

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: P998504

Luminaire Tested: S124DR-B350DB40-4F0-XX-W2A-D

Issue Date: 5/2/2025

Test Information

Test Method: LM-79-2019
Report Number: P998504
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-B350DB40-4F0-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

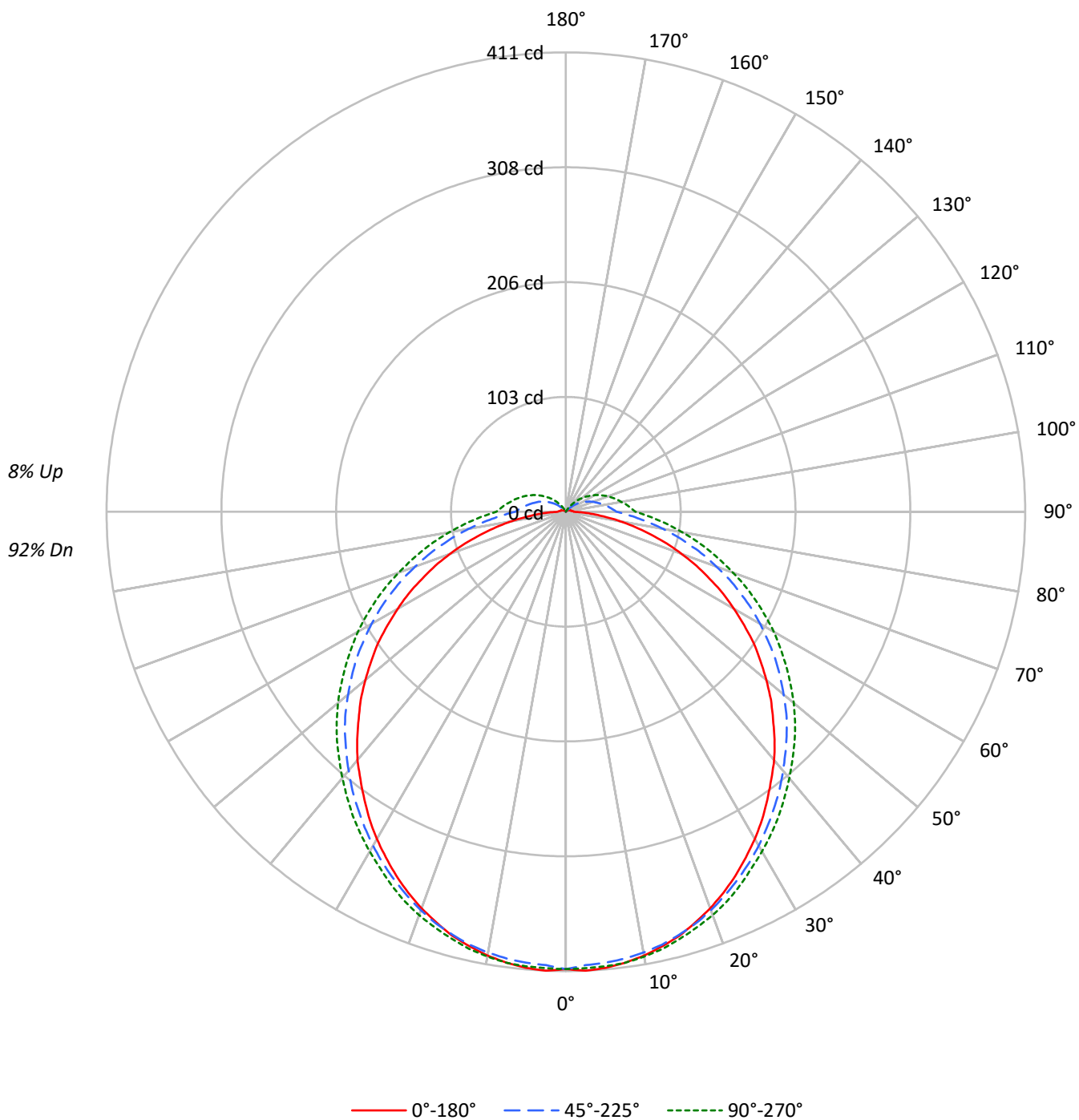
Lumens per Lamp: N/A
Luminaire Lumens: 1395.0 lumens
Efficiency: N/A
Efficacy: 107.3 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 13
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
RCR																	
0	117	117	117	117	114	114	114	114	107	107	107		101	101	101		95
1	105	100	95	91	102	97	93	89	91	88	84		86	83	80		81
2	95	86	79	73	92	84	77	71	79	73	68		74	70	66		70
3	87	75	67	60	83	73	65	59	69	62	57		65	60	55		62
4	79	66	57	50	76	65	56	49	61	54	48		58	52	47		55
5	73	59	50	43	70	58	49	42	55	47	41		52	45	40		49
6	67	53	44	37	64	52	43	37	49	42	36		47	40	35		45
7	62	48	39	33	60	47	38	32	45	37	32		43	36	31		41
8	58	44	35	29	56	43	35	29	41	33	28		39	32	28		37
9	54	40	32	26	52	39	31	26	38	30	25		36	29	25		34
10	50	37	29	24	49	36	29	23	35	28	23		33	27	23		32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3337	3337	3337
5°	3353	3315	3341
10°	3339	3316	3346
15°	3315	3308	3338
20°	3276	3292	3332
25°	3232	3269	3318
30°	3184	3249	3305
35°	3129	3229	3307
40°	3087	3219	3312
45°	3023	3223	3340
50°	2970	3226	3377
55°	2919	3250	3419
60°	2833	3273	3505
65°	2740	3325	3616
70°	2632	3419	3791
75°	2483	3623	4159
80°	2343	4151	4968
85°	2274	5997	7719

