

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

PRDDH16LEDLX 130L 35K xx PR16 xx
16" Diam. Prismatic Refractor

Test Number

SP-01509_2

Test Date

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

Summary of Results

Power

Input Watts	98 W
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Lumen Output

Output Lumens	13204
Efficacy	134.73 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.87
Two luminaires, plane 90°	0.83
Four luminaires	0.88

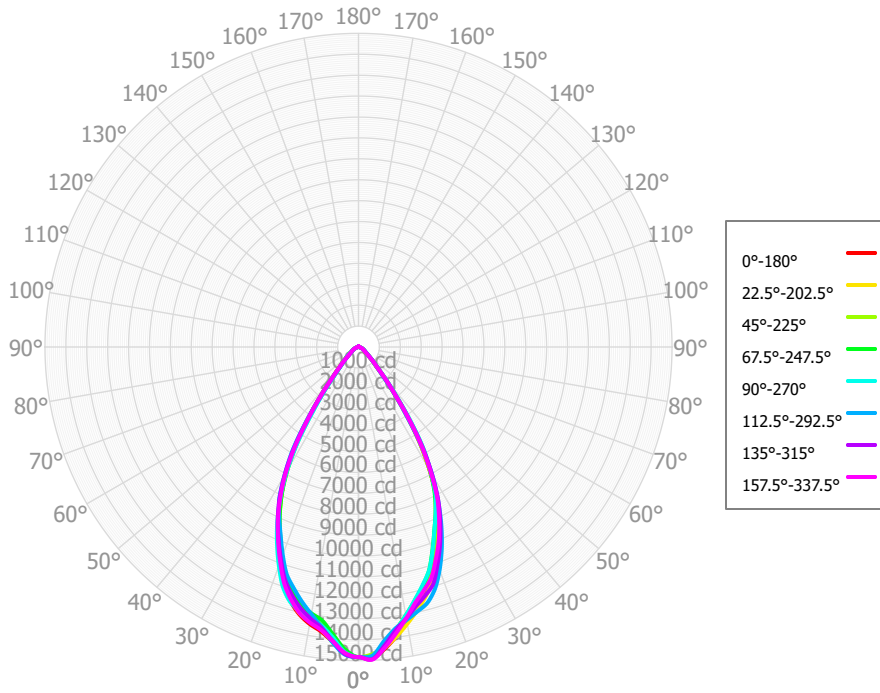
Full Beam Angle

0° - 180°	57°
90° - 270°	57°

IES File Header Contents

Keyword	Value
TEST	SP-01509_2
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TEST DATE	03/01/2023
ISSUEDATE	03/15/2023
LUMCAT	PRDDH16LEDLX 130L 35K xx PR16 xx
LUMINAIRE	16" Diam. Prismatic Refractor
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°	1340.50	10.15%	90.00° - 100.00°	25.95	0.20%
10.00° - 20.00°	3412.02	25.84%	100.00° - 110.00°	35.53	0.27%
20.00° - 30.00°	4092.58	31.00%	100.00° - 120.00°	56.59	0.43%
30.00° - 40.00°	2623.20	19.87%	120.00° - 130.00°	14.22	0.11%
40.00° - 50.00°	857.26	6.49%	130.00° - 140.00°	11.75	0.09%
50.00° - 60.00°	384.62	2.91%	140.00° - 150.00°	8.31	0.06%
60.00° - 70.00°	234.00	1.77%	150.00° - 160.00°	4.58	0.03%
70.00° - 80.00°	104.61	0.79%	160.00° - 170.00°	2.00	0.02%
80.00° - 90.00°	31.13	0.24%	170.00° - 180.00°	0.46	0.00%
0.00° - 90.00°	13079.92	99.06%	0.00° - 180.00°	13203.78	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°	14837.05	14837.05	14837.05	14837.05	14837.05	14837.05	14837.05	14837.05	14837.05	14837.05	14837.05	14837.05	14837.05	14837.05	14837.05	14837.05	14837.05
2.50°	14903.52	14893.96	14720.42	14847.63	14873.62	14733.04	14712.34	14656.91	14671.24	14616.62	14597.34	14498.01	14627.84	14792.99	14954.40	14972.90	14917.05
5.00°	14482.82	14435.95	14347.06	14271.93	14363.21	14195.36	14114.07	14128.29	14161.87	14149.26	13914.80	13822.22	13965.13	14112.43	14331.37	14440.54	14440.54
7.50°	13945.97	13964.08	13787.55	13652.57	13675.42	13517.09	13556.91	13662.93	13725.14	13645.45	13441.64	13214.05	13457.45	13575.38	13661.58	13806.88	13917.05
10.00°	13326.32	13446.15	13214.19	13042.02	13036.02	12981.52	13194.12	13389.66	13454.77	13338.04	13133.33	12943.88	13223.32	13266.35	13177.81	13172.95	13317.05
12.50°	12693.44	12920.04	12631.73	12432.65	12408.41	12486.25	12798.01	13037.63	13097.18	13044.38	12729.65	12629.84	12951.56	12969.77	12700.49	12539.01	12617.05
15.00°	12187.76	12373.34	12064.13	11844.58	11811.62	11954.04	12288.77	12502.43	12584.82	12499.83	12266.53	12163.14	12626.68	12688.86	12319.21	12064.29	12117.05
17.50°	11693.33	11722.56	11504.20	11224.74	11219.83	11414.60	11683.79	11840.03	11900.67	11930.51	11580.03	11574.72	12034.08	12150.18	11890.48	11584.25	11617.05
20.00°	10874.38	10870.62	10689.34	10344.92	10364.15	10592.61	10837.51	10948.76	10972.76	10892.87	10784.79	10672.93	11136.71	11349.35	11055.58	10814.18	10817.05
22.50°	10042.94	9980.86	9771.63	9483.98	9484.74	9735.45	9990.58	10045.24	10017.68	9866.76	9878.76	9786.23	10186.99	10414.22	10203.60	10032.63	10017.05
25.00°	9092.03	9033.79	8900.66	8720.74	8743.37	8974.52	9142.34	9124.12	9031.97	8943.77	8930.84	8929.77	9189.77	9370.26	9260.32	9126.65	9091.05
27.50°	8113.33	7994.63	8043.73	7901.11	7997.07	8219.49	8187.53	8103.31	8001.00	7988.00	7958.46	7960.34	8067.61	8237.76	8256.94	8171.73	8117.05
30.00°	6820.12	6843.16	6813.30	6879.65	6920.99	7058.80	7068.54	6968.60	6929.34	6851.57	6979.26	6811.01	6855.27	7047.54	7028.18	6909.51	6821.05
32.50°	5513.32	5523.41	5503.97	5736.71	5816.69	5879.83	5779.13	5665.65	5652.27	5661.08	5603.96	5518.09	5428.04	5586.35	5721.44	5614.14	5517.05
