

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: P1059571

Luminaire Tested: S123RDR-H340D830-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059571
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-H340D830-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, 80 CRI LEDS
Ballast/Driver: -

Summary

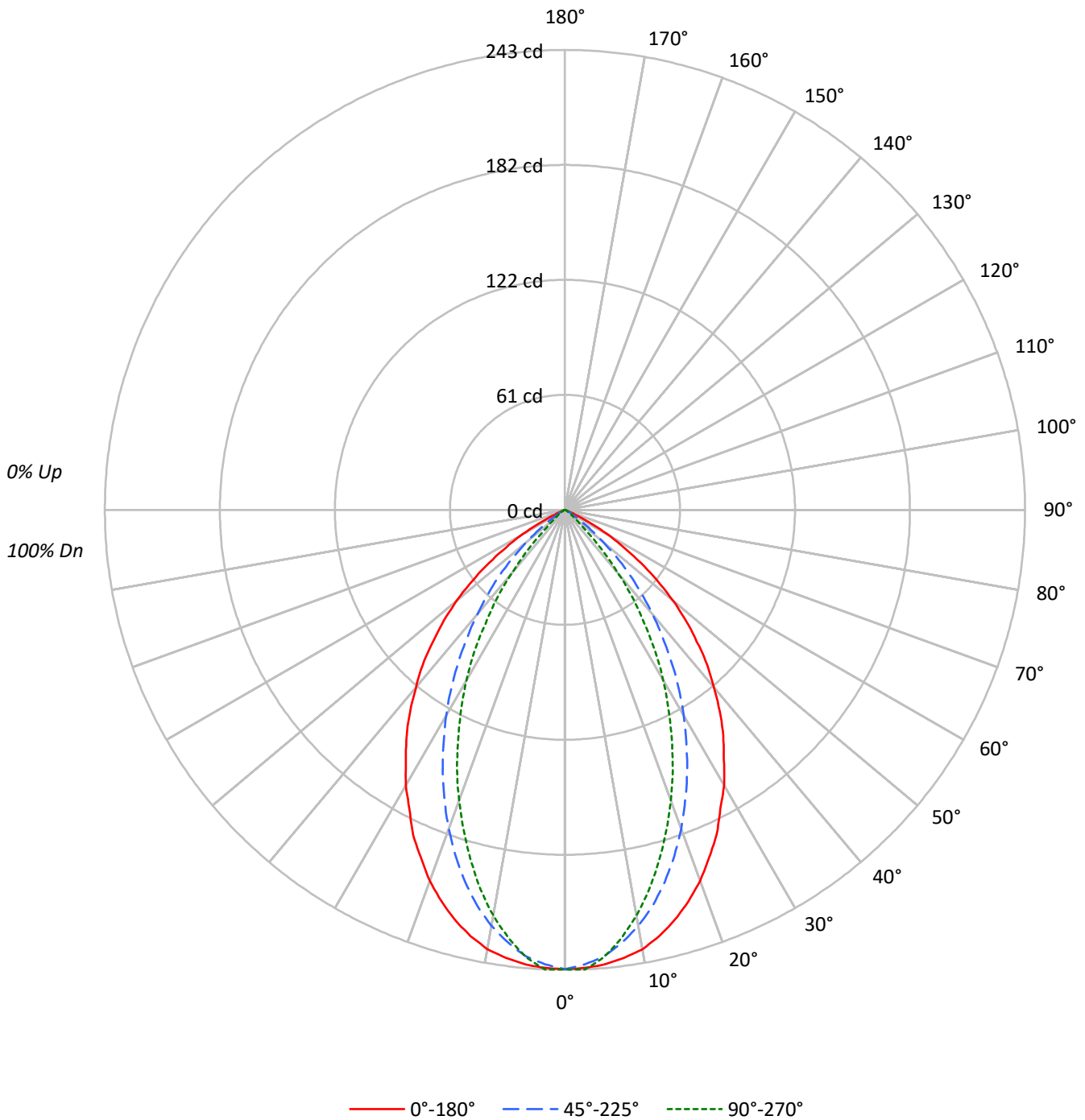
Lumens per Lamp: N/A
Luminaire Lumens: 277.0 lumens
Efficiency: N/A
Efficacy: 23.7 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 0.81 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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°	2850	2850	2850
5°	2842	2791	2796
10°	2810	2661	2596
15°	2727	2475	2333
20°	2608	2242	2042
25°	2457	1980	1727
30°	2279	1702	1410
35°	2090	1406	1048
40°	1875	1102	671
45°	1636	805	279
50°	1357	479	108
55°	1001	201	80
60°	606	73	47
65°	164	44	22
70°	0	14	14
75°	0	0	18
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1636 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	22.3	8.1
10°-20°	57.7	20.8
20°-30°	71.9	25.9
30°-40°	64.3	23.2
40°-50°	40.6	14.6
50°-60°	17.0	6.1
60°-70°	3.2	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°	151.9	54.8
0°-40°	216.1	78.0
0°-60°	273.7	98.8
0°-90°	277.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	277.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	243	243	243	243	243	
5°	241	241	237	238	237	23
15°	224	219	204	195	192	63
25°	190	174	153	140	133	87
35°	146	125	98	80	73	91
45°	98	77	48	26	17	76
55°	49	34	10	4	4	44
65°	6	4	2	1	1	8
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



