diagonal)	1.40
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	4.00 ft
Luminous Width (90-270)	0.60 ft
Luminous Height	0.13 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4364	3764	3480
55	4218	3469	3131
65	3962	3053	2648
75	3555	2414	1942
85	3293	1565	1121

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**CANDELA TABULATION**

	<u>0</u>	<u>10</u>	<u>20</u>	<u>30</u>	<u>40</u>	<u>50</u>	<u>60</u>	<u>70</u>	<u>80</u>	<u>90</u>
<b>0</b>	1027.012	1027.012	1027.012	1027.012	1027.012	1027.012	1027.012	1027.012	1027.012	1027.012
<b>10</b>	1023.599	1017.821	1016.221	1014.137	1012.573	1010.618	1008.653	1006.048	1004.460	1002.047
<b>20</b>	976.373	966.133	965.215	962.525	958.643	960.041	951.323	947.030	944.079	939.882
<b>30</b>	893.145	888.612	886.497	883.053	878.390	874.005	867.489	863.281	856.064	852.591
<b>40</b>	783.330	780.510	778.396	774.030	768.742	763.067	757.335	750.877	743.944	735.007
<b>50</b>	646.530	643.897	642.682	639.178	634.544	628.367	621.405	613.619	606.544	599.360
<b>60</b>	489.004	487.709	487.229	485.150	480.535	474.970	468.551	461.323	453.590	445.961
<b>70</b>	313.826	317.732	318.913	316.356	313.695	309.015	302.557	295.510	287.965	280.165
<b>80</b>	147.759	148.923	149.675	149.407	147.640	144.036	139.612	134.160	127.296	120.183
<b>90</b>	27.275	28.510	29.838	31.232	32.738	34.196	35.467	35.411	33.867	27.559
<b>100</b>	81.382	85.152	91.521	97.606	104.806	106.597	102.280	92.660	81.294	62.986
<b>110</b>	176.518	182.207	177.355	176.531	165.817	160.814	149.745	135.225	116.515	106.329
<b>120</b>	230.093	213.303	225.101	214.296	214.598	201.184	181.689	167.739	149.765	143.178
<b>130</b>	255.503	236.862	249.082	240.872	226.320	211.623	206.831	194.359	186.246	180.840
<b>140</b>	259.280	252.732	230.412	251.149	244.326	226.254	212.465	205.659	203.044	203.151
<b>150</b>	252.269	250.892	237.503	223.102	230.343	237.414	232.991	227.144	225.578	224.901
<b>160</b>	239.083	237.736	236.919	231.663	224.831	220.323	220.259	221.784	222.923	222.752
<b>170</b>	236.746	236.001	236.567	238.320	238.470	238.360	237.425	236.725	236.230	237.356
<b>180</b>	236.242	236.242	236.242	236.242	236.242	236.242	236.242	236.242	236.242	236.242

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	376.29	N.A.	9.10
0-30	800.16	N.A.	19.30
0-40	1314.81	N.A.	31.80
0-60	2348.3	N.A.	56.70
0-80	2972.76	N.A.	71.80
0-90	3067.53	N.A.	74.10
10-90	2970.24	N.A.	71.70
20-40	938.51	N.A.	22.70
20-50	1477.58	N.A.	35.70
40-70	1420.9	N.A.	34.30
60-80	624.47	N.A.	15.10
70-80	237.06	N.A.	5.70
80-90	94.76	N.A.	2.30
90-110	199.69	N.A.	4.80
90-120	373.95	N.A.	9.00
90-130	559.59	N.A.	13.50
90-150	878.09	N.A.	21.20
90-180	1073.3	N.A.	25.90
110-180	873.61	N.A.	21.10
0-180	4140.83	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	97.29
10-20	279.00
20-30	423.87
30-40	514.65
40-50	539.07
50-60	494.42
60-70	387.41
70-80	237.06
80-90	94.76
90-100	68.06
100-110	131.64
110-120	174.26
120-130	185.65
130-140	173.29
140-150	145.21
150-160	106.74
160-170	65.87
170-180	22.60

