

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: P998474

Luminaire Tested: S124DR-B1195DB40-4F0-XX-W2A-D

Issue Date: 5/2/2025

Test Information

Test Method: LM-79-2019
Report Number: P998474
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-16)
Test Lab: INNOVATION CENTER
Issue Date: 5/2/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124DR-B1195DB40-4F0-XX-W2A-D
Description: Define 4 Direct Recessed with 4000K BioUP LEDs {m-DER=0.865} {m-EER=0.951}
Light Source: -
Ballast/Driver: -

Summary

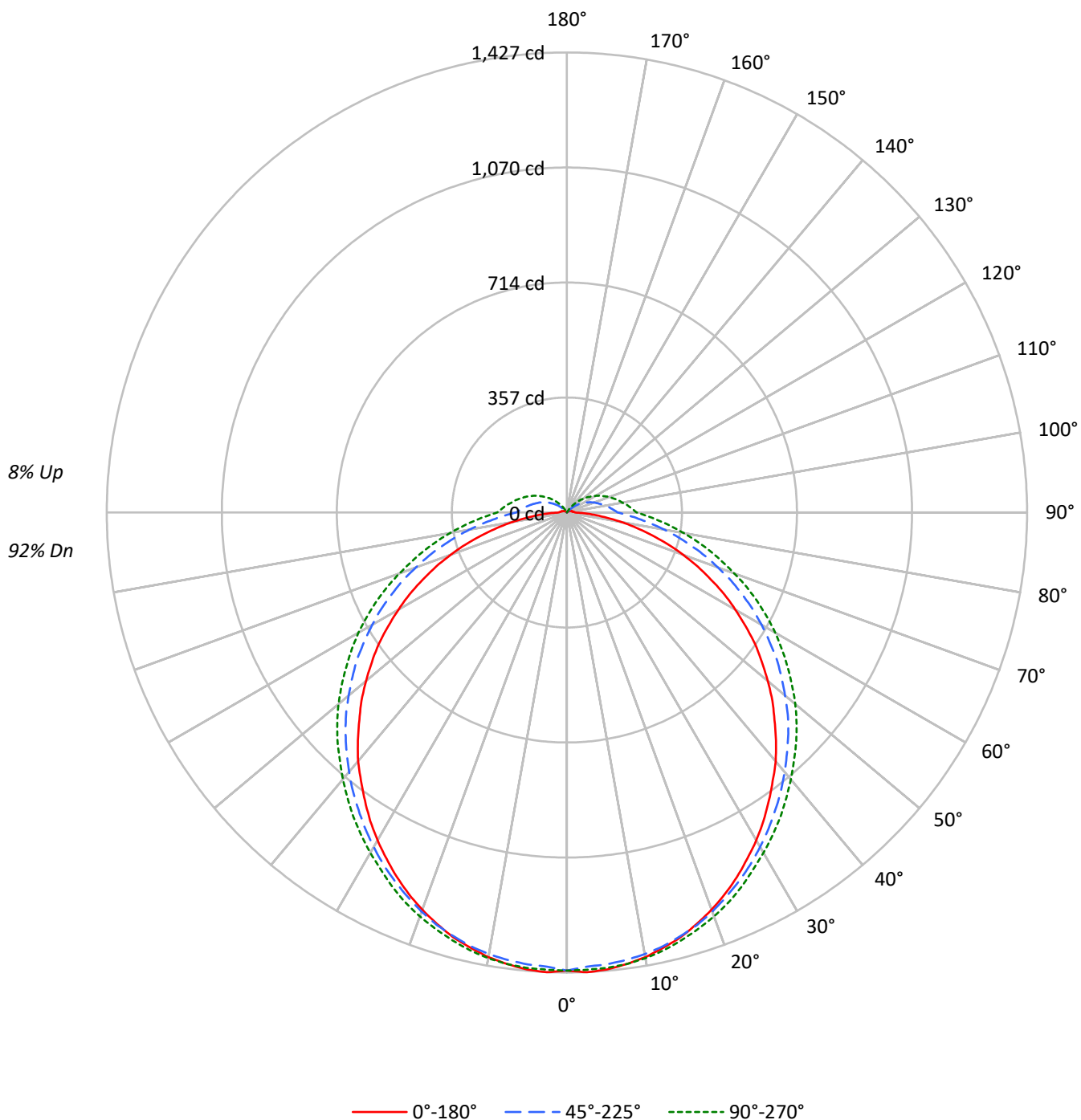
Lumens per Lamp: N/A
Luminaire Lumens: 4845.0 lumens
Efficiency: N/A
Efficacy: 79.0 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Direct

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

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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	114	114	114	114	107	107	107	101	101	101	95	95	95
1	105	100	95	91	102	97	93	89	91	88	84	86	83	80	81	79	77
2	95	86	79	73	92	84	77	71	79	73	68	74	70	66	70	67	63
3	87	75	67	60	83	73	65	59	69	62	57	65	60	55	62	57	53
4	79	66	57	50	76	65	56	49	61	54	48	58	52	47	55	49	45
5	73	59	50	43	70	58	49	42	55	47	41	52	45	40	49	44	39
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	45	39	34
7	62	48	39	33	60	47	38	32	45	37	32	43	36	31	41	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	38	30	25	36	29	25	34	29	24
10	50	37	29	24	49	36	29	23	35	28	23	33	27	23	32	26	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11588	11588	11588
5°	11646	11515	11606
10°	11596	11516	11622
15°	11513	11486	11594
20°	11379	11434	11572
25°	11225	11354	11526
30°	11058	11283	11478
35°	10868	11216	11485
40°	10723	11180	11502
45°	10497	11194	11598
50°	10316	11204	11730
55°	10135	11290	11878
60°	9836	11367	12171
65°	9518	11544	12559
70°	9143	11876	13166
75°	8623	12584	14439
80°	8148	14421	17262
85°	7887	20846	26796

