



**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : HRZ-4-LED-FL-HO-40.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
[TEST] L250\_4000K\_HO(950)\_NA\_N2S\_5-12-2016  
[TESTLAB] Orb Optronix, Inc.  
[ISSUE DATE] 05-12-2016  
[TEST DATE] 01-12-2017  
[MANUFACTURER] LSI INDUSTRIES, INC  
[LUMEN CATEGORY] HRZ-4-LED-FL-HO-40  
[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	5199
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	116
Total Luminaire Watts	44.8
Ballast Factor	1.00
CIE Type	Semi-Indirect
Spacing Criterion (0-180)	N.A.
Spacing Criterion (90-270)	N.A.
Spacing Criterion (Diagonal)	N.A.
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	1644	1371	1260
55	1602	1275	1139
65	1502	1125	966
75	1331	877	701
85	1224	627	404

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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>	351.760	351.760	351.760	351.760	351.760	351.760	351.760	351.760	351.760	351.760
<b>10</b>	352.158	351.170	350.346	349.519	348.519	346.971	346.312	345.815	344.856	344.851
<b>20</b>	344.406	343.929	341.788	338.990	336.205	334.202	332.633	331.139	329.313	329.048
<b>30</b>	326.414	325.356	322.114	317.611	314.377	310.817	307.907	305.831	303.686	302.718
<b>40</b>	292.889	292.026	290.728	284.040	280.385	276.084	272.664	269.729	267.017	265.729
<b>50</b>	245.730	244.810	243.518	240.473	232.906	228.795	225.427	222.054	219.296	217.285
<b>60</b>	185.560	185.408	184.386	182.569	179.112	174.497	170.877	167.395	164.666	163.079
<b>70</b>	118.804	118.385	118.586	117.860	115.362	112.402	109.660	106.157	103.420	101.794
<b>80</b>	54.000	54.227	54.601	54.435	53.145	51.313	49.506	47.300	44.284	42.595
<b>90</b>	11.031	11.549	14.463	14.779	17.312	21.800	22.185	19.519	15.763	10.682
<b>100</b>	311.774	334.796	293.935	204.243	202.946	201.836	188.788	164.342	130.886	92.285
<b>110</b>	744.045	725.635	711.704	677.716	650.103	604.853	539.940	448.354	308.840	237.195
<b>120</b>	1071.780	1059.205	1023.839	978.895	913.576	835.960	733.610	585.974	454.393	404.505
<b>130</b>	1176.899	1162.771	1131.041	1081.490	1005.499	912.862	792.106	671.389	591.634	565.319
<b>140</b>	1167.210	1153.795	1120.229	1060.733	994.607	915.462	819.427	745.165	710.749	701.438
<b>150</b>	1072.484	1060.807	1038.475	1001.788	952.398	896.845	850.595	822.403	812.016	806.361
<b>160</b>	969.187	960.950	949.542	934.085	915.561	899.606	889.661	882.580	878.226	873.999
<b>170</b>	935.518	931.027	927.846	925.720	924.107	921.256	919.274	915.589	913.280	910.932
<b>180</b>	925.312	925.312	925.312	925.312	925.312	925.312	925.312	925.312	925.312	925.312

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	130.36	N.A.	2.50
0-30	280.72	N.A.	5.40
0-40	466.88	N.A.	9.00
0-60	847.85	N.A.	16.30
0-80	1077.32	N.A.	20.70
0-90	1114.02	N.A.	21.40
10-90	1080.62	N.A.	20.80
20-40	336.52	N.A.	6.50
20-50	534.47	N.A.	10.30
40-70	524.09	N.A.	10.10
60-80	229.47	N.A.	4.40
70-80	86.35	N.A.	1.70
80-90	36.69	N.A.	0.70
90-110	541.80	N.A.	10.40
90-120	1230.09	N.A.	23.70
90-130	2004.81	N.A.	38.60
90-150	3309.56	N.A.	63.70
90-180	4085.15	N.A.	78.60
110-180	3543.35	N.A.	68.20
0-180	5199.16	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	33.40
10-20	96.96
20-30	150.36
30-40	186.16
40-50	197.95
50-60	183.02
60-70	143.12
70-80	86.35
80-90	36.69
90-100	125.60
100-110	416.20
110-120	688.29
120-130	774.72
130-140	717.41
140-150	587.34
150-160	427.03
160-170	260.37
170-180	88.19