TEST NUMBER: P1059571

CATALOG NUMBER: S123RDR-H340D830-X4F0-XX-UDD-BVL-B

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	242.7	242.7	242.7	242.7	242.7
2.5°	242.3	242.7	240.4	242.7	243.1
5°	241.1	240.8	236.8	237.6	237.2
7.5°	238.8	237.6	230.6	229.0	228.2
10°	235.7	232.5	223.2	219.3	217.7
12.5°	230.6	226.3	214.2	207.9	205.6
15°	224.3	218.9	203.6	195.0	191.9
17.5°	216.9	209.1	191.9	182.5	177.8
20°	208.7	197.8	179.4	168.1	163.4
22.5°	198.9	186.8	166.1	154.0	148.9
25°	189.6	174.3	152.8	139.5	133.3
27.5°	177.8	161.8	138.7	125.1	118.4
30°	168.1	149.7	125.5	110.2	104.0
32.5°	156.3	137.2	111.8	95.0	89.1
35°	145.8	124.7	98.1	80.5	73.1
37.5°	134.4	112.6	84.4	66.1	59.0
40°	122.3	100.4	71.9	51.6	43.8
42.5°	111.4	88.3	59.4	38.3	30.5
45°	98.5	76.6	48.5	25.8	16.8
47.5°	86.8	65.7	36.7	14.5	9.0
50°	74.3	54.3	26.2	7.4	5.9
52.5°	61.4	43.4	17.2	5.1	4.7
55°	48.9	33.6	9.8	3.9	3.9
57.5°	36.7	24.2	5.1	3.1	2.7
60°	25.8	16.0	3.1	2.3	2.0
62.5°	14.9	9.4	2.3	1.6	1.6
65°	5.9	4.3	1.6	0.8	0.8
67.5°	0.4	1.2	0.8	0.4	0.4
70°	0.0	0.0	0.4	0.4	0.4
72.5°	0.0	0.0	0.4	0.4	0.4
75°	0.0	0.0	0.0	0.0	0.4
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	8.82	10.00	9.19	10.31	10.62	0.00	0.00	0.00	0.00	0.00
	3H	8.66	9.69	9.04	10.02	10.39	0.00	0.00	0.00	0.00	0.00
	4H	8.57	9.53	8.98	9.88	10.27	0.00	0.00	0.00	0.00	0.00
	6H	8.48	9.35	8.90	9.73	10.12	0.00	0.00	0.00	0.00	0.00
	8H	8.43	9.25	8.87	9.65	10.05	0.00	0.00	0.00	0.00	0.00
	12H	8.38	9.17	8.82	9.55	9.98	0.00	0.00	0.00	0.00	0.00
4H	2H	8.58	9.53	8.98	9.89	10.27	0.00	0.00	0.00	0.00	0.00
	3H	8.41	9.18	8.83	9.59	9.99	0.00	0.00	0.00	0.00	0.00
	4H	8.31	8.99	8.75	9.41	9.86	0.00	0.00	0.00	0.00	0.00
	6H	8.21	8.80	8.68	9.25	9.72	0.00	0.00	0.00	0.00	0.00
	8H	8.15	8.69	8.62	9.14	9.62	0.00	0.00	0.00	0.00	0.00
	12H	8.09	8.57	8.58	9.05	9.53	0.00	0.00	0.00	0.00	0.00
8H	4H	8.15	8.69	8.62	9.14	9.62	0.00	0.00	0.00	0.00	0.00
	6H	8.03	8.47	8.54	8.97	9.46	0.00	0.00	0.00	0.00	0.00
	8H	7.96	8.36	8.49	8.88	9.37	0.00	0.00	0.00	0.00	0.00
	12H	7.91	8.26	8.42	8.75	9.33	0.00	0.00	0.00	0.00	0.00
12H	4H	8.09	8.57	8.58	9.05	9.53	0.00	0.00	0.00	0.00	0.00
	6H	7.96	8.36	8.49	8.88	9.37	0.00	0.00	0.00	0.00	0.00
	8H	7.91	8.26	8.42	8.75	9.33	0.00	0.00	0.00	0.00	0.00