

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P992377

Luminaire Tested: S123DR-B1165DB50-4F0-XX-W2A-D

Issue Date: 5/2/2025

Test Information

Test Method: LM-79-2019
Report Number: P992377
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-15)
Test Lab: INNOVATION CENTER
Issue Date: 5/2/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DR-B1165DB50-4F0-XX-W2A-D
Description: Define 3 Direct Recessed with 5000K BioUP LEDs {m-DER=1.015} {m-EER=1.115}
Light Source: -
Ballast/Driver: -

Summary

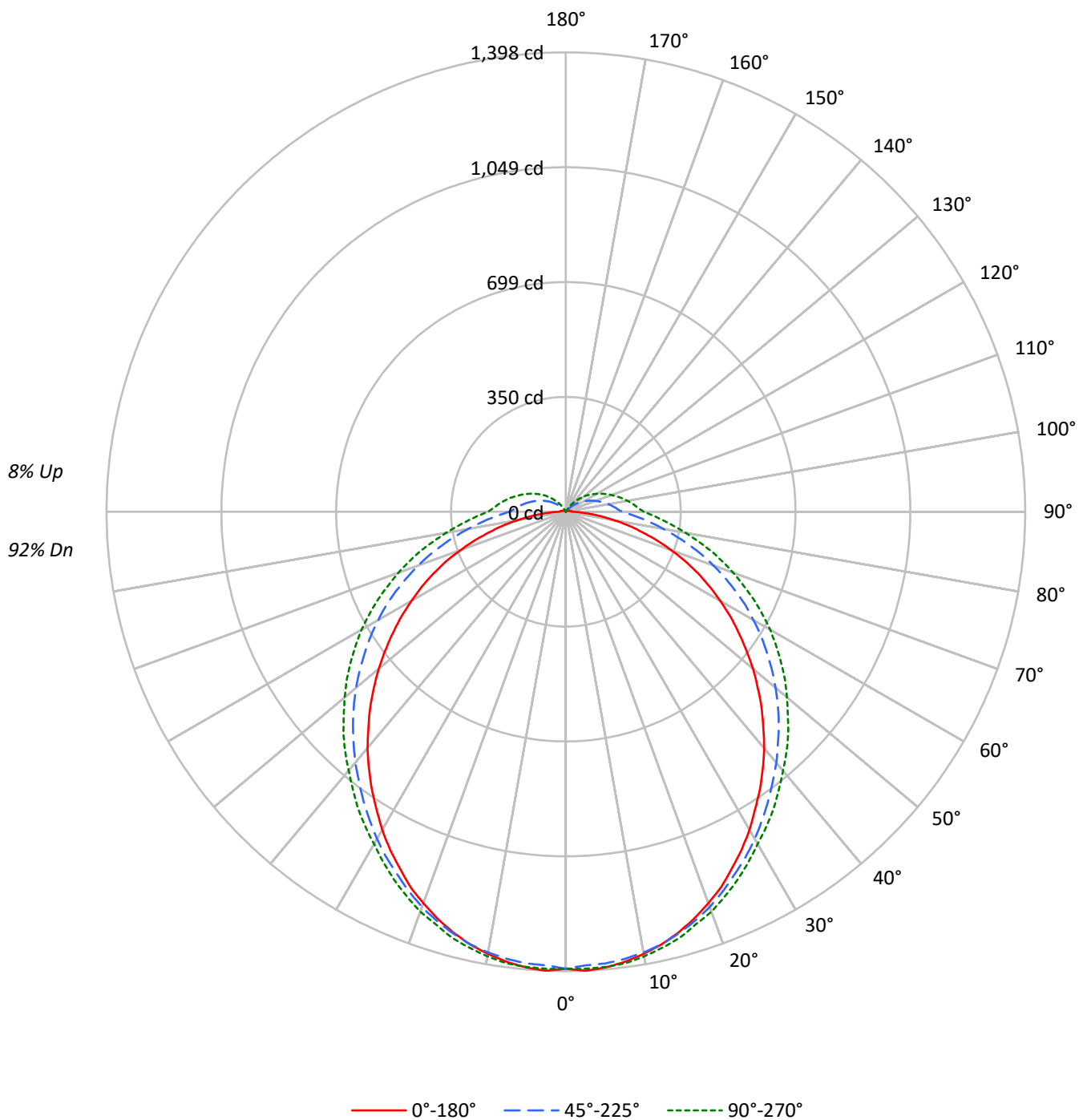
Lumens per Lamp: N/A
Luminaire Lumens: 4673.0 lumens
Efficiency: N/A
Efficacy: 76.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 61.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P992377

