

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

ALDDH16LEDLX 65L 35K xx AL16 MWI xx
16" Diam. Alum Reflector MW Interior

Test Number

SP-01482

Test Date

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

Summary of Results

Power

Input Watts	52 W
-------------	------

Lumen Output

Output Lumens	5994
Efficacy	115.27 lm/W

Luminous Dimensions

0° - 180° Size	-1.33
90° - 270° Size	-1.33
Height	0

Spacing Criterion

Two luminaires, plane 0°	1.1
Two luminaires, plane 90°	1.1
Four luminaires	1.04

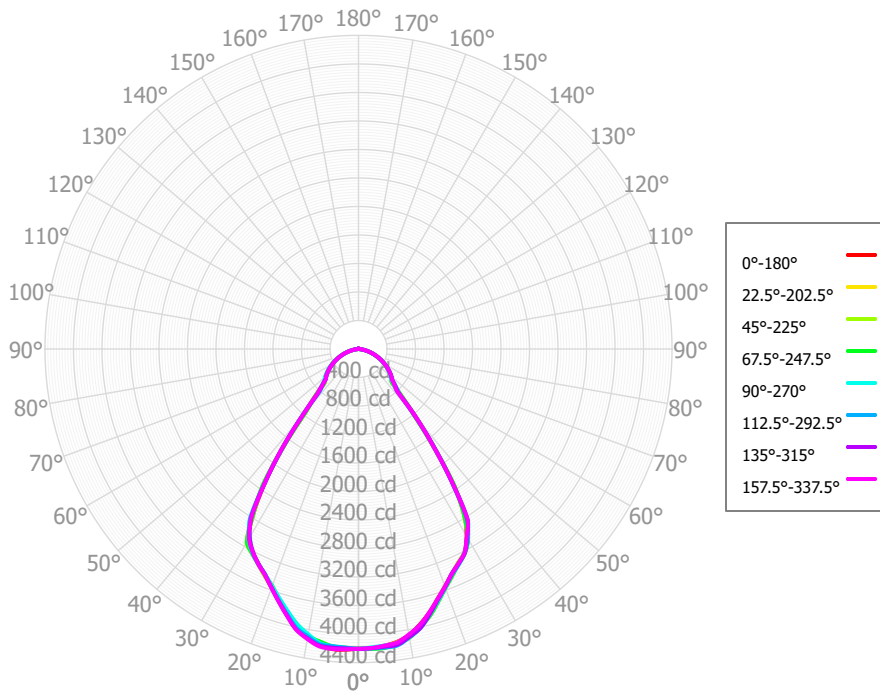
Full Beam Angle

0° - 180°	72°
90° - 270°	72°

IES File Header Contents

Keyword	Value
TEST	SP-01482
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TEST DATE	2/27/2023
ISSUEDATE	03/01/2023
LUMCAT	ALDDH16LEDLX 65L 35K xx AL16 MWI xx
LUMINAIRE	16" Diam. Alum Reflector MW Interior
LAMP	N/A
LAMPCAT	N/A
OTHER	Total Luminaire Watts is approximate
OTHER	This report is created by Spectrum Lighting

