

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: P992358

Luminaire Tested: S123DR-B1165DB2750-4F0-XX-W2A-D_3000K

Issue Date: 5/2/2025

Test Information

Test Method: LM-79-2019
Report Number: P992358
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-B1165DB2750-4F0-XX-W2A-D_3000K
Description: Define 3 Direct Recessed with 3000K BioUP LEDs {m-DER=0.589} {m-EER=0.647}
Light Source: -
Ballast/Driver: -

Summary

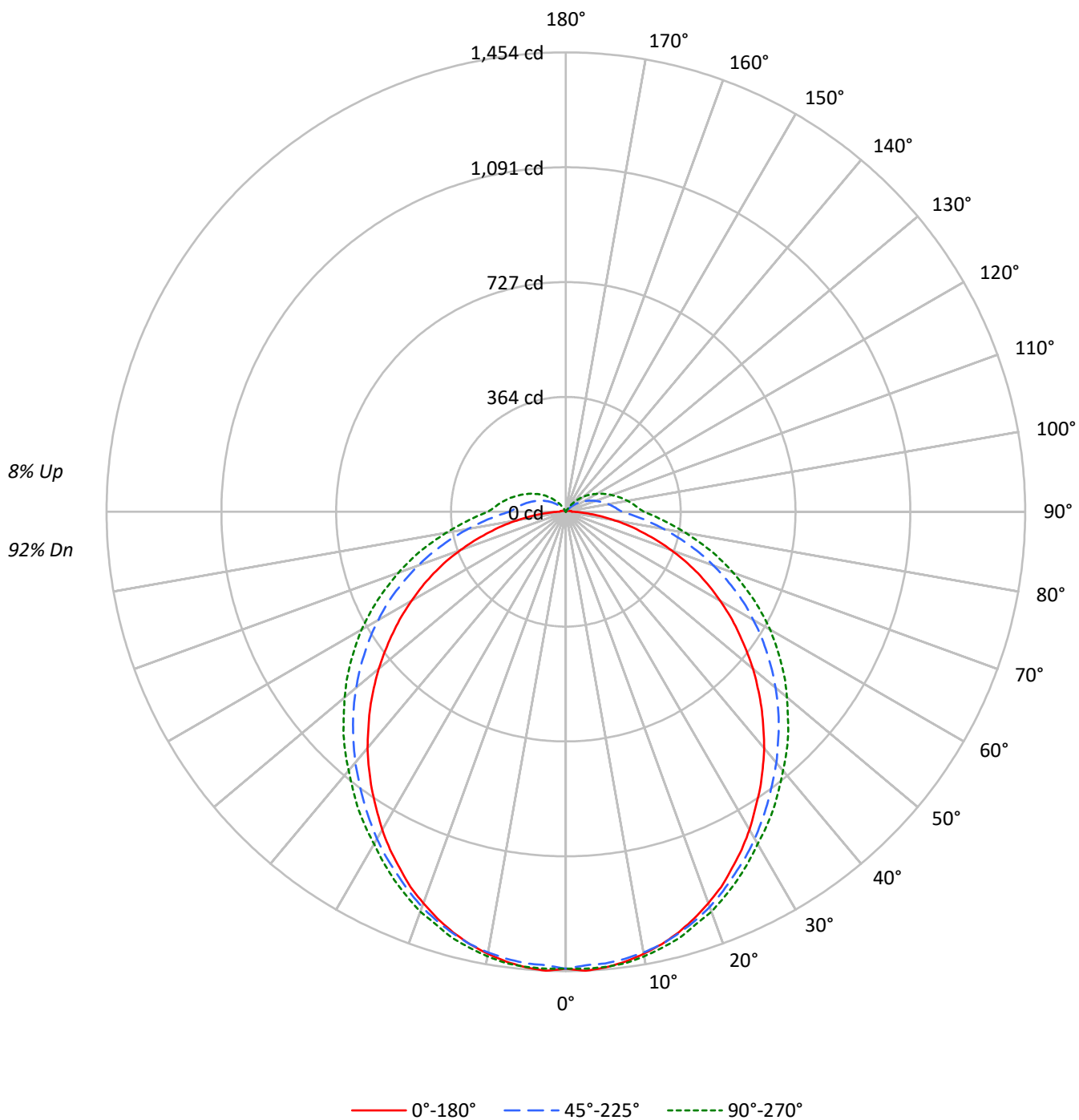
Lumens per Lamp: N/A
Luminaire Lumens: 4860.1 lumens
Efficiency: N/A
Efficacy: 79.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 61.3
Input Voltage (V):
Input Current (A_{in}): 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

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Luminous Intensity Polar Plot



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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°	15566	15566	15566
5°	15642	15506	15625
10°	15530	15479	15617
15°	15360	15395	15553
20°	15103	15247	15427
25°	14781	15023	15266
30°	14449	14860	15095
35°	14076	14676	15069
40°	13724	14564	15029
45°	13332	14507	15155
50°	12953	14508	15301
55°	12534	14574	15608
60°	12140	14751	16075
65°	11757	15086	16690
70°	11154	15667	17747
75°	10418	16773	19721
80°	9670	19532	23828
85°	9534	29566	38137

