

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: P1059616

Luminaire Tested: S123RDR-H340D930-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059616
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-H340D930-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: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

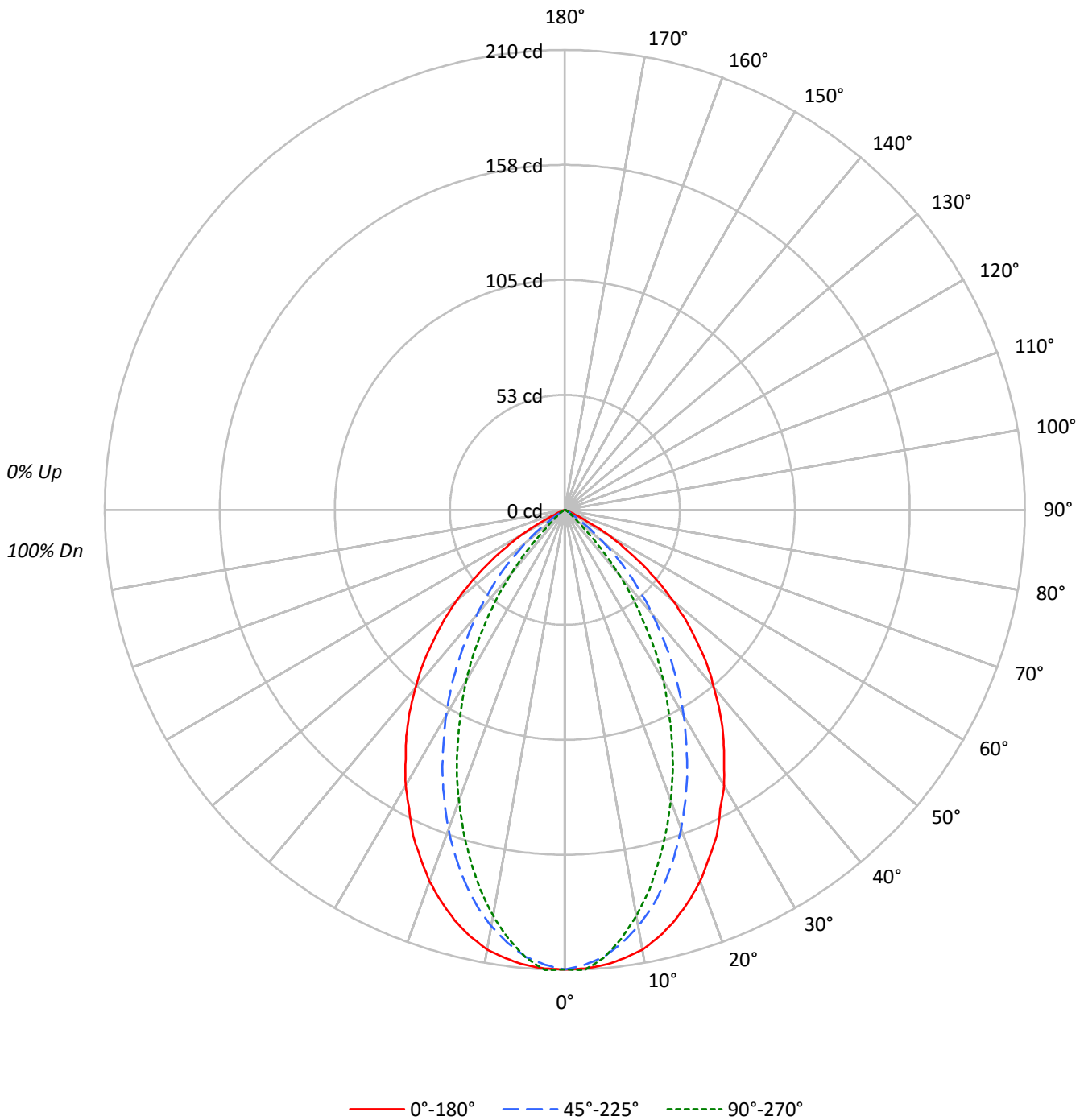
Lumens per Lamp: N/A
Luminaire Lumens: 239.6 lumens
Efficiency: N/A
Efficacy: 20.5 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 0.81 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	113	110	107	104	110	107	105	103	103	101	100	100	98	97	96	95	94	92
2	106	101	96	92	104	99	95	91	96	92	89	93	90	87	90	87	85	84
3	100	92	87	82	98	91	86	82	88	84	80	86	82	79	83	80	78	76
4	94	85	79	74	92	84	78	74	82	77	73	80	75	72	78	74	71	69
5	88	79	72	67	86	78	71	67	76	70	66	74	69	65	72	68	65	63
6	83	73	66	61	81	72	66	61	70	65	60	69	64	60	67	63	60	58
7	78	68	61	56	77	67	60	56	66	60	56	64	59	55	63	58	55	53
8	74	63	56	52	72	62	56	51	61	55	51	60	55	51	59	54	51	49
9	70	59	52	48	68	58	52	48	57	52	47	56	51	47	55	51	47	46
10	66	55	49	44	65	55	48	44	54	48	44	53	48	44	52	47	44	42

