

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

PRDDH16LEDLX 65L 35K xx PR16 TF3 xx
16" Diam. Prismatic Refractor with TF3 Lens

Test Number

SP-01476

Test Date

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

Summary of Results

Power

Input Watts	52 W
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Lumen Output

Output Lumens	6635
Efficacy	127.59 lm/W

Luminous Dimensions

0° - 180° Size	-1.33
90° - 270° Size	-1.33
Height	0.92

Spacing Criterion

Two luminaires, plane 0°	0.88
Two luminaires, plane 90°	0.84
Four luminaires	0.88

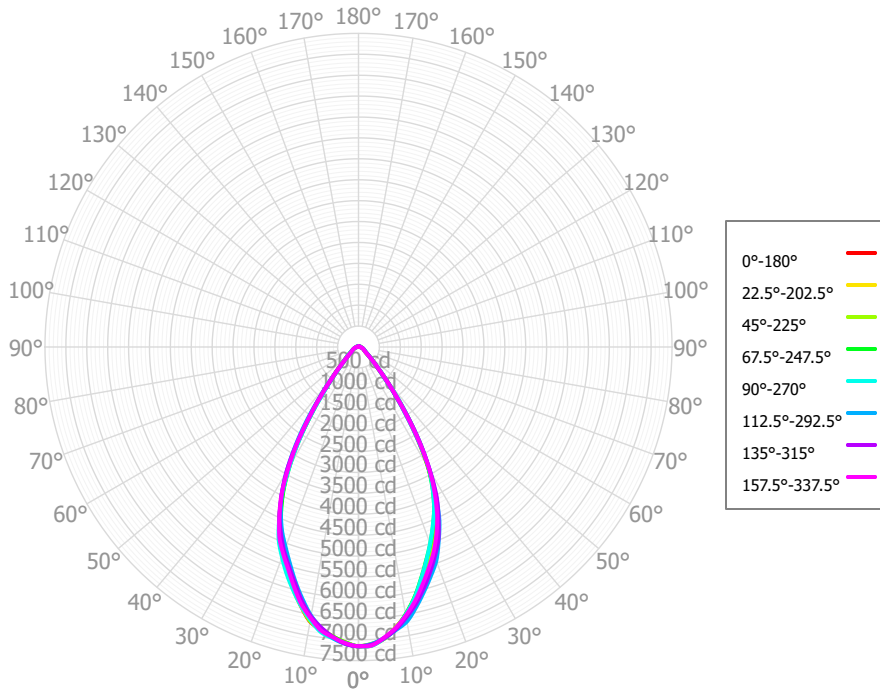
Full Beam Angle

0° - 180°	58°
90° - 270°	58°

IES File Header Contents

Keyword	Value
TEST	SP-01476
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TEST DATE	03/01/2023
ISSUEDATE	03/15/2023
LUMCAT	PRDDH16LEDLX 65L 35K xx PR16 TF3 xx
LUMINAIRE	16" Diam. Prismatic Refractor with TF3 Lens
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°	662.73	9.99%	90.00° - 100.00°	34.16	0.51%
10.00° - 20.00°	1650.27	24.87%	100.00° - 110.00°	35.33	0.53%
20.00° - 30.00°	1998.06	30.11%	100.00° - 120.00°	48.61	0.73%
30.00° - 40.00°	1288.05	19.41%	120.00° - 130.00°	6.58	0.10%
40.00° - 50.00°	439.82	6.63%	130.00° - 140.00°	5.14	0.08%
50.00° - 60.00°	201.67	3.04%	140.00° - 150.00°	3.69	0.06%
60.00° - 70.00°	140.65	2.12%	150.00° - 160.00°	2.30	0.03%
70.00° - 80.00°	99.37	1.50%	160.00° - 170.00°	1.12	0.02%
80.00° - 90.00°	52.39	0.79%	170.00° - 180.00°	0.32	0.00%
0.00° - 90.00°	6533.03	98.46%	0.00° - 180.00°	6634.93	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°	7158.63	7158.63	7158.63	7158.63	7158.63	7158.63	7158.63	7158.63	7158.63	7158.63	7158.63	7158.63	7158.63	7158.63	7158.63	7158.63	7158.63
2.50°	7123.93	7115.37	7109.79	7151.20	7152.19	7109.23	7110.19	7090.41	7096.38	7072.41	7074.45	7078.54	7099.11	7111.61	7127.58	7149.17	7123.93
5.00°	7005.47	7005.87	7008.29	6993.64	7003.95	6992.87	6964.70	6973.91	6970.55	6964.59	6950.48	6959.61	6996.90	6989.11	6998.92	6981.10	7005.47
7.50°	6778.97	6774.55	6779.47	6807.18	6801.77	6789.29	6776.93	6843.45	6824.32	6843.45	6807.54	6834.45	6881.26	6833.44	6814.29	6782.52	6778.97
10.00°	6515.96	6517.62	6507.14	6491.83	6505.78	6527.51	6545.73	6585.11	6669.91	6654.24	6661.29	6572.58	6628.25	6669.42	6571.83	6522.05	6515.96
12.50°	6214.94	6194.63	6153.73	6155.26	6164.73	6180.29	6232.89	6308.29	6349.89	6351.09	6316.05	6299.71	6348.16	6373.35	6305.82	6232.00	6214.94
15.00°	5902.65	5863.92	5805.20	5754.60	5764.95	5819.67	5855.61	5948.20	5984.01	6016.59	5953.55	5915.55	6027.57	6057.18	5994.45	5897.45	5902.65
17.50°	5581.33	5535.47	5463.46	5369.04	5378.69	5444.21	5516.67	5583.15	5639.05	5642.67	5586.60	5537.38	5702.69	5749.13	5670.00	5567.41	5581.33
20.00°	5244.23	5205.60	5121.78	5015.91	5005.95	5097.63	5200.44	5267.91	5297.81	5265.36	5218.37	5191.70	5349.96	5441.66	5333.12	5242.56	5244.23
22.50°	4897.64	4827.17	4780.16	4655.18	4640.54	4775.68	4844.83	4941.89	4889.40	4884.80	4828.84	4824.73	4990.37	5015.16	4993.97	4869.60	4897.64
25.00°	4453.99	4434.80	4376.25	4282.25	4280.69	4396.73	4472.09	4480.99	4474.97	4436.87	4423.92	4384.24	4480.97	4578.93	4529.34	4454.68	4453.99
27.50°	3966.76	3916.09	3922.00	3850.39	3851.69	3980.65	3977.32	3996.56	3934.98	3939.73	3910.29	3898.92	3955.29	4011.40	4052.99	3953.73	3966.76
30.00°	3351.93	3367.24	3347.08	3347.26	3383.45	3431.02	3444.57	3371.23	3384.75	3350.17	3364.91	3303.93	3295.62	3419.20	3415.99	3395.35	3351.93
32.50°	2696.66	2665.72	2698.90	2752.03	2773.13	2816.97	2766.56	2736.83	2688.19	2710.18	2683.87	2676.41	2633.81	2672.17	2774.03	2737.83	2696.66
