Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

ALAT18GV 55L 35K xx MWI xx xx

Nom 18.4" diam reflector x 10.7" H, Retro Pendant decorative luminaire

Test Number

SP-00730

Test Date

The results contained in this report pertain only to this IES file.

Summary of Results

Power

Input Watts	39 W

Lumen Output

Output Lumens	4052
Efficacy	103.91 lm/W

Luminous Dimensions

0° - 180° Size	-1.53
90° - 270° Size	-1.53
Height	0

Spacing Criterion

Two luminaires, plane 0°	1.25
Two luminaires, plane 90°	1.25
Four luminaires	1.38

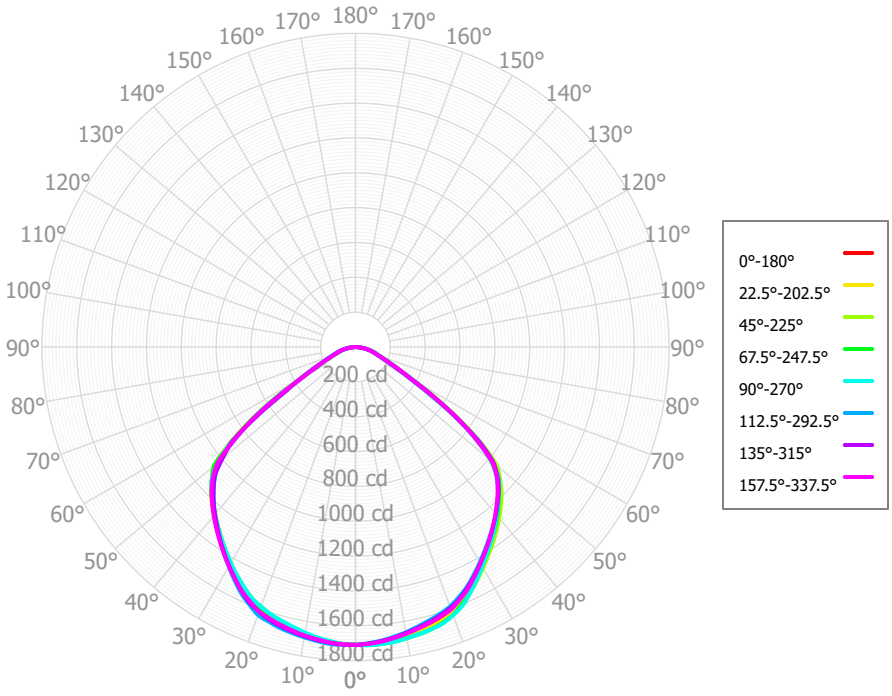
Full Beam Angle

0° - 180°	106°
90° - 270°	106°

IES File Header Contents

Keyword	Value
TEST	SP-00730
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	10/30/2018
UPDATE	6/8/2022
LUMCAT	ALAT18GV 55L 35K xx MWI xx xx
LUMINAIRE	Nom 18.4" diam reflector x 10.7" H, Retro Pendant decorative luminaire
OTHER	Matte white interior finish
OTHER	Platinum outside finish
OTHER	4" Low profile frosted glass dome
OTHER	Beam Angle: 104.4 deg
LAMPCAT	N/A, Gen3
LAMP	N/A
OTHER	Total Luminiare watts is approximate
OTHER	CCT multipliers: 27K x 0.971, 30K x 0.985, 40K x 1.03
OTHER	This report generated by Spectrum Lighting
_CRI	85+

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture
0.00° - 10.00°	164.14	4.05%
10.00° - 20.00°	466.17	11.50%
20.00° - 30.00°	707.21	17.45%
30.00° - 40.00°	846.78	20.90%
40.00° - 50.00°	893.98	22.06%
50.00° - 60.00°	626.07	15.45%
60.00° - 70.00°	221.90	5.48%
70.00° - 80.00°	101.51	2.51%
80.00° - 90.00°	24.47	0.60%
0.00° - 90.00°	4052.22	100.00%

Zone	Lumens	% Fixture
90.00° - 100.00°	0.07	0.00%
100.00° - 110.00°	0.00	0.00%
100.00° - 120.00°	0.00	0.00%
120.00° - 130.00°	0.00	0.00%
130.00° - 140.00°	0.00	0.00%
140.00° - 150.00°	0.00	0.00%
150.00° - 160.00°	0.00	0.00%
160.00° - 170.00°	0.00	0.00%
170.00° - 180.00°	0.00	0.00%
0.00° - 180.00°	4052.30	100.00%