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2465	2465	2465
5°	2459	2415	2419
10°	2431	2301	2245
15°	2360	2141	2018
20°	2256	1939	1766
25°	2125	1713	1494
30°	1971	1471	1219
35°	1808	1217	906
40°	1622	953	581
45°	1415	696	241
50°	1173	415	93
55°	866	174	70
60°	524	63	40
65°	142	39	19
70°	0	10	10
75°	0	0	14
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1415 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	19.3	8.1
10°-20°	49.9	20.8
20°-30°	62.2	25.9
30°-40°	55.6	23.2
40°-50°	35.1	14.6
50°-60°	14.7	6.1
60°-70°	2.8	1.2
70°-80°	0.1	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°	131.4	54.8
0°-40°	187.0	78.0
0°-60°	236.7	98.8
0°-90°	239.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	239.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	210	210	210	210	210	
5°	209	208	205	206	205	20
15°	194	189	176	169	166	54
25°	164	151	132	121	115	75
35°	126	108	85	70	63	79
45°	85	66	42	22	14	66
55°	42	29	8	3	3	38
65°	5	4	1	1	1	7
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	209.9	209.9	209.9	209.9	209.9
2.5°	209.6	209.9	207.9	209.9	210.3
5°	208.6	208.2	204.9	205.5	205.2
7.5°	206.6	205.5	199.5	198.1	197.4
10°	203.9	201.2	193.0	189.7	188.3
12.5°	199.5	195.7	185.3	179.9	177.8
15°	194.1	189.3	176.1	168.7	166.0
17.5°	187.6	180.9	166.0	157.9	153.8
20°	180.5	171.1	155.2	145.4	141.3
22.5°	172.1	161.6	143.7	133.2	128.8
25°	164.0	150.8	132.2	120.7	115.3
27.5°	153.8	140.0	120.0	108.2	102.4
30°	145.4	129.5	108.5	95.3	89.9
32.5°	135.2	118.7	96.7	82.2	77.1
35°	126.1	107.8	84.9	69.6	63.2
37.5°	116.3	97.4	73.0	57.1	51.0
40°	105.8	86.9	62.2	44.6	37.9
42.5°	96.3	76.4	51.4	33.1	26.4
45°	85.2	66.3	41.9	22.3	14.5
47.5°	75.1	56.8	31.8	12.5	7.8
50°	64.2	47.0	22.7	6.4	5.1
52.5°	53.1	37.5	14.9	4.4	4.1
55°	42.3	29.1	8.5	3.4	3.4
57.5°	31.8	21.0	4.4	2.7	2.4
60°	22.3	13.9	2.7	2.0	1.7
62.5°	12.8	8.1	2.0	1.4	1.4
65°	5.1	3.7	1.4	0.7	0.7
67.5°	0.3	1.0	0.7	0.3	0.3
70°	0.0	0.0	0.3	0.3	0.3
72.5°	0.0	0.0	0.3	0.3	0.3
75°	0.0	0.0	0.0	0.0	0.3
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	8.34	9.51	8.70	9.83	10.14	0.00	0.00	0.00	0.00	0.00
	3H	8.18	9.21	8.56	9.54	9.91	0.00	0.00	0.00	0.00	0.00
	4H	8.09	9.05	8.50	9.40	9.78	0.00	0.00	0.00	0.00	0.00
	6H	8.00	8.87	8.41	9.24	9.64	0.00	0.00	0.00	0.00	0.00
	8H	7.95	8.77	8.38	9.16	9.57	0.00	0.00	0.00	0.00	0.00
	12H	7.90	8.68	8.33	9.07	9.50	0.00	0.00	0.00	0.00	0.00
4H	2H	8.10	9.05	8.50	9.40	9.79	0.00	0.00	0.00	0.00	0.00
	3H	7.93	8.70	8.35	9.11	9.51	0.00	0.00	0.00	0.00	0.00
	4H	7.83	8.51	8.26	8.93	9.38	0.00	0.00	0.00	0.00	0.00
	6H	7.73	8.31	8.20	8.76	9.23	0.00	0.00	0.00	0.00	0.00
	8H	7.66	8.21	8.14	8.66	9.13	0.00	0.00	0.00	0.00	0.00
	12H	7.61	8.08	8.10	8.57	9.05	0.00	0.00	0.00	0.00	0.00
8H	4H	7.66	8.21	8.14	8.66	9.13	0.00	0.00	0.00	0.00	0.00
	6H	7.55	7.99	8.05	8.49	8.97	0.00	0.00	0.00	0.00	0.00
	8H	7.48	7.87	8.00	8.39	8.89	0.00	0.00	0.00	0.00	0.00
	12H	7.42	7.77	7.94	8.27	8.84	0.00	0.00	0.00	0.00	0.00
12H	4H	7.61	8.08	8.10	8.57	9.05	0.00	0.00	0.00	0.00	0.00
	6H	7.48	7.87	8.00	8.39	8.89	0.00	0.00	0.00	0.00	0.00
	8H	7.42	7.77	7.94	8.27	8.84	0.00	0.00	0.00	0.00	0.00