

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: P1059634

Luminaire Tested: S123RDR-H340D940-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059634
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-H340D940-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

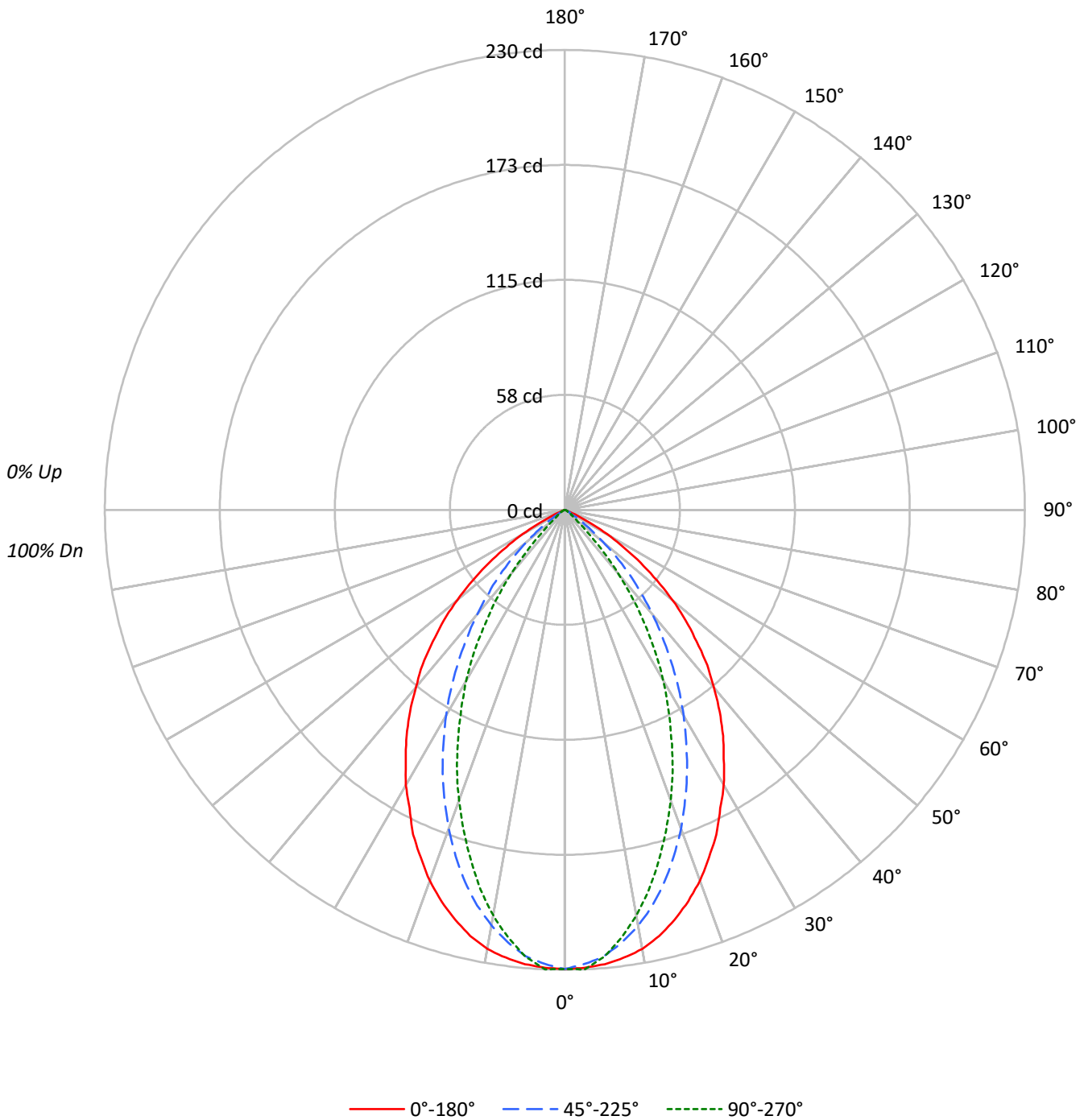
Lumens per Lamp: N/A
Luminaire Lumens: 262.0 lumens
Efficiency: N/A
Efficacy: 22.4 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 0.81 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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°	2696	2696	2696
5°	2689	2642	2645
10°	2659	2517	2456
15°	2580	2341	2206
20°	2467	2121	1932
25°	2323	1873	1634
30°	2156	1609	1334
35°	1977	1330	991
40°	1774	1042	635
45°	1548	761	264
50°	1284	453	100
55°	946	188	76
60°	573	70	42
65°	153	42	19
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: 1548 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	21.1	8.1
10°-20°	54.5	20.8
20°-30°	68.0	25.9
30°-40°	60.8	23.2
40°-50°	38.4	14.6
50°-60°	16.1	6.1
60°-70°	3.0	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°	143.7	54.8
0°-40°	204.5	78.0
0°-60°	258.9	98.8
0°-90°	262.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	262.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	230	230	230	230	230	
5°	228	228	224	225	224	22
15°	212	207	193	184	182	60
25°	179	165	145	132	126	82
35°	138	118	93	76	69	86
45°	93	72	46	24	16	72
55°	46	32	9	4	4	41
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