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	403.64	6.73%	90.00° - 100.00°	2.22	0.04%
10.00° - 20.00°	1079.44	18.01%	100.00° - 110.00°	2.10	0.04%
20.00° - 30.00°	1530.71	25.54%	100.00° - 120.00°	4.18	0.07%
30.00° - 40.00°	1385.68	23.12%	120.00° - 130.00°	2.08	0.03%
40.00° - 50.00°	591.67	9.87%	130.00° - 140.00°	1.98	0.03%
50.00° - 60.00°	457.22	7.63%	140.00° - 150.00°	1.71	0.03%
60.00° - 70.00°	329.59	5.50%	150.00° - 160.00°	1.37	0.02%
70.00° - 80.00°	169.52	2.83%	160.00° - 170.00°	0.91	0.02%
80.00° - 90.00°	31.98	0.53%	170.00° - 180.00°	0.31	0.01%
0.00° - 90.00°	5979.46	99.75%	0.00° - 180.00°	5994.21	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°	4208.06	4208.06	4208.06	4208.06	4208.06	4208.06	4208.06	4208.06	4208.06	4208.06	4208.06	4208.06	4208.06	4208.06	4208.06	4208.06	4208.06
2.50°	4201.73	4206.15	4209.66	4210.64	4191.58	4194.76	4206.29	4219.18	4223.32	4216.19	4206.60	4195.60	4207.59	4207.19	4202.13	4201.00	4201.73
5.00°	4179.61	4192.07	4200.12	4210.94	4177.38	4186.17	4208.89	4224.79	4227.25	4214.86	4199.12	4188.14	4190.63	4205.71	4193.76	4179.48	4179.61
7.50°	4145.95	4151.43	4159.61	4169.23	4162.73	4177.47	4198.45	4209.57	4183.92	4161.15	4149.44	4140.83	4162.75	4195.52	4184.52	4154.89	4145.95
10.00°	4077.00	4098.43	4103.87	4114.92	4085.11	4095.11	4124.92	4133.42	4112.94	4102.84	4093.63	4089.28	4065.13	4108.32	4102.06	4068.87	4077.00
12.50°	3964.12	3977.66	3988.49	4000.30	4003.35	4010.83	4034.76	4033.90	3996.30	3981.08	3971.28	3963.68	3960.13	4011.81	4011.67	3969.51	3964.12
15.00°	3833.52	3850.89	3863.60	3877.33	3855.84	3857.93	3876.80	3874.35	3855.76	3855.61	3841.42	3832.43	3816.63	3851.39	3854.87	3830.24	3833.52
17.50°	3683.02	3696.77	3706.74	3720.52	3705.86	3705.32	3720.18	3717.55	3709.51	3706.11	3697.35	3686.15	3675.70	3694.37	3692.90	3683.77	3683.02
20.00°	3545.01	3549.00	3557.52	3570.42	3561.63	3563.94	3568.28	3567.05	3560.59	3555.86	3552.11	3539.17	3545.92	3556.60	3554.16	3550.04	3545.01
22.50°	3419.67	3425.79	3431.04	3443.95	3418.14	3424.76	3428.16	3432.29	3440.25	3442.72	3438.72	3432.32	3423.94	3426.82	3416.55	3418.17	3419.67
25.00°	3311.90	3310.03	3314.49	3325.76	3320.51	3326.55	3323.81	3329.36	3331.73	3330.18	3327.03	3326.37	3331.01	3334.63	3322.37	3319.44	3311.90
27.50°	3220.23	3219.09	3223.88	3232.91	3220.11	3222.77	3207.49	3213.83	3225.23	3237.73	3231.60	3234.39	3225.85	3229.72	3228.76	3224.59	3220.23
30.00°	3035.24	3069.09	3068.32	3077.89	3053.73	3049.50	3059.33	3075.57	3119.45	3131.52	3136.63	3133.34	3081.42	3074.19	3046.73	3041.76	3035.24
32.50°	2773.09	2747.79	2763.11	2756.40	2861.51	2839.21	2801.62	2795.95	2749.79	2744.11	2748.20	2750.05	2833.29	2831.73	2853.67	2851.37	2773.09
35.00°	2326.56	2344.46	2353.33	2349.56	2301.65	2293.98	2286.81	2287.76	2296.03	2341.10	2353.63	2353.46	2294.31	2292.04	2300.36	2306.96	2326.56
37.50°	1741.04	1732.08	1729.43	1741.13	1746.91	1753.54	1767.21	1767.37	1749.98	1737.45	1728.97	1735.18	1759.03	1759.68	1750.91	1742.48	1741.04
40.00°	1264.36	1210.31	1210.13	1221.10	1243.18	1246.62	1237.53	1229.23	1178.47	1166.03	1123.40	1147.61	1232.88	1249.06	1267.57	1266.45	1264.36