Candela Distribution

	0.00°	22.50°	45.00°	67.50°	90.00°	112.50°	135.00°	157.50°	180.00°	202.50°	225.00°	247.50°	270.00°	292.50°	315.00°	337.50°	360.00°
0.00°	1710.28	1710.28	1710.28	1710.28	1710.28	1710.28	1710.28	1710.28	1710.28	1710.28	1710.28	1710.28	1710.28	1710.28	1710.28	1710.28	1710.28
2.50°	1707.47	1707.26	1711.63	1713.06	1714.20	1710.90	1709.82	1707.73	1707.70	1706.65	1705.00	1707.02	1705.98	1701.77	1704.31	1705.66	1707.47
5.00°	1699.26	1702.18	1709.39	1711.49	1711.97	1710.62	1704.72	1702.78	1699.60	1699.16	1695.65	1699.58	1694.58	1692.59	1695.31	1698.63	1699.26
7.50°	1689.93	1694.19	1703.66	1704.70	1708.35	1702.58	1696.80	1692.45	1689.17	1688.48	1682.98	1684.67	1682.16	1678.53	1683.79	1685.46	1689.93
10.00°	1677.89	1685.28	1694.08	1697.47	1698.24	1693.13	1686.15	1681.98	1676.06	1675.32	1668.18	1667.74	1664.79	1663.43	1667.62	1672.16	1677.89
12.50°	1666.12	1675.44	1684.94	1689.12	1688.19	1682.06	1674.45	1667.48	1662.16	1659.84	1651.94	1650.05	1646.81	1644.73	1651.61	1656.70	1666.12
15.00°	1654.92	1662.98	1676.25	1678.05	1678.37	1670.74	1659.08	1652.81	1645.10	1642.74	1633.91	1632.16	1628.66	1626.09	1635.89	1641.08	1654.92
17.50°	1639.52	1648.15	1660.10	1660.95	1664.81	1654.08	1642.46	1635.27	1627.24	1622.37	1614.77	1614.07	1610.49	1607.67	1617.30	1623.56	1639.52
20.00°	1615.93	1622.66	1637.17	1636.54	1638.67	1636.77	1617.04	1616.36	1600.98	1599.96	1588.98	1595.93	1584.76	1585.45	1594.30	1604.02	1615.93
22.50°	1585.73	1588.52	1602.09	1597.69	1606.82	1597.89	1589.01	1581.56	1572.88	1568.73	1559.47	1562.51	1558.55	1553.13	1563.76	1567.63	1585.73
25.00°	1544.06	1547.46	1556.88	1554.29	1557.61	1557.04	1545.82	1545.58	1532.22	1532.40	1520.69	1526.47	1517.18	1517.16	1522.69	1529.76	1544.06
27.50°	1499.99	1501.29	1510.86	1502.64	1507.73	1506.54	1498.62	1499.47	1489.28	1490.14	1477.28	1481.02	1475.19	1472.50	1479.52	1482.29	1499.99
30.00°	1452.13	1455.36	1464.21	1452.35	1456.09	1455.37	1450.71	1453.26	1443.01	1444.81	1431.81	1434.23	1430.81	1427.68	1433.68	1435.04	1452.13
32.50°	1405.30	1409.61	1418.89	1404.26	1405.74	1405.34	1402.65	1406.24	1396.24	1399.25	1385.39	1388.93	1386.40	1382.54	1388.27	1389.00	1405.30
35.00°	1359.96	1363.49	1374.48	1357.81	1358.38	1355.36	1353.53	1359.29	1351.19	1353.59	1340.32	1343.79	1342.48	1338.53	1343.37	1342.94	1359.96
37.50°	1313.69	1317.14	1329.11	1313.77	1310.21	1305.42	1304.21	1312.81	1306.35	1308.62	1295.81	1300.24	1298.57	1296.65	1298.11	1296.77	1313.69
40.00°	1266.22	1270.03	1283.14	1267.07	1260.28	1255.48	1255.55	1266.09	1260.97	1263.95	1251.72	1256.82	1254.83	1254.15	1252.46	1250.37	1266.22
42.50°	1217.96	1222.49	1235.06	1216.77	1209.46	1203.86	1206.99	1218.27	1215.55	1219.25	1207.79	1214.09	1211.10	1210.58	1206.81	1203.05	1217.96
45.00°	1168.76	1171.32	1185.81	1163.21	1156.94	1151.98	1152.22	1168.54	1165.66	1174.53	1162.04	1171.40	1167.44	1164.16	1161.15	1154.13	1168.76
47.50°	1109.74	1118.35	1125.78	1105.70	1096.18	1092.13	1096.66	1110.90	1115.52	1118.27	1115.71	1116.63	1119.14	1113.34	1103.47	1099.66	1109.74
50.00°	1040.09	1017.84	1060.21	1014.26	1021.39	1026.95	997.58	1032.01	1014.08	1058.28	1016.76	1061.51	1017.51	1022.40	1035.40	1022.46	1040.09
52.50°	906.79	896.32	913.21	885.17	899.88	874.48	894.17	877.73	910.62	910.04	903.13	893.83	904.28	873.98	897.70	876.56	906.79
55.00°	711.46	709.92	729.06	719.02	704.85	719.59	692.04	713.31	697.18	736.16	708.42	725.21	689.09	703.22	705.01	718.30	711.46
57.50°	538.40	497.77	554.74	515.25	530.52	535.32	482.70	517.81	483.75	555.95	494.39	537.63	485.73	503.68	533.76	527.38	538.40
60.00°	385.19	368.79	384.40	370.38	385.44	362.00	368.49	352.99	367.86	374.15	367.61	354.73	365.55	355.37	377.98	367.66	385.19
62.50°	282.79	269.31	289.60	279.41	278.92	285.00	258.45	273.48	254.09	281.61	259.15	276.21	255.51	266.52	277.29	283.15	282.79
65.00°	221.21	212.38	222.22	215.70	221.06	213.03	208.45	204.92	203.20	208.23	201.56	200.31	202.72	201.78	212.00	213.33	221.21
67.50°	177.19	166.17	180.12	171.30	176.22	173.74	160.85	162.65	154.78	165.41	152.77	161.94	155.18	159.52	168.70	169.52	177.19
70.00°	142.29	140.33	144.75	143.27	142.03	139.25	134.92	129.75	128.54	127.91	127.74	126.92	127.90	131.67	134.85	138.77	142.29
72.50°	120.87	117.62	125.19	120.57	122.60	120.03	111.44	111.27	105.50	110.09	105.61	108.19	105.77	110.07	116.12	117.83	120.87
75.00°	101.46	99.87	104.85	102.32	105.02	101.12	94.37	92.65	89.70	93.01	89.56	90.79	91.23	93.13	97.49	98.65	101.46
77.50°	83.49	78.24	83.83	80.91	84.65	82.51	74.90	74.18	72.58	76.05	73.01	75.07	73.68	74.66	77.81	79.22	83.49
80.00°	63.41	55.58	63.04	58.40	62.69	61.43	54.89	57.58	54.63	58.63	55.72	56.64	54.81	54.87	57.92	58.94	63.41
82.50°	40.73	34.03	41.47	37.27	42.23	40.28	36.32	36.39	36.01	40.17	36.11	37.66	35.04	34.90	39.88	37.60	40.73
85.00°	19.73	14.59	20.52	16.71	21.22	20.85	15.45	17.87	16.18	21.31	18.29	19.63	15.75	16.37	20.80	18.31	19.73
87.50°	4.83	2.18	4.76	3.07	5.20	6.21	3.08	5.08	4.52	7.78	3.65	6.16	3.86	3.52	5.75	3.38	4.83
90.00°	0.00	0.00	0.00	0.00	0.00	0.92	0.82	1.16	1.02	1.10	1.07	0.88	1.35	0.00	0.00	0.00	0.00
92.50°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
97.50°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