35.00°	2061.04	1999.12	2063.44	2071.17	2102.96	2181.45	2059.17	2068.76	2012.27	2085.41	2032.06	1990.88	1961.83	1965.06	2096.86	2031.22	2061.04
37.50°	1429.60	1446.78	1433.75	1508.74	1554.75	1538.53	1519.97	1469.79	1485.27	1466.76	1463.93	1417.19	1360.58	1414.75	1451.23	1487.54	1429.60
40.00°	1043.55	980.14	1023.76	1029.51	1042.42	1103.38	999.27	1050.39	1008.65	1066.91	993.83	992.67	979.60	946.50	1048.81	1002.79	1043.55
42.50°	686.57	713.83	684.31	728.06	758.49	717.20	748.42	717.46	750.65	728.15	727.86	702.83	673.92	697.78	691.20	728.99	686.57
45.00°	529.61	504.61	512.64	519.65	518.62	540.00	511.35	547.27	530.12	560.61	525.96	550.91	536.90	499.84	532.36	506.78	529.61
47.50°	382.34	393.13	377.18	394.33	404.45	391.73	408.00	411.20	418.22	423.92	422.77	439.68	425.53	399.92	393.38	391.14	382.34
50.00°	304.49	303.70	301.35	301.00	303.09	316.17	309.89	323.71	323.53	339.56	336.12	360.03	356.43	318.08	314.10	291.05	304.49
52.50°	231.27	242.99	232.76	247.91	253.09	245.18	258.25	259.91	265.05	259.98	268.67	298.64	297.04	262.62	248.46	239.43	231.27
55.00°	200.65	200.58	204.34	205.68	205.65	214.31	212.02	221.58	218.83	224.14	221.39	248.04	249.66	221.69	211.98	191.22	200.65
57.50°	172.85	176.23	178.07	184.30	184.20	184.71	192.16	194.25	191.67	189.91	192.12	213.48	213.91	196.99	183.13	172.97	172.85
60.00°	159.38	159.77	164.98	166.42	164.09	169.99	173.45	176.03	170.65	173.62	171.33	185.86	189.22	176.67	166.34	155.19	159.38
62.50°	146.40	149.21	152.00	154.30	154.67	155.58	158.41	160.68	156.93	157.40	156.25	163.54	167.62	160.07	151.52	143.45	146.40
65.00°	135.00	137.44	140.19	142.65	144.85	142.93	143.85	147.11	142.60	141.66	140.89	142.87	148.23	144.23	139.07	131.97	135.00
67.50°	123.84	124.98	128.70	130.83	133.21	130.38	130.36	131.95	127.73	126.71	125.37	127.43	131.82	128.87	127.96	122.04	123.84
70.00°	113.22	114.34	118.87	119.06	121.50	118.21	117.39	116.04	116.67	115.19	113.46	113.05	117.03	116.31	118.09	111.81	113.22
72.50°	102.80	104.46	108.60	107.86	109.57	106.56	105.31	105.76	108.21	104.80	102.86	102.34	103.33	105.10	107.29	100.44	102.80
75.00°	92.70	93.51	96.83	96.67	98.25	96.20	94.33	97.34	98.19	97.70	91.82	92.02	90.06	92.38	95.83	89.07	92.70
77.50°	81.95	82.24	84.63	85.47	88.26	85.46	84.74	85.61	87.38	88.28	80.66	79.57	76.95	79.15	82.91	77.67	81.95
80.00°	70.36	69.85	71.40	73.90	77.13	74.01	74.22	73.16	74.42	73.93	69.13	67.01	63.90	65.30	69.21	66.17	70.36
82.50°	58.04	57.25	59.10	60.75	64.15	62.32	62.78	61.60	60.68	60.55	57.54	53.42	50.55	51.31	55.57	54.47	58.04
85.00°	44.99	47.15	48.44	48.75	51.78	50.30	50.97	50.16	47.91	48.68	46.69	40.47	37.15	41.04	41.95	43.60	44.99
87.50°	35.53	37.30	40.11	39.98	40.19	41.66	38.88	40.27	35.40	38.96	35.91	33.11	31.27	31.27	35.93	33.92	35.53
90.00°	28.76	32.85	34.85	33.61	33.27	36.59	33.26	30.68	31.92	31.77	32.13	27.31	26.03	29.63	31.90	28.72	28.76
92.50°	26.53	28.72	32.06	32.14	30.74	33.22	31.23	31.82	29.87	28.45	28.69	29.05	27.93	28.49	30.82	28.36	26.53
95.00°	26.90	28.44	31.73	31.85	30.27	31.23	31.71	33.07	30.87	28.63	29.77	30.89	29.98	29.52	30.21	28.70	26.90
97.50°	29.97	28.54	34.56	33.36	31.27	34.40	33.22	35.28	32.09	29.66	31.32	33.02	32.91	30.65	30.65	29.63	29.97
100.00°	34.17	31.71	39.77	36.62	36.15	40.72	35.51	36.70	35.86	31.26	35.89	34.96	35.60	32.97	31.18	31.64	34.17
102.50°	34.17	33.06	41.66	41.88	43.14	42.63	38.04	33.86	39.00	30.01	39.56	36.49	36.55	35.16	34.48	34.32	34.17
105.00°	32.93	26.16	41.62	43.30	40.10	42.57	36.50	29.21	33.46	27.29	39.77	37.03	35.73	36.68	37.45	32.85	32.93