42.50°	861.56	892.80	882.01	886.46	788.12	801.82	847.13	861.55	899.44	901.96	891.63	903.58	838.76	848.79	816.00	792.98	861.56
45.00°	682.40	668.59	663.78	656.55	701.69	707.67	718.79	716.98	689.35	665.71	674.39	681.92	733.38	736.23	726.68	715.24	682.40
47.50°	639.66	631.48	625.51	622.51	622.37	623.70	624.96	623.41	626.62	632.70	638.68	645.93	650.03	645.87	642.50	639.44	639.66
50.00°	597.70	592.88	586.57	586.17	585.99	587.36	589.26	590.05	593.06	598.28	602.36	608.94	610.12	606.63	601.72	600.90	597.70
52.50°	556.16	551.64	546.64	545.94	548.51	549.65	551.11	552.21	552.80	555.55	560.45	565.45	568.71	565.46	560.58	562.02	556.16
55.00°	512.51	508.60	505.35	504.32	505.54	506.50	509.26	509.58	511.43	512.90	518.24	521.73	524.63	520.35	517.00	516.11	512.51
57.50°	467.82	462.67	462.28	460.63	462.18	463.04	466.75	465.65	466.75	470.61	473.95	476.72	479.18	475.14	473.02	470.24	467.82
60.00°	422.41	417.61	417.94	416.72	417.21	418.47	423.34	420.45	421.63	427.50	429.39	431.54	431.53	429.76	426.90	424.91	422.41
62.50°	376.68	373.80	372.10	372.52	372.65	373.86	378.75	375.50	377.30	381.04	383.31	385.64	385.01	384.08	380.89	379.62	376.68
65.00°	331.97	329.94	327.16	328.24	329.54	329.14	332.72	330.76	333.05	334.58	337.47	339.71	340.06	337.91	335.40	334.68	331.97
67.50°	287.65	286.00	283.19	283.86	286.22	284.73	287.46	287.12	287.77	288.18	292.73	293.64	294.86	292.44	290.18	289.82	287.65
70.00°	243.89	242.34	239.76	240.26	242.27	241.12	243.06	244.35	242.41	242.95	248.33	248.43	249.32	247.99	246.00	245.52	243.89
72.50°	200.31	199.00	196.86	197.52	199.15	198.37	200.20	200.78	201.55	201.32	205.23	206.04	205.42	204.78	202.49	201.65	200.31
75.00°	159.99	157.74	155.94	156.71	158.37	157.58	158.87	156.63	160.88	160.19	162.45	163.97	163.41	163.20	161.22	160.25	159.99
77.50°	120.64	118.66	116.75	117.83	118.63	117.74	119.17	116.79	120.34	120.36	120.79	122.83	123.43	122.77	121.25	119.48	120.64
80.00°	82.34	81.14	80.00	80.87	81.40	79.84	80.94	79.72	79.87	81.94	81.08	83.57	85.55	83.70	85.01	81.68	82.34
82.50°	44.32	45.11	45.16	45.65	47.96	46.30	48.39	47.94	46.95	46.86	47.20	49.05	51.66	49.69	51.28	46.69	44.32
85.00°	23.06	21.36	22.28	22.12	22.67	20.73	20.47	19.22	14.97	19.67	19.85	21.59	21.53	21.15	23.99	23.01	23.06
87.50°	5.42	8.33	7.94	8.17	5.40	4.38	6.60	6.97	8.26	8.94	9.48	9.91	6.17	5.82	4.60	4.28	5.42
90.00°	2.50	2.35	2.14	2.24	3.46	3.12	3.05	3.23	1.92	1.93	2.24	2.11	3.36	3.37	3.02	2.72	2.50
92.50°	2.24	1.93	1.82	2.25	2.19	2.24	1.77	1.99	1.76	1.85	2.18	2.03	2.23	2.25	1.93	1.56	2.24
95.00°	2.23	1.71	1.67	2.18	2.06	1.93	1.99	1.90	1.60	1.80	2.07	1.95	2.39	2.31	1.82	1.57	2.23
97.50°	2.27	1.63	1.62	2.06	2.03	1.73	2.06	1.96	1.56	1.82	1.82	1.87	2.31	2.21	1.79	1.66	2.27
100.00°	2.40	1.65	1.72	2.10	2.14	1.68	2.04	2.08	1.54	1.71	1.64	1.82	2.06	2.00	1.94	1.92	2.40
102.50°	2.54	1.74	1.90	2.23	2.21	1.74	2.23	1.96	1.54	1.42	1.56	1.81	2.25	2.04	2.04	2.10	2.54
105.00°	2.40	1.87	1.83	2.47	2.22	1.93	2.52	1.77	1.55	1.38	1.52	1.74	2.71	2.26	2.08	2.07	2.40

Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

RCR	ptc	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	pcc	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	0%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	30%
	0	7132	7132	7132	7132	6965	6965	6965	6965	6652	6652	6652	6366	6366	6366	6103	6103	5979
	1	6682	6466	6273	6098	6527	6332	6157	5999	6082	5940	5810	5852	5738	5632	5640	5549	5434
	2	6232	5854	5541	5278	6088	5745	5458	5216	5540	5302	5096	5352	5154	4982	5177	5016	4872
	3	5816	5323	4942	4638	5683	5234	4882	4598	5065	4766	4519	4909	4656	4444	4764	4552	4458
	4	5437	4866	4449	4130	5314	4792	4403	4102	4651	4315	4049	4521	4231	3997	4399	4152	4068
	5	5092	4470	4036	3715	4980	4408	4001	3696	4290	3933	3659	4180	3868	3622	4077	3805	3731
	6	4778	4124	3685	3370	4677	4072	3658	3357	3972	3604	3330	3878	3553	3304	3791	3503	3437
	7	4493	3820	3384	3079	4401	3776	3362	3069	3691	3319	3049	3611	3278	3030	3536	3238	3180
	8	4234	3552	3123	2829	4150	3514	3105	2821	3441	3071	2807	3372	3037	2792	3308	3004	2952
	9	3997	3314	2895	2612	3922	3281	2880	2607	3218	2852	2595	3158	2824	2584	3102	2797	2751
	10	3782	3101	2694	2423	3713	3073	2682	2419	3018	2658	2410	2966	2635	2401	2917	2612	2571

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	139.1 fc	8.0 ft
6.5 ft	99.6 fc	9.4 ft
7.5 ft	74.8 fc	10.8 ft
8.0 ft	65.8 fc	11.6 ft
10.0 ft	42.1 fc	14.5 ft
12.0 ft	29.2 fc	17.4 ft
14.0 ft	21.5 fc	20.2 ft
16.0 ft	16.4 fc	23.1 ft
20.0 ft	10.5 fc	28.9 ft
24.0 ft	7.3 fc	34.7 ft
28.0 ft	5.4 fc	40.5 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	32603	32603	32603
45.00°	7477	7273	7688
55.00°	6923	6826	6829
65.00°	6086	5998	6041
75.00°	4789	4668	4741
85.00°	2050	1981	2015

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	15.8	17.1	16.2	17.4	17.7	15.8	17.1	16.2	17.4	17.7
	3H	17.4	18.5	17.7	18.8	19.2	17.4	18.5	17.8	18.9	19.2
	4H	17.9	18.9	18.3	19.3	19.7	17.9	19.0	18.3	19.3	19.7
	6H	18.2	19.1	18.6	19.5	19.9	18.2	19.2	18.7	19.6	20.0
	8H	18.2	19.1	18.7	19.5	19.9	18.3	19.2	18.7	19.6	20.0
	12H	18.2	19.1	18.7	19.5	19.9	18.3	19.2	18.7	19.5	20.0
4H	2H	16.3	17.4	16.7	17.7	18.1	16.4	17.4	16.8	17.8	18.2
	3H	18.1	18.9	18.5	19.3	19.8	18.1	19.0	18.5	19.4	19.8
	4H	18.7	19.5	19.1	19.9	20.3	18.7	19.5	19.2	19.9	20.4
	6H	19.1	19.8	19.5	20.2	20.7	19.1	19.8	19.6	20.3	20.7
	8H	19.1	19.8	19.6	20.2	20.7	19.2	19.8	19.7	20.3	20.8
	12H	19.2	19.7	19.6	20.2	20.7	19.2	19.8	19.7	20.3	20.7
8H	4H	18.9	19.5	19.4	20.0	20.4	18.9	19.6	19.4	20.0	20.5
	6H	19.3	19.9	19.9	20.4	20.8	19.4	19.9	19.9	20.4	20.9
	8H	19.4	19.9	20.0	20.4	20.9	19.5	20.0	20.0	20.5	21.0
	12H	19.5	19.9	20.0	20.4	21.0	19.6	20.0	20.1	20.5	21.0
12H	4H	18.9	19.4	19.4	19.9	20.4	18.9	19.5	19.4	20.0	20.4
	6H	19.4	19.8	19.9	20.3	20.8	19.4	19.9	19.9	20.3	20.9
	8H	19.5	19.9	20.0	20.4	21.0	19.5	19.9	20.1	20.4	21.0

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0