CATALOG NUMBER: S123DR-B1165DB50-4F0-XX-W2A-D

Luminous Intensity Polar Plot



TEST NUMBER: P992377

CATALOG NUMBER: S123DR-B1165DB50-4F0-XX-W2A-D

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	117	117	117	117	113	113	113	113	106	106	106	100	100	100	94	94	94
1	105	100	95	90	102	97	92	88	91	87	84	85	82	80	80	78	76
2	95	86	79	72	92	83	77	71	79	73	68	74	69	65	70	66	63
3	86	75	67	60	83	73	65	59	69	62	56	65	59	54	61	56	52
4	79	66	57	50	76	64	56	49	61	54	48	57	51	46	54	49	45
5	72	59	50	43	70	58	49	42	54	47	41	52	45	40	49	43	39
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	44	38	34
7	62	48	39	33	60	47	38	32	45	37	32	42	36	31	40	35	30
8	58	44	35	29	56	43	35	29	41	33	28	39	32	28	37	31	27
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	28	24
10	50	37	29	24	49	36	29	24	35	28	23	33	27	23	32	26	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14966	14966	14966
5°	15041	14909	15023
10°	14933	14883	15016
15°	14769	14802	14955
20°	14522	14661	14834
25°	14212	14446	14680
30°	13893	14288	14515
35°	13535	14111	14490
40°	13196	14004	14450
45°	12819	13950	14572
50°	12454	13951	14711
55°	12052	14013	15007
60°	11672	14185	15455
65°	11303	14505	16048
70°	10726	15062	17064
75°	10015	16128	18960
80°	9298	18776	22910
85°	9164	28430	36668

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 87.5°

Luminance: 65418 cd/sqm

TEST NUMBER: P992377

CATALOG NUMBER: S123DR-B1165DB50-4F0-XX-W2A-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.9	2.8
10°-20°	376.0	8.0
20°-30°	562.3	12.0
30°-40°	671.4	14.4
40°-50°	702.4	15.0
50°-60°	659.2	14.1
60°-70°	550.6	11.8
70°-80°	393.7	8.4
80°-90°	234.3	5.0
90°-100°	147.2	3.2
100°-110°	108.2	2.3
110°-120°	72.2	1.5
120°-130°	41.2	0.9
130°-140°	18.5	0.4
140°-150°	3.9	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1070.2	22.9
0°-40°	1741.6	37.3
0°-60°	3103.2	66.4
0°-90°	4281.7	91.6
90°-120°	327.6	7.0
90°-150°	391.2	8.4
90°-180°	391.0	8.4
0°-180°	4673.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1390	1390	1390	1390	1390	
5°	1392	1389	1380	1392	1390	132
15°	1325	1330	1328	1344	1342	373
25°	1197	1212	1216	1236	1236	552
35°	1030	1054	1074	1097	1103	644
45°	842	878	916	945	957	649
55°	642	692	747	788	800	575
65°	444	503	570	615	630	439
75°	241	312	388	438	456	257
85°	74	150	230	282	297	76
90°	20	94	171	223	238	14
95°	17	76	150	197	212	13
105°	12	48	114	156	170	12
115°	8	26	80	117	129	8
125°	4	4	48	80	91	5
135°	3	2	18	45	53	2
145°	2	0	0	12	18	1
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0

