

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: P998537

Luminaire Tested: S124DR-B575DB50-4F0-XX-W2A-D

Issue Date: 5/2/2025

Test Information

Test Method: LM-79-2019
Report Number: P998537
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-B575DB50-4F0-XX-W2A-D
Description: Define 4 Direct Recessed with 5000K BioUP LEDs {m-DER=1.015} {m-EER=1.115}
Light Source: -
Ballast/Driver: -

Summary

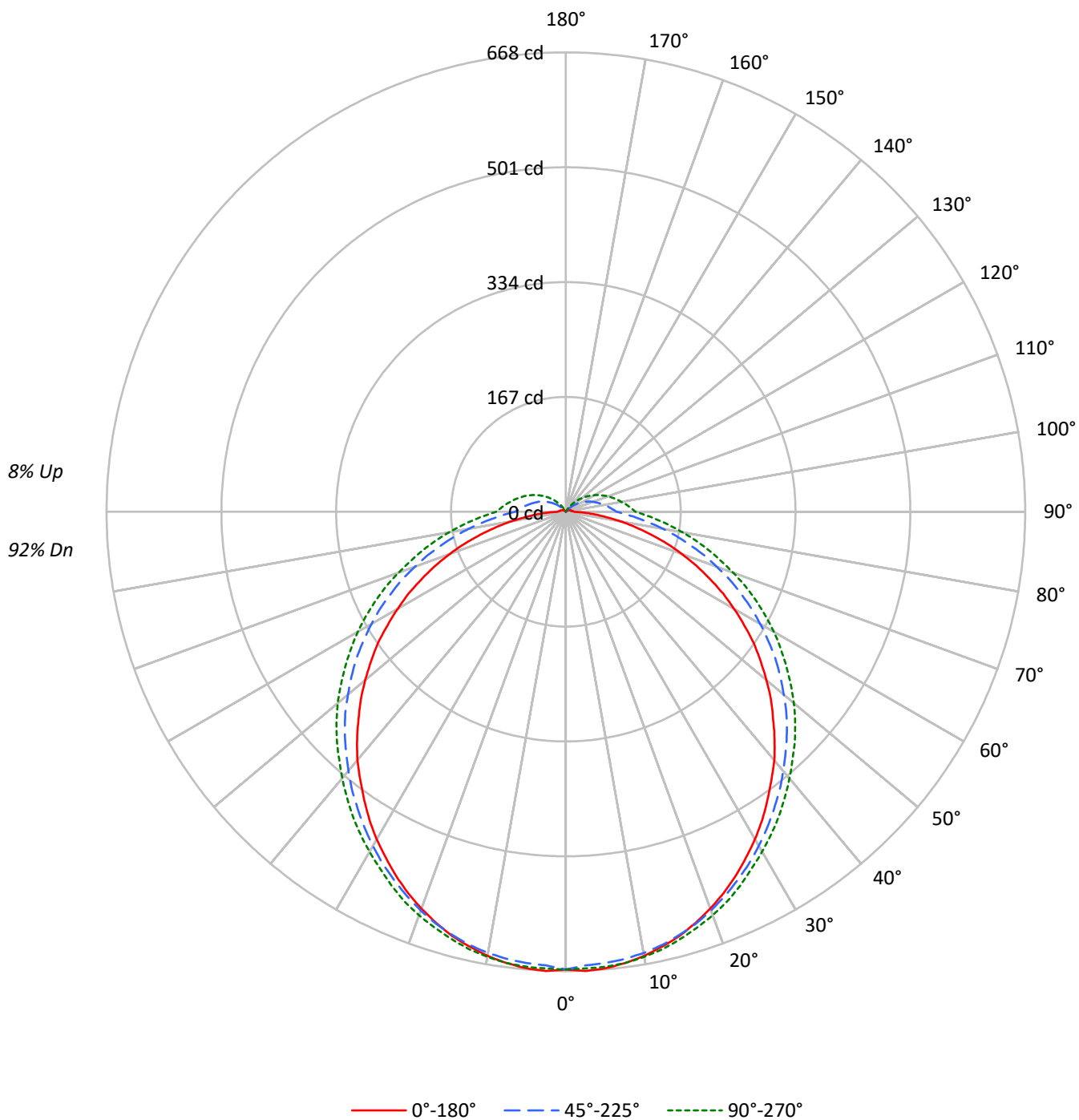
Lumens per Lamp: N/A
Luminaire Lumens: 2269.0 lumens
Efficiency: N/A
Efficacy: 94.5 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 24
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°	5427	5427	5427
5°	5454	5393	5435
10°	5430	5394	5443
15°	5392	5379	5430
20°	5329	5355	5419
25°	5257	5318	5398
30°	5179	5284	5376
35°	5089	5252	5379
40°	5021	5236	5386
45°	4916	5243	5432
50°	4831	5247	5493
55°	4747	5287	5563
60°	4607	5323	5700
65°	4457	5406	5881
70°	4282	5562	6166
75°	4039	5895	6761
80°	3813	6753	8086
85°	3696	9759	12547