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	229.6	229.6	229.6	229.6	229.6
2.5°	229.2	229.6	227.4	229.6	230.0
5°	228.1	227.8	224.1	224.8	224.4
7.5°	225.9	224.8	218.2	216.7	215.9
10°	223.0	220.0	211.1	207.4	206.0
12.5°	218.2	214.1	202.6	196.7	194.5
15°	212.2	207.1	192.6	184.5	181.5
17.5°	205.2	197.8	181.5	172.7	168.2
20°	197.4	187.1	169.7	159.0	154.6
22.5°	188.2	176.7	157.1	145.7	140.9
25°	179.3	164.9	144.6	132.0	126.1
27.5°	168.2	153.1	131.3	118.3	112.0
30°	159.0	141.6	118.7	104.3	98.4
32.5°	147.9	129.8	105.7	89.8	84.3
35°	137.9	118.0	92.8	76.2	69.1
37.5°	127.2	106.5	79.9	62.5	55.8
40°	115.7	95.0	68.0	48.8	41.4
42.5°	105.4	83.6	56.2	36.2	28.8
45°	93.2	72.5	45.8	24.4	15.9
47.5°	82.1	62.1	34.8	13.7	8.5
50°	70.3	51.4	24.8	7.0	5.5
52.5°	58.1	41.0	16.3	4.8	4.4
55°	46.2	31.8	9.2	3.7	3.7
57.5°	34.8	22.9	4.8	3.0	2.6
60°	24.4	15.2	3.0	2.2	1.8
62.5°	14.1	8.9	2.2	1.5	1.5
65°	5.5	4.1	1.5	0.7	0.7
67.5°	0.4	1.1	0.7	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	8.63	9.81	9.00	10.12	10.44	0.00	0.00	0.00	0.00	0.00
	3H	8.47	9.51	8.86	9.84	10.20	0.00	0.00	0.00	0.00	0.00
	4H	8.39	9.34	8.79	9.69	10.08	0.00	0.00	0.00	0.00	0.00
	6H	8.30	9.17	8.71	9.54	9.94	0.00	0.00	0.00	0.00	0.00
	8H	8.25	9.07	8.68	9.46	9.87	0.00	0.00	0.00	0.00	0.00
	12H	8.20	8.98	8.63	9.36	9.79	0.00	0.00	0.00	0.00	0.00
4H	2H	8.39	9.35	8.80	9.70	10.09	0.00	0.00	0.00	0.00	0.00
	3H	8.23	9.00	8.64	9.40	9.81	0.00	0.00	0.00	0.00	0.00
	4H	8.12	8.81	8.56	9.23	9.67	0.00	0.00	0.00	0.00	0.00
	6H	8.03	8.61	8.49	9.06	9.53	0.00	0.00	0.00	0.00	0.00
	8H	7.96	8.51	8.44	8.96	9.43	0.00	0.00	0.00	0.00	0.00
	12H	7.91	8.38	8.39	8.87	9.34	0.00	0.00	0.00	0.00	0.00
8H	4H	7.96	8.51	8.44	8.96	9.43	0.00	0.00	0.00	0.00	0.00
	6H	7.85	8.29	8.35	8.79	9.27	0.00	0.00	0.00	0.00	0.00
	8H	7.77	8.17	8.30	8.69	9.18	0.00	0.00	0.00	0.00	0.00
	12H	7.72	8.07	8.24	8.57	9.14	0.00	0.00	0.00	0.00	0.00
12H	4H	7.91	8.38	8.39	8.87	9.34	0.00	0.00	0.00	0.00	0.00
	6H	7.77	8.17	8.30	8.69	9.18	0.00	0.00	0.00	0.00	0.00
	8H	7.72	8.07	8.24	8.57	9.14	0.00	0.00	0.00	0.00	0.00