

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: P998450

Luminaire Tested: S124DR-B1195DB27-4F0-XX-W2A-D

Issue Date: 5/2/2025

Test Information

Test Method: LM-79-2019
Report Number: P998450
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-B1195DB27-4F0-XX-W2A-D
Description: Define 4 Direct Recessed with 2700K BioUP LEDs {m-DER=0.473} {m-EER=0.52}
Light Source: -
Ballast/Driver: -

Summary

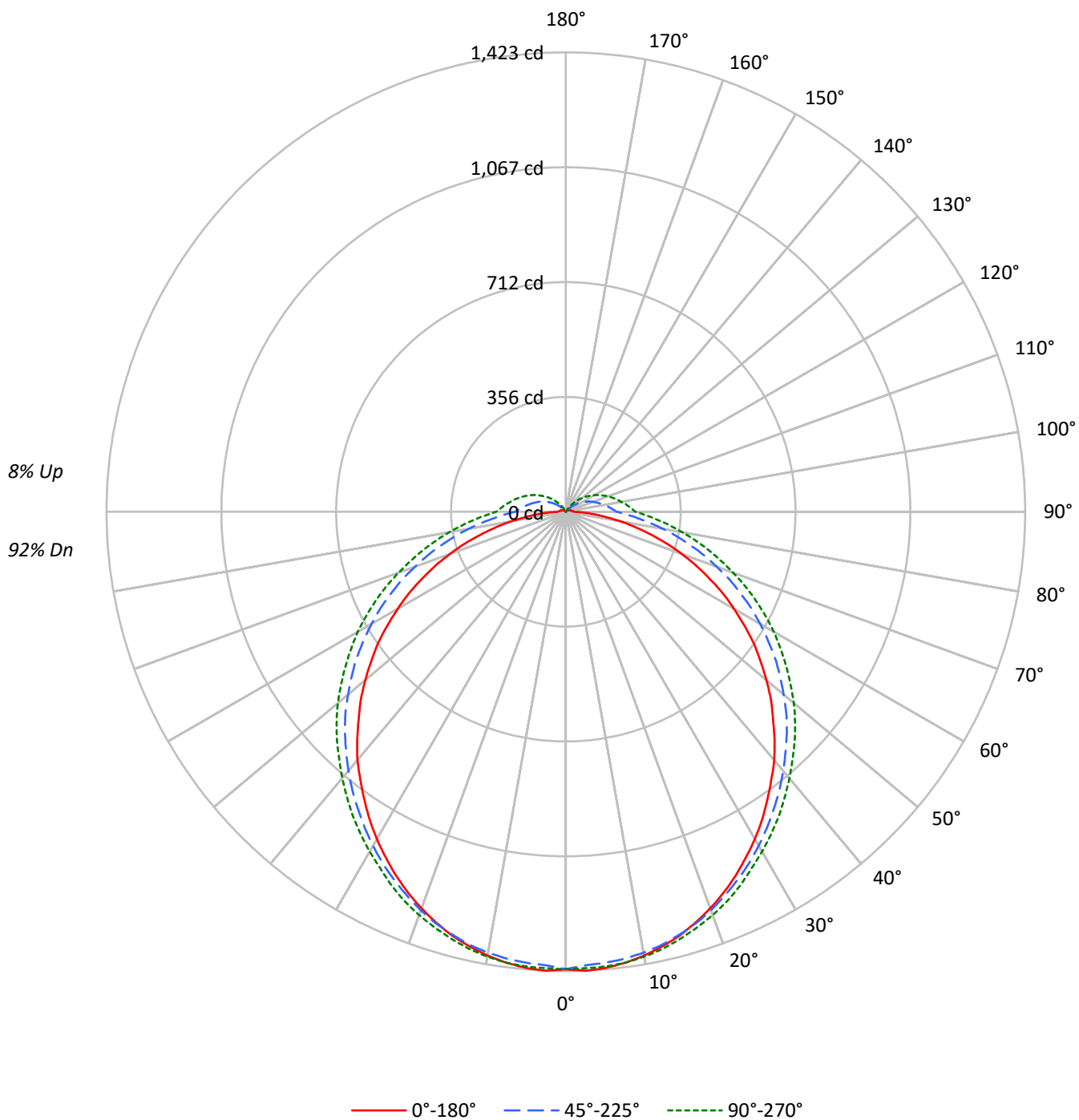
Lumens per Lamp: N/A
Luminaire Lumens: 4831.0 lumens
Efficiency: N/A
Efficacy: 78.8 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Direct

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°	11555	11555	11555
5°	11611	11482	11573
10°	11562	11483	11588
15°	11480	11453	11561
20°	11346	11401	11539
25°	11193	11322	11492
30°	11026	11250	11444
35°	10836	11183	11452
40°	10692	11147	11469
45°	10467	11162	11564
50°	10286	11171	11695
55°	10107	11257	11843
60°	9808	11335	12137
65°	9491	11511	12523
70°	9117	11842	13127
75°	8598	12549	14398
80°	8124	14379	17211
85°	7869	20780	26721