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 87.5°

Luminance: 68034 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.2	2.8
10°-20°	391.1	8.0
20°-30°	584.8	12.0
30°-40°	698.2	14.4
40°-50°	730.6	15.0
50°-60°	685.6	14.1
60°-70°	572.6	11.8
70°-80°	409.5	8.4
80°-90°	243.6	5.0
90°-100°	153.1	3.2
100°-110°	112.5	2.3
110°-120°	75.1	1.5
120°-130°	42.9	0.9
130°-140°	19.2	0.4
140°-150°	4.0	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1113.0	22.9
0°-40°	1811.3	37.3
0°-60°	3227.4	66.4
0°-90°	4453.1	91.6
90°-120°	340.8	7.0
90°-150°	406.9	8.4
90°-180°	407.0	8.4
0°-180°	4860.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1446	1446	1446	1446	1446	
5°	1448	1444	1435	1448	1446	137
15°	1378	1383	1382	1397	1396	388
25°	1244	1260	1265	1285	1285	574
35°	1071	1096	1117	1140	1147	670
45°	876	914	953	983	996	675
55°	668	720	777	819	832	598
65°	462	523	592	640	655	456
75°	250	324	403	455	474	268
85°	77	156	239	293	309	79
90°	20	98	178	232	247	15
95°	17	79	156	205	220	14
105°	13	50	118	162	176	13
115°	8	27	84	121	134	8
125°	5	5	50	84	94	5
135°	3	2	19	47	55	2
145°	2	0	0	13	19	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

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1446.1	1446.1	1446.1	1446.1	1446.1
2.5°	1454.0	1449.2	1436.6	1449.2	1447.7
5°	1447.7	1444.5	1435.1	1447.7	1446.1
7.5°	1436.6	1436.6	1427.2	1442.9	1441.4
10°	1420.9	1424.0	1416.2	1431.9	1428.8
12.5°	1402.0	1406.7	1402.0	1416.2	1413.0
15°	1378.4	1383.1	1381.5	1397.3	1395.7
17.5°	1350.0	1359.5	1357.9	1372.1	1368.9
20°	1318.5	1327.9	1331.1	1345.3	1346.8
22.5°	1285.4	1294.9	1299.6	1318.5	1316.9
25°	1244.5	1260.2	1264.9	1285.4	1285.4
27.5°	1205.1	1222.4	1231.9	1249.2	1250.8
30°	1162.5	1183.0	1195.6	1214.5	1214.5
32.5°	1115.3	1138.9	1156.2	1176.7	1181.4
35°	1071.2	1096.4	1116.9	1140.5	1146.8
37.5°	1023.9	1052.3	1075.9	1102.7	1107.4
40°	976.7	1005.0	1036.5	1063.3	1069.6
42.5°	924.7	960.9	994.0	1023.9	1033.4
45°	875.8	913.7	953.0	983.0	995.6
47.5°	823.9	866.4	910.5	943.6	953.0
50°	773.5	817.6	866.4	902.6	913.7
52.5°	719.9	767.2	822.3	860.1	874.3
55°	667.9	719.9	776.6	819.1	831.7
57.5°	617.5	671.1	732.5	775.0	789.2
60°	563.9	620.7	685.2	729.3	746.7
62.5°	513.5	571.8	641.1	685.2	701.0
65°	461.6	523.0	592.3	639.6	655.3
67.5°	409.6	474.2	543.5	595.4	608.1
70°	354.4	422.2	497.8	548.2	563.9
72.5°	304.0	371.8	450.5	502.5	518.3
75°	250.5	324.5	403.3	455.3	474.2
77.5°	204.8	278.8	357.6	412.7	426.9
80°	156.0	233.1	315.1	368.6	384.4
82.5°	113.4	192.2	275.7	329.2	345.0
85°	77.2	156.0	239.4	293.0	308.8
87.5°	47.3	126.0	206.4	259.9	275.7
90°	20.5	97.7	178.0	231.6	247.3
92.5°	18.9	86.6	165.4	217.4	231.6
95°	17.3	78.8	156.0	204.8	220.5
97.5°	15.8	72.5	146.5	193.8	209.5
100°	14.2	64.6	137.0	182.7	198.5
102.5°	12.6	56.7	127.6	171.7	187.5
105°	12.6	50.4	118.1	162.3	176.4
107.5°	11.0	44.1	108.7	151.2	165.4
110°	9.5	37.8	100.8	141.8	154.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	9.5	31.5	91.4	130.7	144.9
115°	7.9	26.8	83.5	121.3	133.9
117.5°	7.9	20.5	74.0	111.8	124.4
120°	6.3	14.2	66.2	102.4	113.4
122.5°	6.3	9.5	58.3	92.9	104.0
125°	4.7	4.7	50.4	83.5	94.5
127.5°	4.7	3.2	42.5	74.0	85.1
130°	4.7	3.2	34.7	64.6	74.0
132.5°	3.2	3.2	26.8	55.1	66.2
135°	3.2	1.6	18.9	47.3	55.1
137.5°	3.2	1.6	12.6	37.8	45.7
140°	1.6	1.6	6.3	29.9	37.8
142.5°	1.6	0.0	0.0	20.5	28.4
145°	1.6	0.0	0.0	12.6	18.9
147.5°	0.0	0.0	0.0	4.7	11.0
150°	0.0	0.0	0.0	0.0	3.2
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)