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 87.5°

Luminance: 46400 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.6	2.8
10°-20°	385.8	8.0
20°-30°	583.3	12.0
30°-40°	705.7	14.6
40°-50°	746.0	15.4
50°-60°	702.1	14.5
60°-70°	582.6	12.0
70°-80°	408.9	8.4
80°-90°	230.5	4.8
90°-100°	137.2	2.8
100°-110°	101.6	2.1
110°-120°	68.2	1.4
120°-130°	38.4	0.8
130°-140°	16.6	0.3
140°-150°	3.3	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1103.7	22.8
0°-40°	1809.5	37.3
0°-60°	3257.6	67.2
0°-90°	4479.6	92.5
90°-120°	307.0	6.3
90°-150°	365.3	7.5
90°-180°	365.0	7.5
0°-180°	4845.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1421	1421	1421	1421	1421	
5°	1423	1418	1407	1420	1418	135
15°	1364	1365	1361	1375	1373	384
25°	1248	1257	1262	1279	1281	575
35°	1092	1111	1127	1149	1154	684
45°	910	940	971	998	1006	704
55°	713	746	794	826	836	635
65°	493	544	598	638	651	489
75°	274	333	399	444	458	291
85°	84	151	223	270	286	88
90°	26	89	158	204	216	17
95°	21	73	138	181	196	16
105°	14	46	105	145	158	16
115°	10	24	75	110	121	10
125°	6	5	45	75	84	6
135°	3	3	14	40	49	3
145°	2	0	0	10	16	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°	1421.1	1421.1	1421.1	1421.1	1421.1
2.5°	1427.4	1422.7	1409.9	1421.1	1419.5
5°	1422.7	1417.9	1406.7	1419.5	1417.9
7.5°	1413.1	1409.9	1400.4	1414.7	1413.1
10°	1400.4	1398.8	1390.8	1405.2	1403.6
12.5°	1382.9	1382.9	1378.1	1390.8	1390.8
15°	1363.8	1365.4	1360.6	1374.9	1373.3
17.5°	1338.3	1343.1	1341.5	1355.8	1354.2
20°	1311.3	1316.0	1317.6	1333.5	1333.5
22.5°	1281.0	1287.4	1290.6	1306.5	1309.7
25°	1247.6	1257.2	1261.9	1279.4	1281.0
27.5°	1211.0	1225.3	1231.7	1247.6	1249.2
30°	1174.4	1187.1	1198.3	1215.8	1219.0
32.5°	1134.6	1150.5	1163.3	1184.0	1187.1
35°	1091.7	1110.8	1126.7	1148.9	1153.7
37.5°	1048.7	1071.0	1090.1	1112.3	1117.1
40°	1007.3	1028.0	1050.3	1074.2	1080.5
42.5°	959.6	983.4	1010.5	1037.6	1042.3
45°	910.2	940.5	970.7	997.8	1005.7
47.5°	864.1	894.3	929.3	956.4	965.9
50°	813.2	848.2	883.2	915.0	924.6
52.5°	762.3	797.3	838.6	870.5	880.0
55°	712.9	746.3	794.1	825.9	835.5
57.5°	657.2	698.6	744.7	782.9	790.9
60°	603.1	644.5	697.0	733.6	746.3
62.5°	550.6	596.8	649.3	685.9	698.6
65°	493.3	544.2	598.3	638.1	650.9
67.5°	439.2	493.3	550.6	590.4	603.1
70°	383.5	437.6	498.1	541.1	552.2
72.5°	329.4	385.1	450.3	491.7	504.5
75°	273.7	332.6	399.4	444.0	458.3
77.5°	221.2	283.3	353.3	397.8	413.7
80°	173.5	237.1	307.1	354.9	367.6
82.5°	125.7	192.6	262.6	311.9	326.2
85°	84.3	151.2	222.8	270.5	286.4
87.5°	52.5	117.8	187.8	233.9	248.2
90°	25.5	89.1	157.5	203.7	216.4
92.5°	23.9	79.6	148.0	192.6	205.3
95°	20.7	73.2	138.4	181.4	195.7
97.5°	19.1	65.2	130.5	171.9	186.2
100°	17.5	58.9	120.9	163.9	175.0
102.5°	17.5	52.5	113.0	154.4	167.1
105°	14.3	46.1	105.0	144.8	157.5
107.5°	14.3	41.4	97.1	136.9	148.0
110°	12.7	35.0	90.7	127.3	140.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	11.1	30.2	82.7	117.8	130.5
115°	9.5	23.9	74.8	109.8	120.9
117.5°	9.5	19.1	66.8	100.3	113.0
120°	8.0	12.7	58.9	90.7	103.4
122.5°	8.0	8.0	50.9	82.7	93.9
125°	6.4	4.8	44.6	74.8	84.3
127.5°	6.4	4.8	36.6	65.2	76.4
130°	4.8	3.2	28.6	57.3	66.8
132.5°	4.8	3.2	22.3	49.3	58.9
135°	3.2	3.2	14.3	39.8	49.3
137.5°	3.2	1.6	8.0	31.8	39.8
140°	3.2	1.6	3.2	23.9	31.8
142.5°	1.6	1.6	0.0	17.5	23.9
145°	1.6	0.0	0.0	9.5	15.9
147.5°	1.6	0.0	0.0	1.6	8.0
150°	1.6	0.0	0.0	0.0	0.0
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)