



## IES INDOOR REPORT

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

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] L250\_3000K\_SS(750)\_2080\_N2S\_5-17-2016

[TESTLAB] Orb Optronix, Inc.

[ISSUE DATE] 05-17-2016

[TEST DATE] 01-12-2017

[MANUFACT] LSI INDUSTRIES, INC

[LUMCAT] HRZ-4-LED-2080-FL-SS-30

[OTHER] TEST PROCEDURE: IESNA LM-79-08

[\_ABSOLUTE] NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED

[\_SEARCH\_SOURCETYPE] LED

[\_SEARCH\_APPLICATION] Indoor

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3233
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	88
Total Luminaire Watts	36.8
Ballast Factor	1.00
CIE Type	Semi-Direct
Spacing Criterion (0-180)	1.26
Spacing Criterion (90-270)	1.24
Spacing Criterion (Diagonal)	1.38
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	3405	2981	2842
55	3217	2699	2530
65	2921	2299	2109
75	2422	1691	1497
85	1809	929	739

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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>	841.767	841.767	841.767	841.767	841.767	841.767	841.767	841.767	841.767	841.767
<b>10</b>	829.164	827.919	826.400	825.655	825.615	824.602	823.920	823.056	823.238	823.381
<b>20</b>	784.602	785.401	783.304	782.348	781.073	775.825	778.051	776.899	772.660	771.752
<b>30</b>	711.657	710.855	709.689	708.493	707.205	704.817	702.703	699.951	699.806	697.976
<b>40</b>	616.703	615.809	615.906	614.338	611.622	610.224	607.195	605.060	603.074	603.107
<b>50</b>	499.099	499.584	499.836	498.253	496.841	494.731	492.302	489.704	487.826	486.604
<b>60</b>	367.060	367.612	368.713	368.761	367.657	366.663	363.572	361.744	360.043	357.998
<b>70</b>	224.758	226.002	227.558	227.916	227.879	226.418	225.143	223.481	221.909	220.220
<b>80</b>	89.708	91.153	91.882	93.020	93.417	92.809	92.535	91.450	89.933	88.283
<b>90</b>	6.450	7.042	8.012	9.360	11.867	14.669	15.828	16.013	13.901	9.066
<b>100</b>	71.170	73.849	79.021	82.602	85.761	84.034	76.965	66.668	54.826	38.409
<b>110</b>	143.915	148.650	140.660	143.861	130.130	126.615	115.233	101.572	84.611	74.531
<b>120</b>	187.231	168.419	191.446	165.643	164.729	162.383	140.965	126.969	111.458	104.016
<b>130</b>	205.014	180.879	196.176	204.348	176.270	166.287	155.686	144.890	140.383	137.717
<b>140</b>	210.374	198.097	185.414	196.397	197.900	191.545	167.972	158.612	157.205	155.583
<b>150</b>	204.312	201.019	183.442	178.635	183.377	182.853	181.045	181.934	183.457	183.746
<b>160</b>	192.719	191.816	187.744	179.240	174.936	174.895	177.177	177.264	177.955	177.755
<b>170</b>	192.884	192.530	192.857	192.782	191.389	188.943	186.501	184.323	183.655	183.568
<b>180</b>	191.804	191.804	191.804	191.804	191.804	191.804	191.804	191.804	191.804	191.804

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	306.97	N.A.	9.50
0-30	650.57	N.A.	20.10
0-40	1063.84	N.A.	32.90
0-60	1877.46	N.A.	58.10
0-80	2338.36	N.A.	72.30
0-90	2394.71	N.A.	74.10
10-90	2315.15	N.A.	71.60
20-40	756.87	N.A.	23.40
20-50	1184.75	N.A.	36.60
40-70	1106.78	N.A.	34.20
60-80	460.89	N.A.	14.30
70-80	167.74	N.A.	5.20
80-90	56.35	N.A.	1.70
90-110	149.63	N.A.	4.60
90-120	286.29	N.A.	8.90
90-130	431.53	N.A.	13.30
90-150	683.40	N.A.	21.10
90-180	838.73	N.A.	25.90
110-180	689.10	N.A.	21.30
0-180	3233.44	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	79.56
10-20	227.41
20-30	343.60
30-40	413.27
40-50	427.88
50-60	385.74
60-70	293.16
70-80	167.74
80-90	56.35
90-100	46.25
100-110	103.39
110-120	136.66
120-130	145.24
130-140	136.49
140-150	115.38
150-160	84.76
160-170	52.40
170-180	18.18