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 87.5°

Luminance: 13367 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.8	2.8
10°-20°	111.1	8.0
20°-30°	168.0	12.0
30°-40°	203.2	14.6
40°-50°	214.8	15.4
50°-60°	202.2	14.5
60°-70°	167.7	12.0
70°-80°	117.7	8.4
80°-90°	66.4	4.8
90°-100°	39.5	2.8
100°-110°	29.2	2.1
110°-120°	19.6	1.4
120°-130°	11.1	0.8
130°-140°	4.8	0.3
140°-150°	1.0	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	317.8	22.8
0°-40°	521.0	37.3
0°-60°	938.0	67.2
0°-90°	1289.8	92.5
90°-120°	88.4	6.3
90°-150°	105.2	7.5
90°-180°	105.0	7.5
0°-180°	1395.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	409	409	409	409	409	
5°	410	408	405	409	408	39
15°	393	393	392	396	395	111
25°	359	362	363	368	369	165
35°	314	320	324	331	332	197
45°	262	271	280	287	290	203
55°	205	215	229	238	240	183
65°	142	157	172	184	187	141
75°	79	96	115	128	132	84
85°	24	44	64	78	82	25
90°	7	26	45	59	62	5
95°	6	21	40	52	56	5
105°	4	13	30	42	45	5
115°	3	7	22	32	35	3
125°	2	1	13	22	24	2
135°	1	1	4	12	14	1
145°	0	0	0	3	5	0
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°	409.2	409.2	409.2	409.2	409.2
2.5°	411.0	409.6	406.0	409.2	408.7
5°	409.6	408.2	405.0	408.7	408.2
7.5°	406.9	406.0	403.2	407.3	406.9
10°	403.2	402.7	400.5	404.6	404.1
12.5°	398.2	398.2	396.8	400.5	400.5
15°	392.7	393.1	391.8	395.9	395.4
17.5°	385.3	386.7	386.3	390.4	389.9
20°	377.5	378.9	379.4	384.0	384.0
22.5°	368.8	370.7	371.6	376.2	377.1
25°	359.2	362.0	363.3	368.4	368.8
27.5°	348.7	352.8	354.6	359.2	359.7
30°	338.1	341.8	345.0	350.1	351.0
32.5°	326.7	331.3	334.9	340.9	341.8
35°	314.3	319.8	324.4	330.8	332.2
37.5°	301.9	308.4	313.9	320.3	321.6
40°	290.0	296.0	302.4	309.3	311.1
42.5°	276.3	283.2	290.9	298.7	300.1
45°	262.1	270.8	279.5	287.3	289.6
47.5°	248.8	257.5	267.6	275.4	278.1
50°	234.1	244.2	254.3	263.5	266.2
52.5°	219.5	229.6	241.5	250.6	253.4
55°	205.3	214.9	228.6	237.8	240.5
57.5°	189.2	201.1	214.4	225.4	227.7
60°	173.7	185.6	200.7	211.2	214.9
62.5°	158.5	171.8	186.9	197.5	201.1
65°	142.0	156.7	172.3	183.7	187.4
67.5°	126.5	142.0	158.5	170.0	173.7
70°	110.4	126.0	143.4	155.8	159.0
72.5°	94.8	110.9	129.7	141.6	145.2
75°	78.8	95.8	115.0	127.8	132.0
77.5°	63.7	81.6	101.7	114.5	119.1
80°	49.9	68.3	88.4	102.2	105.8
82.5°	36.2	55.4	75.6	89.8	93.9
85°	24.3	43.5	64.1	77.9	82.5
87.5°	15.1	33.9	54.1	67.4	71.5
90°	7.3	25.7	45.4	58.6	62.3
92.5°	6.9	22.9	42.6	55.4	59.1
95°	6.0	21.1	39.9	52.2	56.4
97.5°	5.5	18.8	37.6	49.5	53.6
100°	5.0	17.0	34.8	47.2	50.4
102.5°	5.0	15.1	32.5	44.4	48.1
105°	4.1	13.3	30.2	41.7	45.4
107.5°	4.1	11.9	27.9	39.4	42.6
110°	3.7	10.1	26.1	36.7	40.3

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.2	8.7	23.8	33.9	37.6
115°	2.7	6.9	21.5	31.6	34.8
117.5°	2.7	5.5	19.2	28.9	32.5
120°	2.3	3.7	17.0	26.1	29.8
122.5°	2.3	2.3	14.7	23.8	27.0
125°	1.8	1.4	12.8	21.5	24.3
127.5°	1.8	1.4	10.5	18.8	22.0
130°	1.4	0.9	8.2	16.5	19.2
132.5°	1.4	0.9	6.4	14.2	17.0
135°	0.9	0.9	4.1	11.5	14.2
137.5°	0.9	0.5	2.3	9.2	11.5
140°	0.9	0.5	0.9	6.9	9.2
142.5°	0.5	0.5	0.0	5.0	6.9
145°	0.5	0.0	0.0	2.7	4.6
147.5°	0.5	0.0	0.0	0.5	2.3
150°	0.5	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)