

IES INDOOR REPORT**PHOTOMETRIC FILENAME : SP4ES-11L35KDX-AR4ES-SGXF.IES****DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002
[TESTLAB] Photopia 2017.2.1 see: www.ltioptics.com/ies
[ISSUE DATE]
[TEST DATE] Thu 9/21/2017
[UPDATE] Mon 9/26/2017
[TEST] SP-00598_1_M-11L
[MANUFAC] Spectrum Lighting
[LUMCAT] SP4ES-11L-35K-DX / AR4ES-SG-xF
[LUMINAIRE] Nom. 4.5" Aperture, LED Downlight
[OTHER] Semi-Diffuse clear anodized, open aperture
[OTHER] Any flange finish
[OTHER] 64.4 Deg. Beam Angle
[LAMP] N/A
[LAMPCAT] N/A, 3500K CCT
[OTHER] Fully regressed lensed, light emitting surface
[OTHER] Total Luminaire Watts is approximate
[OTHER] Scaled from 20L Report
[OTHER] CCT Output Multipliers: 4000K X 1.03, 3000K X 0.985
[OTHER] This report prepared by Spectrum Lighting, Preliminary

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	914
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	83
Total Luminaire Watts	11
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.06
Spacing Criterion (90-270)	1.06
Spacing Criterion (Diagonal)	0.94
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.38 ft (Diameter)
Luminous Width (90-270)	0.38 ft (Diameter)
Luminous Height	0.00 ft

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LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3947	3878	3906
55	869	950	920
65	433	422	454
75	252	234	238
85	98	135	123

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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>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>	<u>202.5</u>
0	913.363	913.363	913.363	913.363	913.363	913.363	913.363	913.363	913.363	913.363
5	900.114	897.182	902.974	902.479	888.069	902.479	902.974	897.182	900.114	897.182
10	885.253	893.569	879.384	886.100	891.754	886.100	879.384	893.569	885.253	893.569
15	871.635	867.570	870.144	862.835	865.326	862.835	870.144	867.570	871.635	867.570
20	834.438	837.298	836.710	837.826	829.939	837.826	836.710	837.298	834.438	837.298
25	756.085	754.331	756.349	757.631	756.344	757.631	756.349	754.331	756.085	754.331
30	567.496	573.859	572.440	570.581	572.286	570.581	572.440	573.859	567.496	573.859
35	321.519	320.870	319.556	318.846	320.672	318.846	319.556	320.870	321.519	320.870
40	122.012	120.621	120.241	120.577	119.961	120.577	120.241	120.621	122.012	120.621
45	28.666	28.397	28.166	28.446	28.364	28.446	28.166	28.397	28.666	28.397
50	10.615	10.318	10.989	10.830	10.571	10.830	10.989	10.318	10.615	10.318
55	5.121	5.352	5.599	5.517	5.418	5.517	5.599	5.352	5.121	5.352
60	3.080	3.053	3.130	3.053	3.080	3.053	3.130	3.053	3.080	3.053
65	1.881	1.760	1.832	1.848	1.969	1.848	1.832	1.760	1.881	1.760
70	1.056	1.254	1.089	1.084	1.056	1.084	1.089	1.254	1.056	1.254
75	0.671	0.688	0.622	0.655	0.633	0.655	0.622	0.688	0.671	0.688
80	0.341	0.358	0.330	0.363	0.314	0.363	0.330	0.358	0.341	0.358
85	0.088	0.094	0.121	0.088	0.110	0.088	0.121	0.094	0.088	0.094
90	0.000	0.011	0.000	0.006	0.011	0.006	0.000	0.011	0.000	0.011

Vert. Horizontal Angles

	<u>225.0</u>	<u>247.5</u>	<u>270.0</u>	<u>292.5</u>	<u>315.0</u>	<u>337.5</u>	<u>360.0</u>
0	913.363	913.363	913.363	913.363	913.363	913.363	913.363
5	902.974	902.479	888.069	902.479	902.974	897.182	900.114
10	879.384	886.100	891.754	886.100	879.384	893.569	885.253
15	870.144	862.835	865.326	862.835	870.144	867.570	871.635
20	836.710	837.826	829.939	837.826	836.710	837.298	834.438
25	756.349	757.631	756.344	757.631	756.349	754.331	756.085
30	572.440	570.581	572.286	570.581	572.440	573.859	567.496
35	319.556	318.846	320.672	318.846	319.556	320.870	321.519
40	120.241	120.577	119.961	120.577	120.241	120.621	122.012
45	28.166	28.446	28.364	28.446	28.166	28.397	28.666
50	10.989	10.830	10.571	10.830	10.989	10.318	10.615
55	5.599	5.517	5.418	5.517	5.599	5.352	5.121
60	3.130	3.053	3.080	3.053	3.130	3.053	3.080
65	1.832	1.848	1.969	1.848	1.832	1.760	1.881
70	1.089	1.084	1.056	1.084	1.089	1.254	1.056
75	0.622	0.655	0.633	0.655	0.622	0.688	0.671
80	0.330	0.363	0.314	0.363	0.330	0.358	0.341
85	0.121	0.088	0.110	0.088	0.121	0.094	0.088
90	0.000	0.006	0.011	0.006	0.000	0.011	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	329.99	N.A.	36.10
0-30	665.01	N.A.	72.80
0-40	869.86	N.A.	95.20
0-60	910.81	N.A.	99.70
0-80	913.49	N.A.	100.00
0-90	913.64	N.A.	100.00
10-90	828.08	N.A.	90.60
20-40	539.87	N.A.	59.10
20-50	575.35	N.A.	63.00
40-70	42.90	N.A.	4.70
60-80	2.68	N.A.	0.30
70-80	0.73	N.A.	0.10
80-90	0.15	N.A.	0.00
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	913.64	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	85.56
10-20	244.43
20-30	335.02
30-40	204.85
40-50	35.48
50-60	5.47
60-70	1.95
70-80	0.73
80-90	0.15
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

