

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: P1059472

Luminaire Tested: S123RDR-H1000D940-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059472
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-30)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H1000D940-X4F0-XX-UDD-BVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

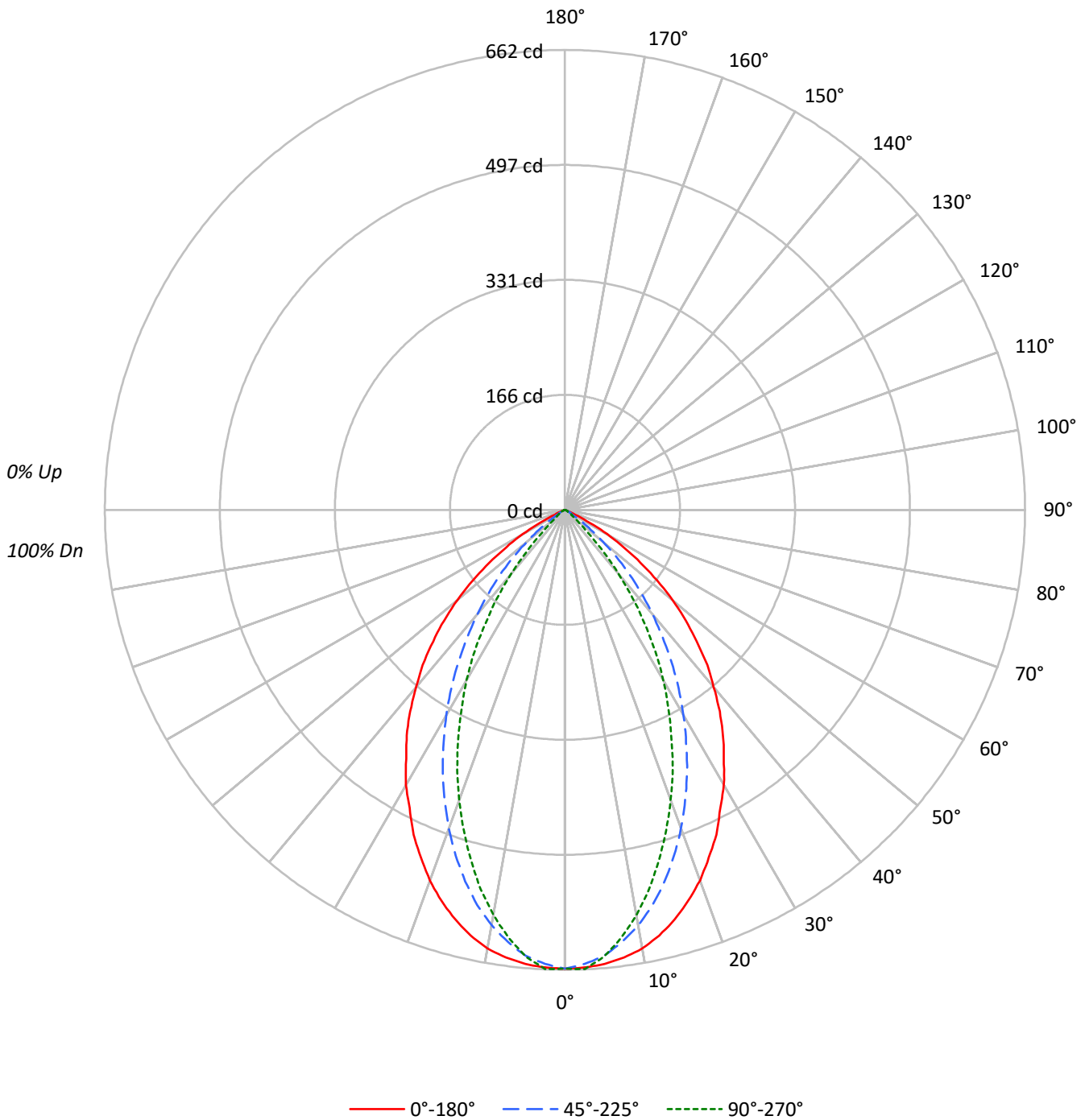
Lumens per Lamp: N/A
Luminaire Lumens: 753.6 lumens
Efficiency: N/A
Efficacy: 24.2 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 0.81 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 31.2
Input Voltage (V): 120
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	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	113	110	107	104	110	107	105	103	103	101	100	100	98	97	96	95	94	92				92
2	106	101	96	92	104	99	95	91	96	92	89	93	90	87	90	87	85	84				84
3	100	92	87	82	98	91	86	82	88	84	80	86	82	79	83	80	78	76				76
4	94	85	79	74	92	84	78	74	82	77	73	80	75	72	78	74	71	69				69
5	88	79	72	67	86	78	71	67	76	70	66	74	69	65	72	68	65	63				63
6	83	73	66	61	81	72	66	61	70	65	60	69	64	60	67	63	60	58				58
7	78	68	61	56	77	67	60	56	66	60	56	64	59	55	63	58	55	53				53
8	74	63	56	52	72	62	56	51	61	55	51	60	55	51	59	54	51	49				49
9	70	59	52	48	68	58	52	48	57	52	47	56	51	47	55	51	47	46				46
10	66	55	49	44	65	55	48	44	54	48	44	53	48	44	52	47	44	42				42