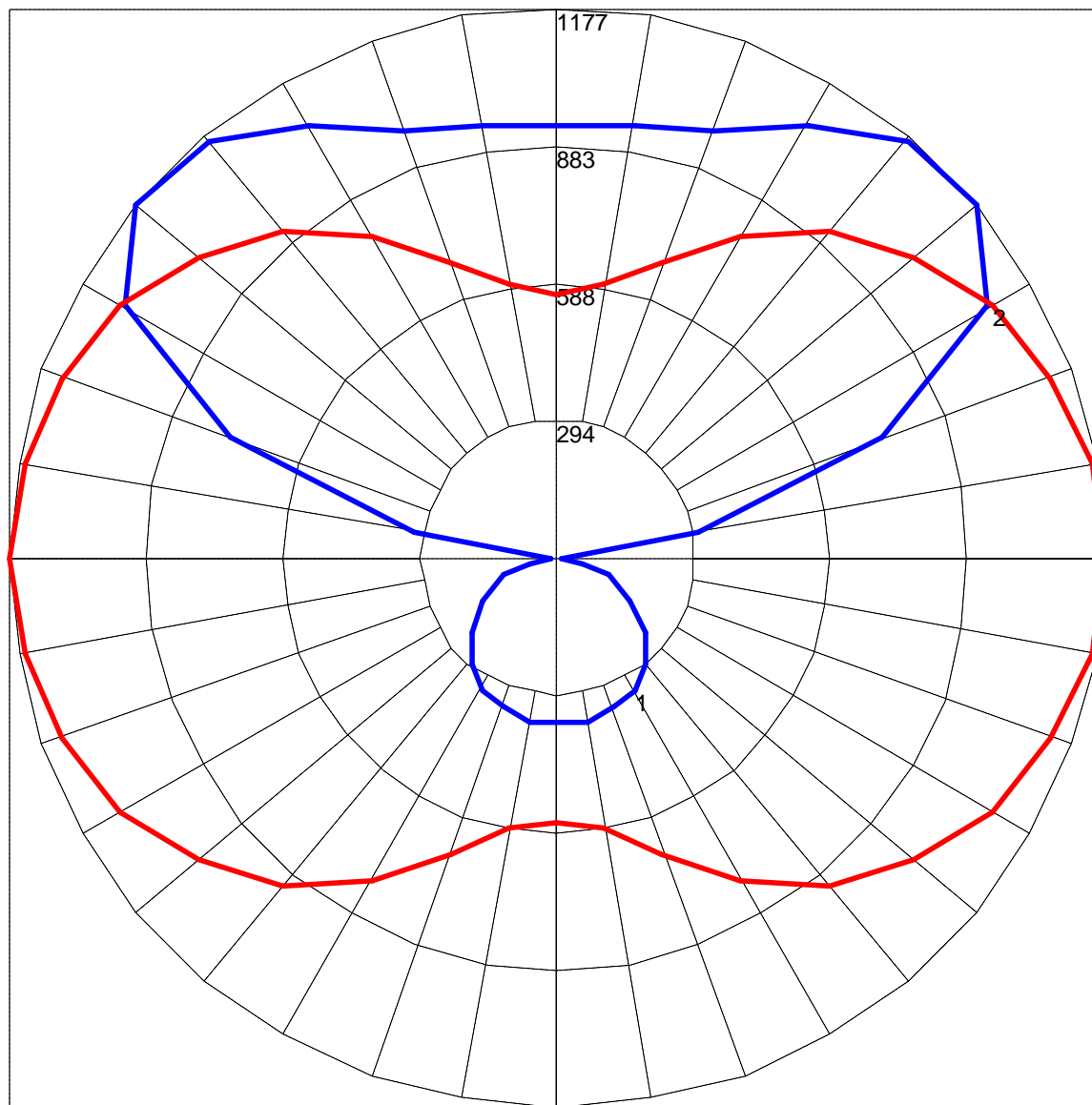
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

Effective Floor Cavity Reflectance 0.20

RC RW	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	100	100	100	100	89	89	89	89	67	67	67	48	48	48	30	30	30	21
1	91	87	83	80	81	77	74	71	59	57	55	42	40	39	26	25	25	18
2	83	76	70	65	73	67	62	58	51	48	45	36	34	32	23	22	21	14
3	75	66	59	54	66	59	53	48	45	41	37	32	29	27	20	19	17	12
4	69	58	51	45	61	52	45	41	40	35	32	28	25	23	18	16	15	10
5	63	52	44	38	55	46	39	34	35	31	27	25	22	20	16	14	13	9
6	58	46	38	33	51	41	35	30	32	27	23	23	20	17	14	12	11	8
7	53	41	34	29	47	37	30	26	28	24	20	20	17	15	13	11	10	7
8	49	37	30	25	43	33	27	23	26	21	18	19	15	13	12	10	9	6
9	46	34	27	22	40	30	24	20	23	19	16	17	14	12	11	9	8	5
10	43	31	24	19	38	28	22	18	21	17	14	16	13	10	10	8	7	5

POLAR GRAPH



Maximum Candela = 1176.899 Located At Horizontal Angle = 0, Vertical Angle = 130  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (130) (Through Max. Cd.)