35.00°	4121.47	4040.06	4135.91	4267.58	4387.75	4397.22	4278.50	4207.21	4226.15	4267.40	4152.44	4044.08	3876.59	3986.72	4200.72	4180.99	4121.05
37.50°	2835.99	2857.92	2759.73	2971.44	3031.27	2979.99	3032.45	3015.47	3054.79	3011.70	2990.72	2843.07	2736.98	2813.18	2885.11	2887.98	2835.05
40.00°	2001.86	1912.44	1980.33	2029.85	2133.22	2100.83	2037.84	2019.84	2031.48	2135.34	1864.22	1916.34	1782.17	1809.64	1998.12	2014.28	2001.05
42.50°	1301.50	1338.78	1242.32	1330.54	1348.09	1319.48	1412.37	1437.03	1474.18	1442.37	1448.54	1362.86	1331.70	1324.58	1331.65	1312.80	1301.05
45.00°	1008.35	996.36	974.30	1019.11	1046.02	1033.47	1077.37	1093.76	1127.23	1139.65	1071.92	1112.60	1052.23	993.21	1030.19	1006.61	1008.05
47.50°	749.97	750.80	716.78	762.10	774.69	772.52	819.54	836.87	870.57	875.34	863.01	902.91	864.73	785.93	778.03	744.47	749.05
50.00°	571.28	553.04	563.06	575.07	597.59	599.71	610.49	619.56	644.71	674.70	659.08	719.36	700.25	604.43	590.38	560.65	571.05
52.50°	434.93	445.13	419.81	450.34	457.06	459.39	495.36	508.59	524.43	523.89	536.57	589.04	585.35	508.85	463.89	428.29	434.05
55.00°	374.90	371.12	373.45	389.41	400.83	404.99	426.66	434.54	430.78	439.35	421.81	485.55	479.00	424.87	401.13	368.00	374.05
57.50°	324.63	326.06	328.98	341.01	350.91	355.40	372.77	381.40	377.11	371.78	369.23	407.49	411.28	374.05	348.64	319.64	324.05
60.00°	288.43	289.05	294.94	302.84	312.42	315.53	324.48	333.53	330.21	322.18	317.97	339.42	347.40	325.44	304.81	284.75	288.05
62.50°	255.28	250.69	261.00	267.97	275.65	277.44	281.97	286.80	287.23	278.30	273.25	287.13	295.12	278.40	265.03	251.68	255.05
65.00°	225.61	212.07	227.40	235.28	241.33	242.21	241.10	240.27	244.62	239.33	231.31	239.44	243.39	231.88	227.97	220.25	225.05
67.50°	195.05	184.19	194.28	203.83	209.71	208.34	206.55	206.42	211.25	203.97	199.05	197.04	199.41	195.71	192.68	189.78	195.05
70.00°	163.68	157.60	162.53	173.03	181.15	176.20	173.29	173.89	178.18	171.06	165.91	155.72	155.63	159.19	158.34	160.00	163.68
72.50°	126.54	124.79	129.14	138.73	146.72	141.71	139.79	139.87	143.37	138.12	130.45	117.49	114.23	119.54	121.94	124.44	126.54
75.00°	85.15	91.66	92.26	103.02	106.91	104.82	106.25	105.90	108.81	105.15	97.41	79.66	75.36	81.94	84.69	85.58	85.15
77.50°	58.49	64.99	61.99	74.69	75.31	74.26	76.26	78.65	77.41	76.59	69.17	59.20	53.13	55.34	59.10	58.68	58.49
80.00°	40.39	39.28	42.65	48.59	49.78	48.87	46.48	52.48	48.74	49.88	47.18	39.91	33.99	33.51	37.14	37.20	40.39
82.50°	30.00	30.20	29.41	35.98	35.88	35.71	38.28	40.46	38.18	37.11	34.98	31.19	28.48	29.26	29.17	26.88	30.00
85.00°	23.10	21.98	24.28	26.28	28.78	30.47	30.42	29.42	28.88	28.70	26.10	23.00	23.60	24.75	24.30	20.37	23.10
87.50°	21.05	20.66	21.25	23.49	26.02	26.93	27.53	25.17	25.13	24.18	21.42	23.25	20.73	19.50	19.80	19.43	21.05
90.00°	20.68	19.99	20.48	21.65	25.24	24.25	25.11	22.75	23.02	20.51	20.19	23.72	19.38	17.04	15.35	19.86	20.68
92.50°	19.99	22.55	20.11	22.90	23.68	24.32	26.51	28.46	26.12	22.81	22.48	25.98	21.66	20.42	16.84	19.91	19.99
95.00°	19.23	24.28	20.07	24.36	21.85	25.48	27.81	32.27	28.27	25.99	23.27	28.43	22.52	21.92	18.79	19.90	19.23
97.50°	20.86	23.09	22.73	23.92	25.00	31.16	28.58	29.94	28.17	25.17	22.85	31.92	20.73	20.35	17.21	20.47	20.86
100.00°	22.90	24.61	27.21	24.05	29.41	38.17	29.76	29.11	30.24	24.02	26.60	34.93	23.17	22.45	15.92	21.11	22.90
102.50°	30.30	33.19	34.42	36.88	38.56	42.30	32.34	31.88	36.36	31.48	33.04	36.21	31.84	29.37	22.72	29.72	30.30
105.00°	38.25	37.95	43.10	47.75	48.52	45.81	32.97	31.75	39.18	38.75	34.64	35.52	35.55	34.54	29.02	38.43	38.25

Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

RCR	pfc	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%	10%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%
	0	15689	15689	15689	15689	15310	15310	15310	15310	14602	14602	14602	13954	13954	13954	13359	13359	13359
	1	14891	14498	14145	13827	14550	14199	13882	13595	13639	13386	13153	13125	12924	12739	12651	12495	12349
	2	14093	13404	12834	12356	13784	13164	12646	12207	12713	12286	11919	12297	11949	11644	11912	11631	11381
	3	13332	12429	11731	11175	13052	12234	11592	11075	11865	11325	10880	11524	11072	10693	11207	10833	10512
	4	12617	11562	10790	10200	12363	11401	10685	10131	11096	10482	9996	10813	10289	9865	10550	10105	9738
	5	11948	10788	9977	9378	11718	10653	9896	9329	10399	9739	9233	10162	9589	9139	9940	9445	9047
	6	11325	10093	9266	8672	11117	9980	9202	8637	9765	9079	8567	9565	8960	8498	9377	8846	8430
	7	10747	9468	8639	8058	10558	9372	8588	8032	9189	8489	7979	9018	8394	7928	8858	8302	7877
	8	10210	8904	8083	7518	10038	8822	8041	7498	8665	7961	7458	8518	7883	7419	8379	7807	7380
	9	9713	8394	7585	7040	9557	8323	7551	7024	8187	7485	6993	8059	7420	6962	7938	7358	6932
	10	9252	7930	7139	6612	9110	7868	7110	6600	7750	7055	6575	7638	7001	6551	7532	6948	6526

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	490.5 fc	6.0 ft
6.5 ft	351.2 fc	7.1 ft
7.5 ft	263.8 fc	8.2 ft
8.0 ft	231.8 fc	8.8 ft
10.0 ft	148.4 fc	11.0 ft
12.0 ft	103.0 fc	13.1 ft
14.0 ft	75.7 fc	15.3 ft
16.0 ft	58.0 fc	17.5 ft
20.0 ft	37.1 fc	21.9 ft
24.0 ft	25.8 fc	26.3 ft
28.0 ft	18.9 fc	30.7 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	114954	114954	114954
45.00°	5875	5676	6094
55.00°	2243	2234	2398
65.00°	1432	1443	1532
75.00°	595	644	747
85.00°	186	195	231

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