	ρfc	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	ρcc	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	10%	0%
	ρw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	30%
	0	4824	4824	4824	4824	4712	4712	4712	4712	4503	4503	4503	4311	4311	4311	4135	4135	4135	4052
	1	4485	4324	4180	4051	4379	4234	4104	3985	4065	3958	3860	3910	3823	3744	3766	3698	3634	3621
	2	4136	3850	3613	3415	4035	3775	3559	3375	3636	3454	3297	3507	3356	3224	3388	3264	3153	3195
	3	3810	3435	3144	2913	3715	3373	3104	2887	3256	3027	2838	3148	2954	2790	3048	2884	2744	2823
	4	3513	3077	2758	2514	3425	3025	2728	2498	2928	2669	2465	2837	2613	2432	2752	2560	2401	2507
RCR	5	3246	2771	2439	2194	3166	2727	2415	2182	2644	2370	2160	2567	2327	2137	2495	2285	2116	2238
	6	3008	2508	2173	1933	2934	2471	2155	1925	2401	2119	1909	2335	2084	1893	2273	2051	1877	2010
	7	2795	2282	1951	1718	2727	2251	1936	1712	2191	1907	1700	2134	1879	1689	2081	1852	1677	1817
	8	2605	2088	1762	1539	2544	2060	1750	1535	2009	1727	1526	1960	1704	1517	1914	1682	1509	1651
	9	2435	1919	1602	1389	2380	1895	1593	1385	1850	1573	1379	1808	1554	1372	1768	1536	1366	1509
	10	2283	1772	1465	1262	2233	1751	1457	1259	1712	1441	1254	1675	1425	1249	1641	1410	1244	1386

