

Photometric Report - (AXA-4-L31-840-Black LVRC) - Page 1 of 6

Indoor Photometric Report

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Created: Mon, 14 Nov 2016 14:25:14

PRODUCT INFORMATION

Test number: 1
Test date: Mon, 14 Nov 2016 14:25:14
Manufacturer:
Catalog number:
Description: AXA-4-L31-840-Black LVRC
Lamp catalog number: AM700C840D72N2S00C
Lamp description: LED 25.5W 22" 72 LED linear module (700mA)

ANALYSIS SUMMARY

Traced 2000000 of 2000000 rays.

Rays limited to 22 reactions.

Rays traced to a minimum of 1% of their initial magnitude.

Report type: Indoor

Lamp flux energy units: Lumens

Far Field Sphere Test Distance: 20.00ft

Photometric Type: C

Symmetry: Quadrilateral

LUMENS EXITING FAR FIELD SPHERE

	Lumens (%)	Reaction
0 (0.0%)		0
1 (0.0%)		1
1511 (31.7%)		2
358 (7.5%)		3
249 (5.2%)		4
98 (2.1%)		5
71 (1.5%)		6
37 (0.8%)		7
39 (0.8%)		8
24 (0.5%)		9
20 (0.4%)		10
13 (0.3%)		11
10 (0.2%)		12
7 (0.1%)		13
5 (0.1%)		14
4 (0.1%)		15
3 (0.1%)		16
2 (0.0%)		17
1 (0.0%)		18
1 (0.0%)		19
1 (0.0%)		20
1 (0.0%)		21
2456 (51.5%)		Total

LUMEN INTERACTION WITH SYSTEM

Attenuated (%)	Absorbed (%)	Incident (%)	Layer Name
0 (0.0%)	0 (0.0%)	2 (0.0%)	LAMP-AM700C840D72N2S00C1
0 (0.0%)	3 (0.1%)	17 (0.4%)	LAMP-AM700C840D72N2S00C2
0 (0.0%)	167 (3.5%)	724 (15.2%)	LAMP-AM700C840D72N2S00C3
0 (0.0%)	6 (0.1%)	7 (0.1%)	LAMP-AM700C840D72N2S00C4
0 (0.0%)	40 (0.8%)	235 (4.9%)	swa8616 - swa7565-1 swp13847-1
0 (0.0%)	41 (0.8%)	238 (5.0%)	swa8616 - swa7565-1 swp13847-2
0 (0.0%)	7 (0.2%)	44 (0.9%)	swa8616 - swa7565-1 swp13854-1
0 (0.0%)	13 (0.3%)	79 (1.7%)	swa8616 - swa7565-1 swp13859-1
0 (0.0%)	13 (0.3%)	77 (1.6%)	swa8616 - swa7565-1 swp13859-2

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0 (0.0%)	2 (0.0%)	13 (0.3%)	swa8616 - swa7565-1 swp13865-1
0 (0.0%)	2 (0.0%)	12 (0.3%)	swa8616 - swa7565-1 swp13865-2
0 (0.0%)	30 (0.6%)	34 (0.7%)	swa8616 - swa7569-1 swp13882-1
0 (0.0%)	48 (1.0%)	55 (1.2%)	swa8616 - swa7569-1 swp13882-10
0 (0.0%)	47 (1.0%)	54 (1.1%)	swa8616 - swa7569-1 swp13882-11
0 (0.0%)	46 (1.0%)	53 (1.1%)	swa8616 - swa7569-1 swp13882-12
0 (0.0%)	47 (1.0%)	54 (1.1%)	swa8616 - swa7569-1 swp13882-13
0 (0.0%)	48 (1.0%)	55 (1.2%)	swa8616 - swa7569-1 swp13882-14
0 (0.0%)	49 (1.0%)	56 (1.2%)	swa8616 - swa7569-1 swp13882-15
0 (0.0%)	49 (1.0%)	56 (1.2%)	swa8616 - swa7569-1 swp13882-16
0 (0.0%)	48 (1.0%)	55 (1.2%)	swa8616 - swa7569-1 swp13882-17
0 (0.0%)	48 (1.0%)	55 (1.2%)	swa8616 - swa7569-1 swp13882-18
0 (0.0%)	48 (1.0%)	55 (1.2%)	swa8616 - swa7569-1 swp13882-19
0 (0.0%)	42 (0.9%)	49 (1.0%)	swa8616 - swa7569-1 swp13882-2
0 (0.0%)	48 (1.0%)	55 (1.2%)	swa8616 - swa7569-1 swp13882-20
0 (0.0%)	47 (1.0%)	54 (1.1%)	swa8616 - swa7569-1 swp13882-21
0 (0.0%)	42 (0.9%)	48 (1.0%)	swa8616 - swa7569-1 swp13882-22
0 (0.0%)	30 (0.6%)	34 (0.7%)	swa8616 - swa7569-1 swp13882-23
0 (0.0%)	47 (1.0%)	54 (1.1%)	swa8616 - swa7569-1 swp13882-3
0 (0.0%)	48 (1.0%)	55 (1.1%)	swa8616 - swa7569-1 swp13882-4
0 (0.0%)	48 (1.0%)	55 (1.1%)	swa8616 - swa7569-1 swp13882-5
0 (0.0%)	49 (1.0%)	56 (1.2%)	swa8616 - swa7569-1 swp13882-6
0 (0.0%)	49 (1.0%)	56 (1.2%)	swa8616 - swa7569-1 swp13882-7
0 (0.0%)	49 (1.0%)	56 (1.2%)	swa8616 - swa7569-1 swp13882-8
0 (0.0%)	48 (1.0%)	55 (1.2%)	swa8616 - swa7569-1 swp13882-9
0 (0.0%)	86 (1.8%)	886 (18.6%)	swa8616 - swa7569-1 swp17638-1
0 (0.0%)	86 (1.8%)	888 (18.6%)	swa8616 - swa7569-1 swp17638-2
0 (0.0%)	198 (4.1%)	9692 (203.2%)	swa8616 - swa7569-1 swp17650-1
0 (0.0%)	1 (0.0%)	7 (0.2%)	swa8616 - swp13061-2
0 (0.0%)	1 (0.0%)	7 (0.2%)	swa8616 - swp13061-3
0 (0.0%)	125 (2.6%)	733 (15.4%)	swa8616 - swp13819-1
0 (0.0%)	0 (0.0%)	0 (0.0%)	swa8616 - swp13865-1
0 (0.0%)	0 (0.0%)	0 (0.0%)	swa8616 - swp13865-2
0 (0.0%)	229 (4.8%)	1344 (28.2%)	swa8616 - swp17489-1
0 (0.0%)	228 (4.8%)	1342 (28.1%)	swa8616 - swp17489-2
0 (0.0%)	2304 (48.3%)	17556 (368.1%)	Total