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	7874	7874	7874	7874	7679	7679	7679	7679	7316	7316	7316	6983	6983	6983	6677	6677	6533
	1	7445	7235	7047	6877	7268	7080	6911	6758	6790	6655	6530	6524	6417	6317	6279	6195	6061
	2	7030	6668	6369	6117	6869	6543	6271	6040	6309	6084	5891	6092	5909	5749	5892	5744	5613
	3	6641	6170	5806	5517	6494	6068	5734	5464	5876	5594	5363	5698	5463	5265	5533	5338	5171
	4	6277	5731	5331	5026	6145	5647	5276	4989	5487	5170	4918	5339	5068	4849	5201	4972	4782
	5	5940	5341	4923	4614	5819	5271	4880	4588	5137	4797	4537	5013	4718	4487	4897	4642	4438
	6	5626	4993	4568	4263	5517	4933	4534	4244	4821	4468	4206	4715	4405	4169	4617	4345	4132
	7	5336	4680	4256	3958	5237	4630	4228	3943	4534	4176	3915	4443	4124	3886	4359	4075	3859
	8	5067	4399	3979	3690	4977	4356	3957	3679	4273	3913	3657	4195	3872	3635	4122	3831	3613
	9	4818	4145	3732	3454	4737	4107	3714	3445	4035	3678	3427	3968	3643	3410	3904	3609	3393
	10	4588	3914	3511	3243	4514	3882	3496	3235	3819	3465	3221	3760	3436	3207	3704	3408	3194