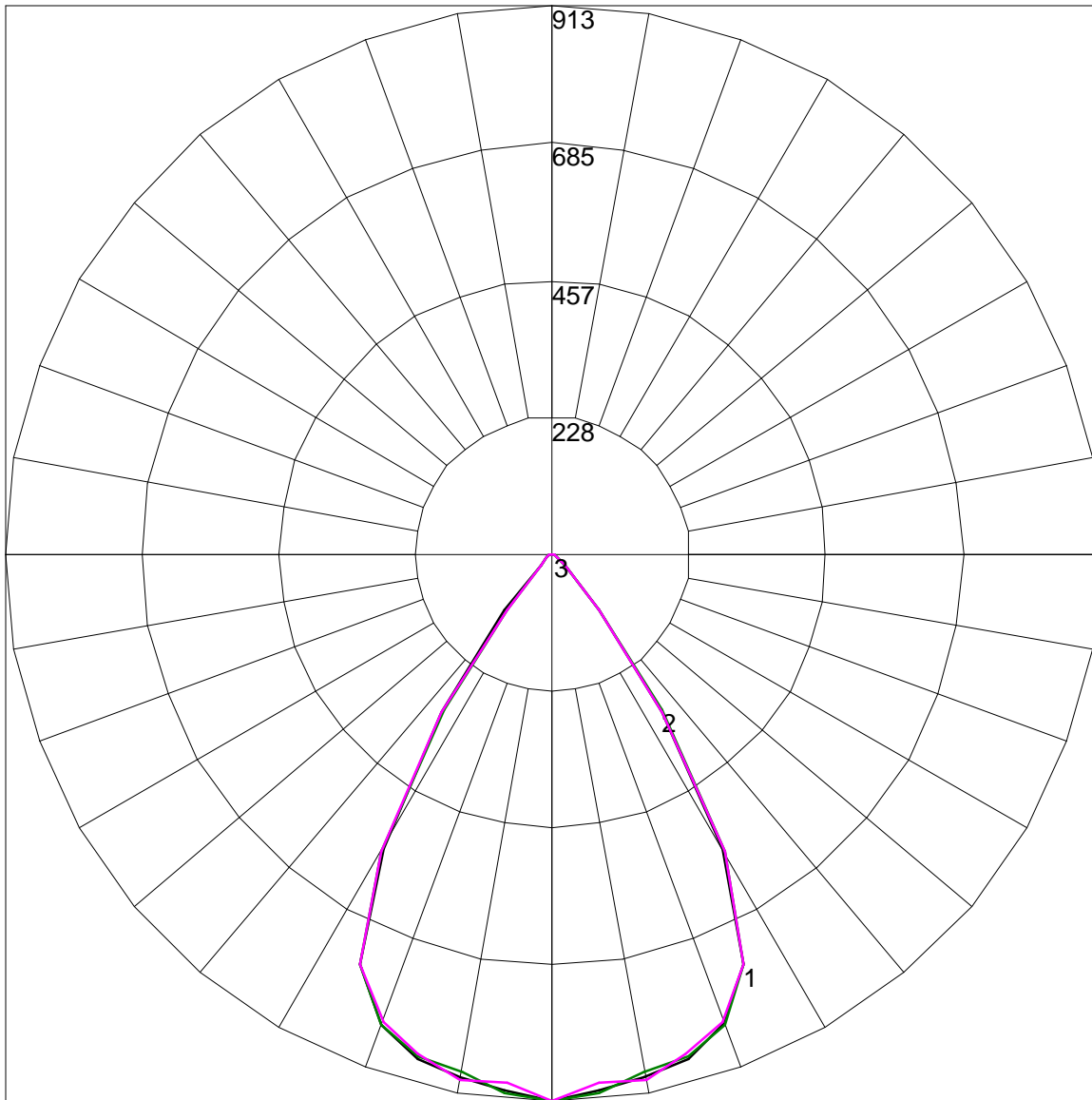
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	94
2	108	103	99	96	106	101	98	95	98	95	93	95	93	91	92	91	89	87
3	103	96	91	87	101	95	90	87	92	88	85	90	87	84	88	85	83	81
4	97	90	84	80	96	89	84	80	87	82	79	85	81	78	83	80	77	75
5	92	84	78	74	91	83	78	74	81	77	73	80	76	72	78	75	72	70
6	88	79	73	69	86	78	73	69	77	72	68	75	71	68	74	70	67	66
7	83	74	68	64	82	74	68	64	72	67	63	71	67	63	70	66	63	61
8	79	70	64	60	78	69	64	60	68	63	59	67	63	59	66	62	59	58
9	75	66	60	56	74	65	60	56	64	59	56	64	59	55	63	58	55	54
10	72	62	56	53	71	62	56	52	61	56	52	60	55	52	59	55	52	51

POLAR GRAPH



Maximum Candela = 913.363 Located At Horizontal Angle = 0, Vertical Angle = 0

1 - Vertical Plane Through Horizontal Angles (0 - 180)

2 - Vertical Plane Through Horizontal Angles (45 - 225)

3 - Vertical Plane Through Horizontal Angles (90 - 270)