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 87.5°

Luminance: 21742 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.1	2.8
10°-20°	180.7	8.0
20°-30°	273.2	12.0
30°-40°	330.5	14.6
40°-50°	349.4	15.4
50°-60°	328.8	14.5
60°-70°	272.9	12.0
70°-80°	191.5	8.4
80°-90°	108.0	4.8
90°-100°	64.3	2.8
100°-110°	47.6	2.1
110°-120°	31.9	1.4
120°-130°	18.0	0.8
130°-140°	7.8	0.3
140°-150°	1.5	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	516.9	22.8
0°-40°	847.4	37.3
0°-60°	1525.6	67.2
0°-90°	2097.9	92.5
90°-120°	143.8	6.3
90°-150°	171.1	7.5
90°-180°	171.0	7.5
0°-180°	2269.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	666	666	666	666	666	
5°	666	664	659	665	664	63
15°	639	639	637	644	643	180
25°	584	589	591	599	600	269
35°	511	520	528	538	540	320
45°	426	440	455	467	471	329
55°	334	350	372	387	391	298
65°	231	255	280	299	305	229
75°	128	156	187	208	215	136
85°	40	71	104	127	134	41
90°	12	42	74	95	101	8
95°	10	34	65	85	92	8
105°	7	22	49	68	74	8
115°	4	11	35	51	57	5
125°	3	2	21	35	40	3
135°	2	2	7	19	23	1
145°	1	0	0	4	8	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°	665.5	665.5	665.5	665.5	665.5
2.5°	668.5	666.3	660.3	665.5	664.8
5°	666.3	664.0	658.8	664.8	664.0
7.5°	661.8	660.3	655.8	662.5	661.8
10°	655.8	655.1	651.4	658.1	657.3
12.5°	647.6	647.6	645.4	651.4	651.4
15°	638.7	639.4	637.2	643.9	643.2
17.5°	626.8	629.0	628.2	635.0	634.2
20°	614.1	616.3	617.1	624.5	624.5
22.5°	599.9	602.9	604.4	611.9	613.3
25°	584.3	588.7	591.0	599.2	599.9
27.5°	567.1	573.8	576.8	584.3	585.0
30°	550.0	556.0	561.2	569.4	570.9
32.5°	531.4	538.8	544.8	554.5	556.0
35°	511.2	520.2	527.6	538.1	540.3
37.5°	491.1	501.6	510.5	520.9	523.2
40°	471.7	481.4	491.9	503.0	506.0
42.5°	449.4	460.6	473.2	485.9	488.1
45°	426.3	440.4	454.6	467.3	471.0
47.5°	404.7	418.8	435.2	447.9	452.4
50°	380.8	397.2	413.6	428.5	433.0
52.5°	357.0	373.4	392.7	407.7	412.1
55°	333.9	349.5	371.9	386.8	391.3
57.5°	307.8	327.2	348.8	366.7	370.4
60°	282.5	301.8	326.4	343.6	349.5
62.5°	257.9	279.5	304.1	321.2	327.2
65°	231.0	254.9	280.2	298.8	304.8
67.5°	205.7	231.0	257.9	276.5	282.5
70°	179.6	204.9	233.3	253.4	258.6
72.5°	154.3	180.4	210.9	230.3	236.2
75°	128.2	155.8	187.1	207.9	214.6
77.5°	103.6	132.7	165.4	186.3	193.8
80°	81.2	111.0	143.8	166.2	172.2
82.5°	58.9	90.2	123.0	146.1	152.8
85°	39.5	70.8	104.3	126.7	134.1
87.5°	24.6	55.1	87.9	109.6	116.3
90°	11.9	41.7	73.8	95.4	101.4
92.5°	11.2	37.3	69.3	90.2	96.1
95°	9.7	34.3	64.8	85.0	91.7
97.5°	8.9	30.6	61.1	80.5	87.2
100°	8.2	27.6	56.6	76.8	82.0
102.5°	8.2	24.6	52.9	72.3	78.3
105°	6.7	21.6	49.2	67.8	73.8
107.5°	6.7	19.4	45.5	64.1	69.3
110°	6.0	16.4	42.5	59.6	65.6

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	5.2	14.2	38.8	55.1	61.1
115°	4.5	11.2	35.0	51.4	56.6
117.5°	4.5	8.9	31.3	47.0	52.9
120°	3.7	6.0	27.6	42.5	48.4
122.5°	3.7	3.7	23.8	38.8	44.0
125°	3.0	2.2	20.9	35.0	39.5
127.5°	3.0	2.2	17.1	30.6	35.8
130°	2.2	1.5	13.4	26.8	31.3
132.5°	2.2	1.5	10.4	23.1	27.6
135°	1.5	1.5	6.7	18.6	23.1
137.5°	1.5	0.7	3.7	14.9	18.6
140°	1.5	0.7	1.5	11.2	14.9
142.5°	0.7	0.7	0.0	8.2	11.2
145°	0.7	0.0	0.0	4.5	7.5
147.5°	0.7	0.0	0.0	0.7	3.7
150°	0.7	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)