

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : SP6ES-20L35KDX-AR6ES-MWXF.IES****DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002

[TESTLAB] Photopia 2017.3.0 see: [www.ltioptics.com/ies](http://www.ltioptics.com/ies)

[ISSUEDATE]

[TESTDATE] Tue 3/20/1028

[UPDATE] Mon 3/26/2018

[TEST] SP-00562\_3

[MANUFAC] Spectrum Lighting

[LUMCAT] SP6ES-20L-35K-DX / AR6ES-MW-xF

[LUMINAIRE] Nom. 6" Aperture, LED Downlight

[OTHER] Matte white trim, open aperture

[OTHER] Any flange finish

[OTHER] 67 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] 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	1614
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	83
Total Luminaire Watts	19.5
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.02
Spacing Criterion (90-270)	1.02
Spacing Criterion (Diagonal)	1.00
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.50 ft (Diameter)
Luminous Width (90-270)	0.50 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	16525	16616	16522
55	14087	13774	13559
65	12368	12191	12639
75	10889	11380	11311
85	9256	9363	9501

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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	1154.10	1154.10	1154.10	1154.10	1154.10	1154.10	1154.10	1154.10	1154.10	1154.10
5	1156.16	1172.06	1151.45	1164.21	1138.74	1164.21	1151.45	1172.06	1156.16	1172.06
10	1104.75	1111.87	1110.40	1127.33	1118.36	1127.33	1110.40	1111.87	1104.75	1111.87
15	1077.51	1041.63	1061.75	1057.39	1052.97	1057.39	1061.75	1041.63	1077.51	1041.63
20	966.59	972.19	963.98	967.44	960.34	967.44	963.98	972.19	966.59	972.19
25	879.49	872.77	880.87	866.59	868.12	866.59	880.87	872.77	879.49	872.77
30	715.05	720.57	714.69	711.59	718.65	711.59	714.69	720.57	715.05	720.57
35	530.12	537.02	535.00	535.48	536.61	535.48	535.00	537.02	530.12	537.02
40	359.74	359.06	352.29	359.66	355.98	359.66	352.29	359.06	359.74	359.06
45	213.35	217.44	214.53	216.73	213.31	216.73	214.53	217.44	213.35	217.44
50	167.35	171.31	169.02	167.72	168.51	167.72	169.02	171.31	167.35	171.31
55	147.53	148.06	144.25	144.76	142.00	144.76	144.25	148.06	147.53	148.06
60	118.18	119.15	118.90	119.84	120.45	119.84	118.90	119.15	118.18	119.15
65	95.44	95.35	94.07	96.42	97.53	96.42	94.07	95.35	95.44	95.35
70	73.92	72.45	73.16	73.27	75.64	73.27	73.16	72.45	73.92	72.45
75	51.46	52.50	53.78	51.28	53.45	51.28	53.78	52.50	51.46	52.50
80	33.43	34.11	33.59	32.57	34.80	32.57	33.59	34.11	33.43	34.11
85	14.73	14.43	14.90	15.28	15.12	15.28	14.90	14.43	14.73	14.43
90	2.39	2.05	2.22	2.43	2.17	2.43	2.22	2.05	2.39	2.05

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	1154.10	1154.10	1154.10	1154.10	1154.10	1154.10	1154.10
5	1151.45	1164.21	1138.74	1164.21	1151.45	1172.06	1156.16
10	1110.40	1127.33	1118.36	1127.33	1110.40	1111.87	1104.75
15	1061.75	1057.39	1052.97	1057.39	1061.75	1041.63	1077.51
20	963.98	967.44	960.34	967.44	963.98	972.19	966.59
25	880.87	866.59	868.12	866.59	880.87	872.77	879.49
30	714.69	711.59	718.65	711.59	714.69	720.57	715.05
35	535.00	535.48	536.61	535.48	535.00	537.02	530.12
40	352.29	359.66	355.98	359.66	352.29	359.06	359.74
45	214.53	216.73	213.31	216.73	214.53	217.44	213.35
50	169.02	167.72	168.51	167.72	169.02	171.31	167.35
55	144.25	144.76	142.00	144.76	144.25	148.06	147.53
60	118.90	119.84	120.45	119.84	118.90	119.15	118.18
65	94.07	96.42	97.53	96.42	94.07	95.35	95.44
70	73.16	73.27	75.64	73.27	73.16	72.45	73.92
75	53.78	51.28	53.45	51.28	53.78	52.50	51.46
80	33.59	32.57	34.80	32.57	33.59	34.11	33.43
85	14.90	15.28	15.12	15.28	14.90	14.43	14.73
90	2.22	2.43	2.17	2.43	2.22	2.05	2.39

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	404.58	N.A.	25.10
0-30	798.73	N.A.	49.50
0-40	1131.87	N.A.	70.10
0-60	1445.18	N.A.	89.50
0-80	1596.16	N.A.	98.90
0-90	1614.02	N.A.	100.00
10-90	1505.02	N.A.	93.20
20-40	727.29	N.A.	45.10
20-50	911.03	N.A.	56.40
40-70	408.34	N.A.	25.30
60-80	150.98	N.A.	9.40
70-80	55.95	N.A.	3.50
80-90	17.86	N.A.	1.10
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	1614.02	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	109.00
10-20	295.58
20-30	394.16
30-40	333.14
40-50	183.74
50-60	129.57
60-70	95.03
70-80	55.95
80-90	17.86
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