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	56.5 fc	14.7 ft
6.5 ft	40.5 fc	17.3 ft
7.5 ft	30.4 fc	20.0 ft
8.0 ft	26.7 fc	21.3 ft
10.0 ft	17.1 fc	26.7 ft
12.0 ft	11.9 fc	32.0 ft
14.0 ft	8.7 fc	37.3 ft
16.0 ft	6.7 fc	42.7 ft
20.0 ft	4.3 fc	53.3 ft
24.0 ft	3.0 fc	64.0 ft
28.0 ft	2.2 fc	74.7 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	10013	10013	10013
45.00°	9677	9818	9579
55.00°	7262	7442	7194
65.00°	3064	3078	3062
75.00°	2295	2372	2376
85.00°	1325	1379	1426

UGR CIE 190:2010

Ceiling reflectance		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall reflectance		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Plane reflectance		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
2H	2H	16.5	18.0	16.9	18.3	18.6	16.7	18.2	17.0	18.5	18.8
	3H	17.0	18.3	17.4	18.7	19.0	17.1	18.4	17.5	18.8	19.1
	4H	17.2	18.5	17.6	18.8	19.2	17.3	18.5	17.7	18.9	19.3
	6H	17.4	18.5	17.8	18.9	19.3	17.4	18.6	17.9	19.0	19.4
	8H	17.4	18.5	17.9	18.9	19.3	17.5	18.6	17.9	19.0	19.4
	12H	17.5	18.5	17.9	18.9	19.3	17.5	18.5	17.9	18.9	19.3
4H	2H	16.6	17.9	17.0	18.2	18.6	16.8	18.0	17.2	18.3	18.7
	3H	17.3	18.3	17.7	18.7	19.1	17.3	18.3	17.7	18.7	19.1
	4H	17.6	18.5	18.0	18.9	19.4	17.6	18.5	18.0	18.9	19.4
	6H	17.9	18.7	18.3	19.1	19.6	17.9	18.7	18.3	19.1	19.6
	8H	18.0	18.7	18.4	19.1	19.6	17.9	18.7	18.4	19.1	19.6
	12H	18.0	18.6	18.5	19.1	19.6	18.0	18.6	18.5	19.1	19.6
8H	4H	17.7	18.4	18.1	18.9	19.3	17.7	18.4	18.1	18.8	19.3
	6H	18.0	18.6	18.5	19.1	19.6	18.0	18.6	18.5	19.1	19.6
	8H	18.1	18.7	18.6	19.2	19.7	18.1	18.7	18.6	19.2	19.7
	12H	18.2	18.7	18.7	19.2	19.7	18.2	18.7	18.7	19.1	19.7
12H	4H	17.7	18.3	18.2	18.8	19.3	17.7	18.3	18.1	18.8	19.3
	6H	18.0	18.6	18.6	19.0	19.6	18.0	18.5	18.5	19.0	19.6
	8H	18.2	18.7	18.7	19.1	19.7	18.1	18.6	18.6	19.1	19.7

Corrected UGR values based on total output energy
SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0