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	236.6 fc	6.1 ft
6.5 ft	169.4 fc	7.2 ft
7.5 ft	127.3 fc	8.3 ft
8.0 ft	111.9 fc	8.9 ft
10.0 ft	71.6 fc	11.1 ft
12.0 ft	49.7 fc	13.4 ft
14.0 ft	36.5 fc	15.6 ft
16.0 ft	28.0 fc	17.8 ft
20.0 ft	17.9 fc	22.3 ft
24.0 ft	12.4 fc	26.7 ft
28.0 ft	9.1 fc	31.2 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	55463	55463	55463
45.00°	3085	2987	3021
55.00°	1200	1223	1230
65.00°	857	890	919
75.00°	647	676	686
85.00°	361	389	416

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	-	-	-	-	-	-	-	-	-	-
	3H	-	-	-	-	-	-	-	-	-	-
	4H	-	-	-	-	-	-	-	-	-	-
	6H	-	-	-	-	-	-	-	-	-	-
	8H	-	-	-	-	-	-	-	-	-	-
	12H	-	-	-	-	-	-	-	-	-	-
4H	2H	-	-	-	-	-	-	-	-	-	-
	3H	-	-	-	-	-	-	-	-	-	-
	4H	-	-	-	-	-	-	-	-	-	-
	6H	-	-	-	-	-	-	-	-	-	-
	8H	-	-	-	-	-	-	-	-	-	-
	12H	-	-	-	-	-	-	-	-	-	-
8H	4H	-	-	-	-	-	-	-	-	-	-
	6H	-	-	-	-	-	-	-	-	-	-
	8H	-	-	-	-	-	-	-	-	-	-
	12H	-	-	-	-	-	-	-	-	-	-
12H	4H	-	-	-	-	-	-	-	-	-	-
	6H	-	-	-	-	-	-	-	-	-	-
	8H	-	-	-	-	-	-	-	-	-	-

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0