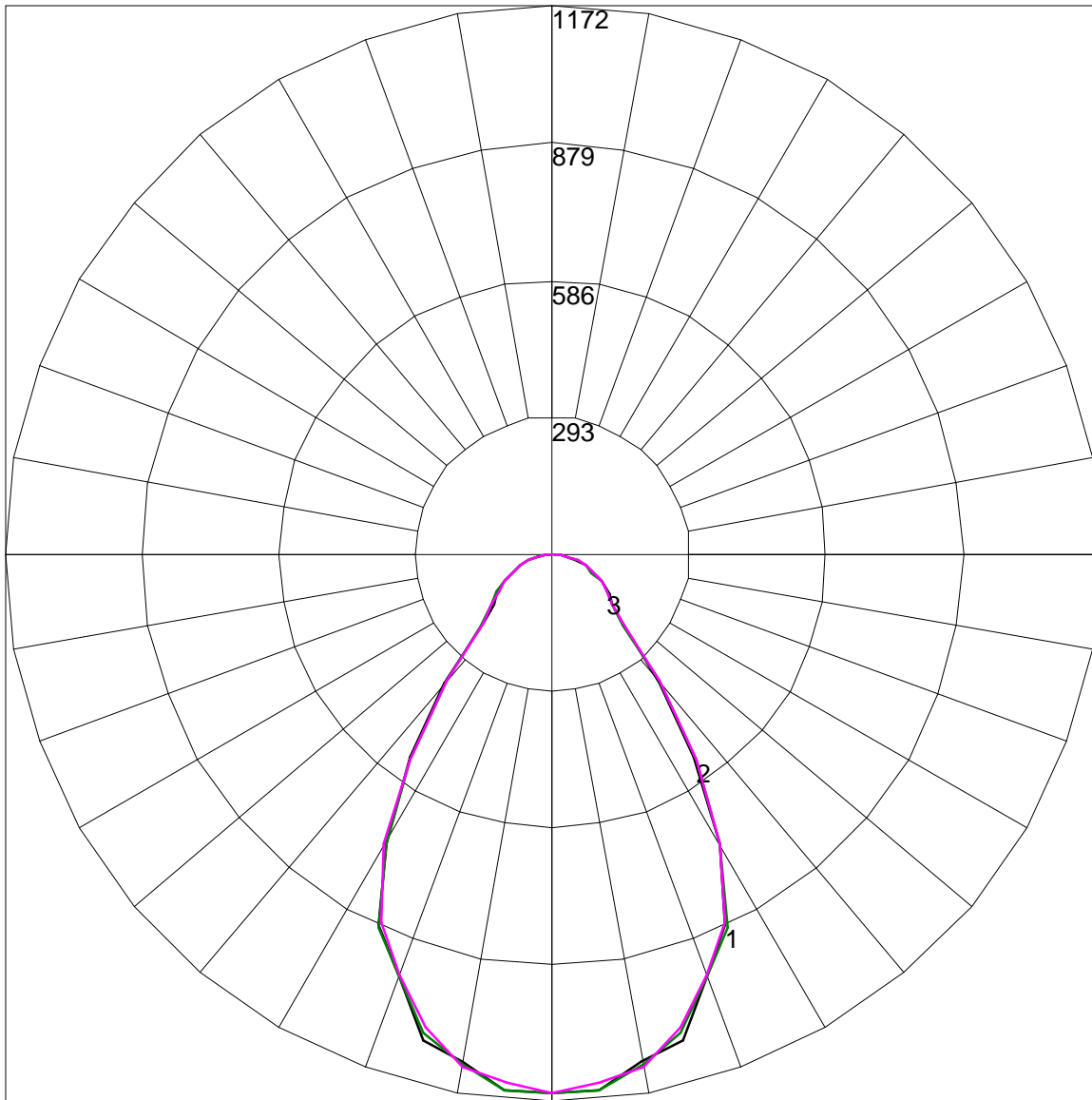
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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	111	107	104	101	109	105	102	99	101	98	96	97	95	93	94	92	91	89
2	103	97	91	87	101	95	90	86	92	88	84	89	85	82	86	83	80	78
3	96	88	81	76	94	86	80	76	84	79	74	81	77	73	79	75	72	70
4	90	80	73	68	88	79	72	67	77	71	66	75	70	66	73	68	65	63
5	84	74	66	61	82	73	66	61	71	65	60	69	64	59	67	63	59	57
6	79	68	60	55	77	67	60	55	65	59	55	64	58	54	62	58	54	52
7	74	63	56	50	73	62	55	50	61	54	50	59	54	50	58	53	49	48
8	70	58	51	46	69	58	51	46	57	50	46	56	50	46	54	49	45	44
9	66	55	48	43	65	54	47	43	53	47	42	52	46	42	51	46	42	41
10	63	51	44	40	61	51	44	40	50	44	39	49	43	39	48	43	39	38

POLAR GRAPH



Maximum Candela = 1172.06 Located At Horizontal Angle = 22.5, Vertical Angle = 5

- # 1 - Vertical Plane Through Horizontal Angles (0 - 180)
- # 2 - Vertical Plane Through Horizontal Angles (45 - 225)
- # 3 - Vertical Plane Through Horizontal Angles (90 - 270)