TEST NUMBER: P992377

CATALOG NUMBER: S123DR-B1165DB50-4F0-XX-W2A-D

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1390.4	1390.4	1390.4	1390.4	1390.4
2.5°	1398.0	1393.5	1381.4	1393.5	1392.0
5°	1392.0	1388.9	1379.8	1392.0	1390.4
7.5°	1381.4	1381.4	1372.3	1387.4	1385.9
10°	1366.2	1369.2	1361.7	1376.8	1373.8
12.5°	1348.0	1352.6	1348.0	1361.7	1358.6
15°	1325.3	1329.9	1328.3	1343.5	1342.0
17.5°	1298.1	1307.1	1305.6	1319.3	1316.2
20°	1267.8	1276.9	1279.9	1293.5	1295.0
22.5°	1236.0	1245.0	1249.6	1267.8	1266.2
25°	1196.6	1211.7	1216.3	1236.0	1236.0
27.5°	1158.7	1175.4	1184.5	1201.1	1202.6
30°	1117.8	1137.5	1149.6	1167.8	1167.8
32.5°	1072.4	1095.1	1111.8	1131.4	1136.0
35°	1030.0	1054.2	1073.9	1096.6	1102.7
37.5°	984.5	1011.8	1034.5	1060.3	1064.8
40°	939.1	966.3	996.6	1022.4	1028.4
42.5°	889.1	923.9	955.7	984.5	993.6
45°	842.1	878.5	916.4	945.1	957.3
47.5°	792.2	833.1	875.5	907.3	916.4
50°	743.7	786.1	833.1	867.9	878.5
52.5°	692.2	737.6	790.6	827.0	840.6
55°	642.2	692.2	746.7	787.6	799.7
57.5°	593.7	645.2	704.3	745.2	758.8
60°	542.2	596.8	658.9	701.3	717.9
62.5°	493.8	549.8	616.5	658.9	674.0
65°	443.8	502.9	569.5	614.9	630.1
67.5°	393.8	455.9	522.6	572.5	584.7
70°	340.8	405.9	478.6	527.1	542.2
72.5°	292.3	357.5	433.2	483.2	498.3
75°	240.8	312.0	387.8	437.7	455.9
77.5°	196.9	268.1	343.8	396.8	410.5
80°	150.0	224.2	302.9	354.4	369.6
82.5°	109.1	184.8	265.1	316.6	331.7
85°	74.2	150.0	230.2	281.7	296.9
87.5°	45.4	121.2	198.4	249.9	265.1
90°	19.7	93.9	171.2	222.7	237.8
92.5°	18.2	83.3	159.0	209.0	222.7
95°	16.7	75.7	150.0	196.9	212.1
97.5°	15.1	69.7	140.9	186.3	201.4
100°	13.6	62.1	131.8	175.7	190.8
102.5°	12.1	54.5	122.7	165.1	180.2
105°	12.1	48.5	113.6	156.0	169.6
107.5°	10.6	42.4	104.5	145.4	159.0
110°	9.1	36.4	96.9	136.3	148.4



TEST NUMBER: P992377

CATALOG NUMBER: S123DR-B1165DB50-4F0-XX-W2A-D

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	9.1	30.3	87.8	125.7	139.3
115°	7.6	25.7	80.3	116.6	128.7
117.5°	7.6	19.7	71.2	107.5	119.7
120°	6.1	13.6	63.6	98.5	109.1
122.5°	6.1	9.1	56.0	89.4	100.0
125°	4.5	4.5	48.5	80.3	90.9
127.5°	4.5	3.0	40.9	71.2	81.8
130°	4.5	3.0	33.3	62.1	71.2
132.5°	3.0	3.0	25.7	53.0	63.6
135°	3.0	1.5	18.2	45.4	53.0
137.5°	3.0	1.5	12.1	36.4	43.9
140°	1.5	1.5	6.1	28.8	36.4
142.5°	1.5	0.0	0.0	19.7	27.3
145°	1.5	0.0	0.0	12.1	18.2
147.5°	0.0	0.0	0.0	4.5	10.6
150°	0.0	0.0	0.0	0.0	3.0
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)