Attenuated (%)	Absorbed (%)	Incident (%)	Material Name
0 (0.0%)	6 (0.1%)	7 (0.1%)	LEDBLKBASE
0 (0.0%)	0 (0.0%)	2 (0.0%)	LEDPHOS
0 (0.0%)	3 (0.1%)	17 (0.4%)	LEDWTBRD
0 (0.0%)	703 (14.7%)	4133 (86.6%)	PAINT002
0 (0.0%)	172 (3.6%)	1774 (37.2%)	RAL901620
0 (0.0%)	198 (4.1%)	9692 (203.2%)	S84DW020S
0 (0.0%)	1056 (22.1%)	1208 (25.3%)	SLIBLK01
0 (0.0%)	167 (3.5%)	724 (15.2%)	WHITEPCB
0 (0.0%)	2304 (48.3%)	17556 (368.1%)	Total

ANOMALOUS LUMENS

Reached interreflection limit:	7.47 (0.2%)
Fell below minimum ray energy:	2.02 (0.0%)
Redirected lamp distribution:	36.55 (0.8%)
Transmitted through shadow geometry:	0.00 (0.0%)
Ray exited a material prior to entering:	0.00 (0.0%)
Ray enter/exit material mismatch:	0.00 (0.0%)
TIR within an incorrect material:	0.00 (0.0%)
Ray never exited a material:	0.00 (0.0%)
Out of SPD range reflect/transmit:	0.00 (0.0%)
Out of SPD range IOR:	0.00 (0.0%)