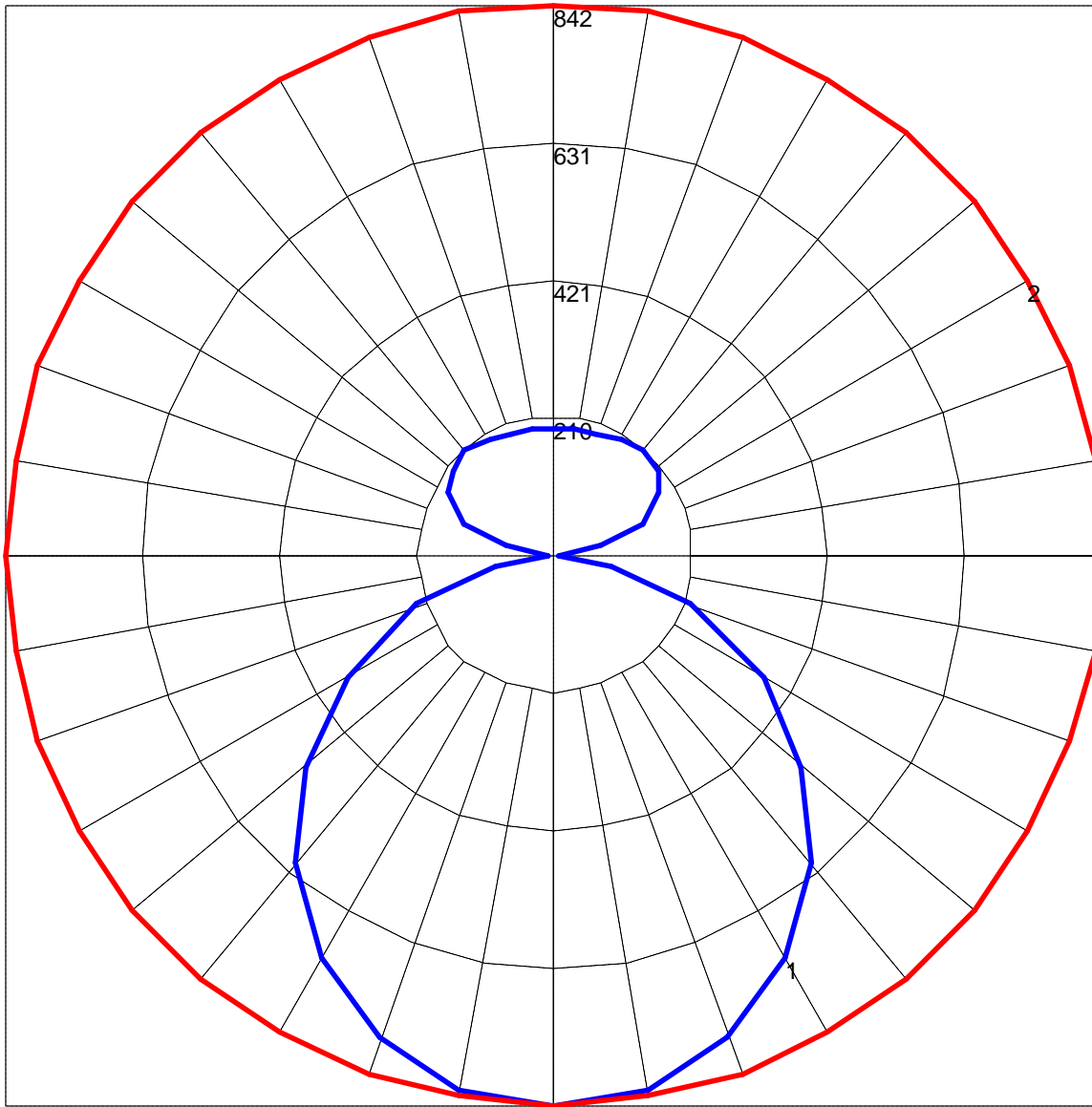
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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	103	98	94	90	98	93	90	86	84	82	79	76	74	72	69	67	65	62
2	93	86	79	73	88	81	76	71	74	69	65	67	63	60	60	57	55	51
3	85	75	67	61	81	71	64	59	65	59	54	59	54	50	53	49	46	43
4	78	66	58	51	74	63	56	50	58	51	46	52	47	43	47	43	40	37
5	71	59	50	44	68	56	49	43	51	45	40	47	41	37	42	38	34	32
6	66	53	44	38	62	51	43	37	46	40	35	42	37	33	38	34	30	28
7	61	48	40	34	58	46	38	33	42	36	31	38	33	29	35	30	27	25
8	57	44	35	30	54	42	34	29	38	32	27	35	30	26	32	28	24	22
9	53	40	32	27	50	38	31	26	35	29	25	32	27	23	30	25	22	20
10	49	37	29	24	47	35	28	23	33	26	22	30	25	21	28	23	20	18

POLAR GRAPH



Maximum Candela = 841.767 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.)