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 87.5°

Luminance: 46269 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.3	2.8
10°-20°	384.7	8.0
20°-30°	581.6	12.0
30°-40°	703.7	14.6
40°-50°	743.9	15.4
50°-60°	700.1	14.5
60°-70°	581.0	12.0
70°-80°	407.7	8.4
80°-90°	229.8	4.8
90°-100°	136.8	2.8
100°-110°	101.3	2.1
110°-120°	68.0	1.4
120°-130°	38.3	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°	1100.6	22.8
0°-40°	1804.2	37.3
0°-60°	3248.2	67.2
0°-90°	4466.7	92.5
90°-120°	306.2	6.3
90°-150°	364.3	7.5
90°-180°	364.0	7.5
0°-180°	4831.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1417	1417	1417	1417	1417	
5°	1418	1414	1403	1415	1414	135
15°	1360	1361	1357	1371	1369	383
25°	1244	1254	1258	1276	1277	573
35°	1088	1108	1123	1146	1150	682
45°	908	938	968	995	1003	701
55°	711	744	792	824	833	633
65°	492	543	597	636	649	488
75°	273	332	398	443	457	290
85°	84	151	222	270	286	88
90°	25	89	157	203	216	17
95°	21	73	138	181	195	16
105°	14	46	105	144	157	16
115°	10	24	75	110	121	10
125°	6	5	44	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°	1417.0	1417.0	1417.0	1417.0	1417.0
2.5°	1423.3	1418.5	1405.9	1417.0	1415.4
5°	1418.5	1413.8	1402.7	1415.4	1413.8
7.5°	1409.0	1405.9	1396.3	1410.6	1409.0
10°	1396.3	1394.7	1386.8	1401.1	1399.5
12.5°	1378.9	1378.9	1374.1	1386.8	1386.8
15°	1359.8	1361.4	1356.7	1370.9	1369.4
17.5°	1334.5	1339.2	1337.6	1351.9	1350.3
20°	1307.5	1312.2	1313.8	1329.7	1329.7
22.5°	1277.3	1283.7	1286.8	1302.7	1305.9
25°	1244.0	1253.5	1258.3	1275.7	1277.3
27.5°	1207.5	1221.8	1228.1	1244.0	1245.6
30°	1171.0	1183.7	1194.8	1212.3	1215.4
32.5°	1131.3	1147.2	1159.9	1180.5	1183.7
35°	1088.5	1107.5	1123.4	1145.6	1150.4
37.5°	1045.7	1067.9	1086.9	1109.1	1113.9
40°	1004.4	1025.0	1047.2	1071.1	1077.4
42.5°	956.8	980.6	1007.6	1034.6	1039.3
45°	907.6	937.8	967.9	994.9	1002.8
47.5°	861.6	891.7	926.7	953.6	963.2
50°	810.8	845.7	880.6	912.4	921.9
52.5°	760.0	795.0	836.2	867.9	877.5
55°	710.9	744.2	791.8	823.5	833.0
57.5°	655.3	696.6	742.6	780.7	788.6
60°	601.4	642.6	695.0	731.5	744.2
62.5°	549.0	595.0	647.4	683.9	696.6
65°	491.9	542.7	596.6	636.3	649.0
67.5°	437.9	491.9	549.0	588.7	601.4
70°	382.4	436.4	496.7	539.5	550.6
72.5°	328.5	384.0	449.0	490.3	503.0
75°	272.9	331.6	398.3	442.7	457.0
77.5°	220.6	282.4	352.3	396.7	412.6
80°	173.0	236.4	306.2	353.8	366.5
82.5°	125.4	192.0	261.8	311.0	325.3
85°	84.1	150.7	222.1	269.7	285.6
87.5°	52.4	117.4	187.2	233.3	247.5
90°	25.4	88.9	157.1	203.1	215.8
92.5°	23.8	79.3	147.6	192.0	204.7
95°	20.6	73.0	138.0	180.9	195.2
97.5°	19.0	65.1	130.1	171.4	185.6
100°	17.5	58.7	120.6	163.4	174.5
102.5°	17.5	52.4	112.7	153.9	166.6
105°	14.3	46.0	104.7	144.4	157.1
107.5°	14.3	41.3	96.8	136.5	147.6
110°	12.7	34.9	90.4	126.9	139.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	11.1	30.1	82.5	117.4	130.1
115°	9.5	23.8	74.6	109.5	120.6
117.5°	9.5	19.0	66.6	100.0	112.7
120°	7.9	12.7	58.7	90.4	103.1
122.5°	7.9	7.9	50.8	82.5	93.6
125°	6.3	4.8	44.4	74.6	84.1
127.5°	6.3	4.8	36.5	65.1	76.2
130°	4.8	3.2	28.6	57.1	66.6
132.5°	4.8	3.2	22.2	49.2	58.7
135°	3.2	3.2	14.3	39.7	49.2
137.5°	3.2	1.6	7.9	31.7	39.7
140°	3.2	1.6	3.2	23.8	31.7
142.5°	1.6	1.6	0.0	17.5	23.8
145°	1.6	0.0	0.0	9.5	15.9
147.5°	1.6	0.0	0.0	1.6	7.9
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)