Intersected with Overlapping Surfaces: 50.60 (1.1%)
- On layers

LAMP-AM700C840D72N2S00C1

LAMP-AM700C840D72N2S00C2

LAMP-AM700C840D72N2S00C3

LAMP-AM700C840D72N2S00C4

____internal____

swa8616 - swa7565-1 swp13847-1

swa8616 - swa7565-1 swp13847-2

swa8616 - swa7565-1 swp13854-1

swa8616 - swa7565-1 swp13859-1

swa8616 - swa7565-1 swp13859-2

swa8616 - swa7565-1 swp13865-1

swa8616 - swa7565-1 swp13865-2

swa8616 - swa7569-1 swp13882-1

swa8616 - swa7569-1 swp13882-10

swa8616 - swa7569-1 swp13882-11

swa8616 - swa7569-1 swp13882-12

swa8616 - swa7569-1 swp13882-13

swa8616 - swa7569-1 swp13882-14

swa8616 - swa7569-1 swp13882-15

swa8616 - swa7569-1 swp13882-16

swa8616 - swa7569-1 swp13882-17

swa8616 - swa7569-1 swp13882-18

swa8616 - swa7569-1 swp13882-19

swa8616 - swa7569-1 swp13882-2

swa8616 - swa7569-1 swp13882-20

swa8616 - swa7569-1 swp13882-21

swa8616 - swa7569-1 swp13882-22

swa8616 - swa7569-1 swp13882-23

swa8616 - swa7569-1 swp13882-3

swa8616 - swa7569-1 swp13882-4
swa8616 - swa7569-1 swp13882-5
swa8616 - swa7569-1 swp13882-6
swa8616 - swa7569-1 swp13882-7
swa8616 - swa7569-1 swp13882-8
swa8616 - swa7569-1 swp13882-9
swa8616 - swa7569-1 swp17638-1
swa8616 - swa7569-1 swp17638-2
swa8616 - swa7569-1 swp17650-1
swa8616 - swp13061-2
swa8616 - swp13061-3
swa8616 - swp13819-1
swa8616 - swp13865-1
swa8616 - swp13865-2
swa8616 - swp17489-1
swa8616 - swp17489-2

Exited Outside of Photometric distribution: 0.11 (0.0%)

LUMINAIRE PROPERTIES

Number of lamps: 2
Lumens per lamp: 2385.0
Input watts: 31.9
Distribution: Direct
Symmetry: Quadrilateral
Photometric Type: C
Luminous shape: Rectangle
Luminous dimensions (feet)
0 - 180 Axis: 3.9
90 - 270 Axis: 0.4
Height: 0.4

CANDELA DISTRIBUTION

Lumen basis: 4,770
Ballast factor: 1.00

Internal multiplier: 1.00
Tilt factor geometry: No tilt factor.

Candela Distribution

	0.00	22.50	45.00	67.50	90.00
0.00	1211.75	1211.75	1211.75	1211.75	1211.75
5.00	1202.91	1227.25	1270.24	1211.91	1233.44
10.00	1193.16	1205.22	1232.66	1241.50	1256.21
15.00	1154.55	1173.26	1195.20	1222.21	1220.79
20.00	1105.77	1109.80	1157.15	1193.52	1215.42
25.00	1009.27	1041.30	1090.62	1128.95	1143.08
30.00	939.80	945.66	983.93	1038.27	1052.38

35.00	814.63	838.40	881.37	907.02	920.86
40.00	713.21	714.75	734.09	752.74	767.09
45.00	589.76	587.35	599.01	592.47	600.38
50.00	450.55	457.75	451.60	455.27	473.64
55.00	329.48	324.53	321.81	331.37	358.07
60.00	211.26	205.43	208.08	240.56	265.87
65.00	113.44	111.32	125.94	168.32	193.86
70.00	43.26	44.25	74.91	115.09	140.23
75.00	8.89	11.42	42.71	73.70	89.85
80.00	1.79	4.92	26.41	43.39	50.58
85.00	0.44	2.66	13.51	17.76	18.41
90.00	0.01	0.65	2.02	2.20	2.26

INDOOR REPORT

ZONAL LUMENS

Cone	Between	Lumens
1.25	0.00 - 2.50	7.25
5.00	2.50 - 7.50	58.85
10.00	7.50 - 12.50	116.70
15.00	12.50 - 17.50	169.47
20.00	17.50 - 22.50	216.58
25.00	22.50 - 27.50	251.17
30.00	27.50 - 32.50	271.60
35.00	32.50 - 37.50	274.67
40.00	37.50 - 42.50	259.12
45.00	42.50 - 47.50	230.03
50.00	47.50 - 52.50	191.76
55.00	52.50 - 57.50	148.34
60.00	57.50 - 62.50	105.93
65.00	62.50 - 67.50	69.45
70.00	67.50 - 72.50	41.98
75.00	72.50 - 77.50	23.45
80.00	77.50 - 82.50	13.62
85.00	82.50 - 87.50	5.92
88.75	87.50 - 90.00	0.41

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0.00 - 30.00	955.82	20.04	38.91
0.00 - 40.00	1495.85	31.36	60.90
0.00 - 60.00	2248.50	47.14	91.54
0.00 - 90.00	2456.31	51.49	100.00
90.00 - 120.00	0.41	0.01	0.02
90.00 - 150.00	0.41	0.01	0.02
90.00 - 180.00	0.41	0.01	0.02
0.00 - 180.00	2456.31	51.49	100.00

Total Luminaire Optical Efficiency = 51.49%

Luminaire Spacing Criterion (spacing to mounting height ratio)

Two luminaires, plane 0: 1.15
Two luminaires, plane 90: 1.25
Four luminaires: 1.23

Full Beam Angle:

0 - 180 90 - 270
86.33 87.92

Average Luminaire Luminance (cd/m²)

	0.00	22.50	45.00	67.50	90.00
0.00	7574.76	7574.76	7574.76	7574.76	7574.76
45.00	4729.05	3597.07	3084.15	2784.04	2776.68
55.00	3132.33	2165.38	1732.82	1598.93	1695.41
65.00	1375.58	843.89	734.07	861.49	970.49
75.00	155.25	103.84	280.62	414.98	493.03
85.00	14.61	31.46	105.39	115.04	115.66