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7755	7755	7755
5°	7735	7597	7609
10°	7647	7241	7064
15°	7420	6736	6348
20°	7097	6099	5554
25°	6683	5387	4699
30°	6201	4629	3836
35°	5687	3826	2851
40°	5103	3000	1826
45°	4450	2190	759
50°	3692	1303	292
55°	2721	545	217
60°	1649	200	124
65°	445	119	58
70°	0	38	38
75°	0	0	50
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4450 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.8	8.1
10°-20°	156.9	20.8
20°-30°	195.6	25.9
30°-40°	174.9	23.2
40°-50°	110.4	14.6
50°-60°	46.2	6.1
60°-70°	8.7	1.2
70°-80°	0.3	0.0
80°-90°	0.0	0.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	413.3	54.8
0°-40°	588.1	78.0
0°-60°	744.6	98.8
0°-90°	753.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	753.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	660	660	660	660	660	
5°	656	655	644	647	646	62
15°	610	596	554	531	522	171
25°	516	474	416	380	363	236
35°	397	339	267	219	199	247
45°	268	208	132	70	46	207
55°	133	92	27	11	11	119
65°	16	12	4	2	2	23
75°	0	0	0	0	1	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	660.4	660.4	660.4	660.4	660.4
2.5°	659.4	660.4	654.1	660.4	661.5
5°	656.2	655.1	644.5	646.6	645.5
7.5°	649.8	646.6	627.5	623.2	621.1
10°	641.3	632.8	607.3	596.6	592.4
12.5°	627.5	615.8	582.8	565.8	559.4
15°	610.4	595.6	554.1	530.7	522.2
17.5°	590.2	569.0	522.2	496.7	483.9
20°	567.9	538.1	488.1	457.3	444.5
22.5°	541.3	508.4	452.0	419.0	405.2
25°	515.8	474.3	415.8	379.7	362.7
27.5°	483.9	440.3	377.5	340.3	322.2
30°	457.3	407.3	341.4	299.9	282.9
32.5°	425.4	373.3	304.2	258.4	242.5
35°	396.7	339.3	266.9	219.1	198.9
37.5°	365.8	306.3	229.7	179.7	160.6
40°	332.9	273.3	195.7	140.4	119.1
42.5°	303.1	240.4	161.7	104.2	83.0
45°	268.0	208.4	131.9	70.2	45.7
47.5°	236.1	178.7	100.0	39.3	24.5
50°	202.1	147.8	71.3	20.2	16.0
52.5°	167.0	118.0	46.8	13.8	12.8
55°	132.9	91.5	26.6	10.6	10.6
57.5°	100.0	65.9	13.8	8.5	7.4
60°	70.2	43.6	8.5	6.4	5.3
62.5°	40.4	25.5	6.4	4.3	4.3
65°	16.0	11.7	4.3	2.1	2.1
67.5°	1.1	3.2	2.1	1.1	1.1
70°	0.0	0.0	1.1	1.1	1.1
72.5°	0.0	0.0	1.1	1.1	1.1
75°	0.0	0.0	0.0	0.0	1.1
77.5°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0



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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	12.30	13.48	12.67	13.79	14.11	0.00	0.00	0.00	0.00	0.00
	3H	12.15	13.18	12.53	13.51	13.87	0.00	0.00	0.00	0.00	0.00
	4H	12.06	13.01	12.46	13.37	13.75	0.00	0.00	0.00	0.00	0.00
	6H	11.97	12.84	12.38	13.21	13.61	0.00	0.00	0.00	0.00	0.00
	8H	11.92	12.74	12.35	13.13	13.54	0.00	0.00	0.00	0.00	0.00
	12H	11.87	12.65	12.30	13.03	13.47	0.00	0.00	0.00	0.00	0.00
4H	2H	12.06	13.02	12.47	13.37	13.76	0.00	0.00	0.00	0.00	0.00
	3H	11.90	12.67	12.31	13.07	13.48	0.00	0.00	0.00	0.00	0.00
	4H	11.79	12.48	12.23	12.90	13.34	0.00	0.00	0.00	0.00	0.00
	6H	11.70	12.28	12.17	12.73	13.20	0.00	0.00	0.00	0.00	0.00
	8H	11.63	12.18	12.11	12.63	13.10	0.00	0.00	0.00	0.00	0.00
	12H	11.58	12.05	12.07	12.54	13.01	0.00	0.00	0.00	0.00	0.00
8H	4H	11.63	12.18	12.11	12.63	13.10	0.00	0.00	0.00	0.00	0.00
	6H	11.52	11.96	12.02	12.46	12.94	0.00	0.00	0.00	0.00	0.00
	8H	11.44	11.84	11.97	12.36	12.86	0.00	0.00	0.00	0.00	0.00
	12H	11.39	11.74	11.91	12.24	12.81	0.00	0.00	0.00	0.00	0.00
12H	4H	11.58	12.05	12.07	12.54	13.01	0.00	0.00	0.00	0.00	0.00
	6H	11.44	11.84	11.97	12.36	12.86	0.00	0.00	0.00	0.00	0.00
	8H	11.39	11.74	11.91	12.24	12.81	0.00	0.00	0.00	0.00	0.00