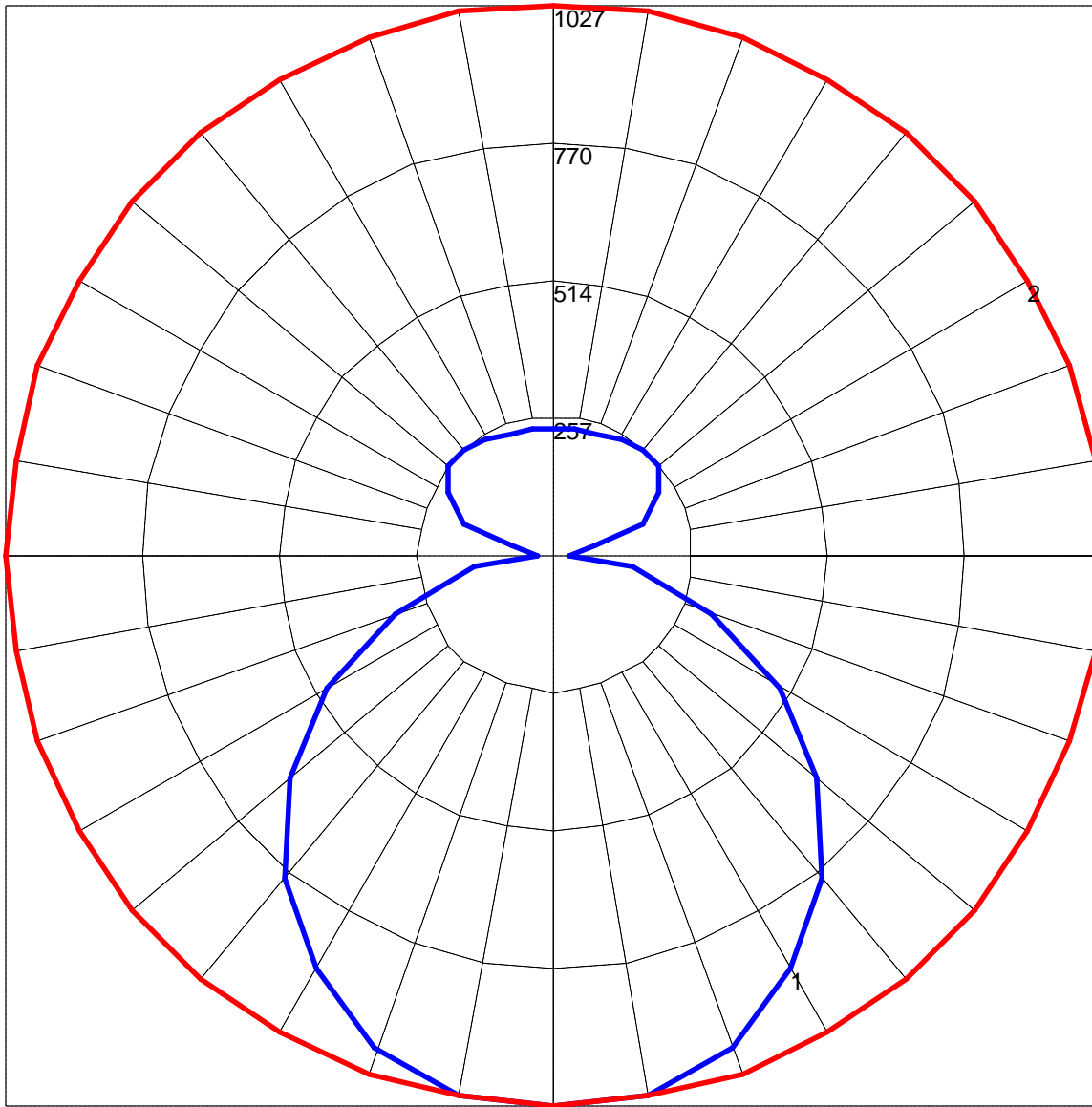
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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	113	113	113	113	107	107	107	107	97	97	97	87	87	87	78	78	78	74
1	102	98	93	90	97	93	89	86	84	81	78	76	73	71	68	66	65	61
2	93	85	78	72	88	81	75	70	73	68	64	66	62	59	59	56	54	50
3	85	74	66	60	80	71	64	58	64	58	53	58	53	49	52	49	45	42
4	77	66	57	51	73	63	55	49	57	50	45	51	46	42	47	42	39	36
5	71	58	50	43	67	56	48	42	51	44	39	46	41	36	42	37	34	31
6	65	52	44	38	62	50	42	36	46	39	34	42	36	32	38	33	29	27
7	60	47	39	33	57	45	37	32	41	35	30	38	32	28	34	30	26	24
8	56	43	35	29	53	41	34	28	38	31	27	35	29	25	32	27	23	21
9	52	39	31	26	50	38	30	25	35	28	24	32	26	22	29	24	21	19
10	49	36	29	23	46	35	28	23	32	26	22	29	24	20	27	22	19	17

POLAR GRAPH



Maximum Candela = 1027.012 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)