

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: P1059598

Luminaire Tested: S123RDR-H340D850-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059598
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-H340D850-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: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

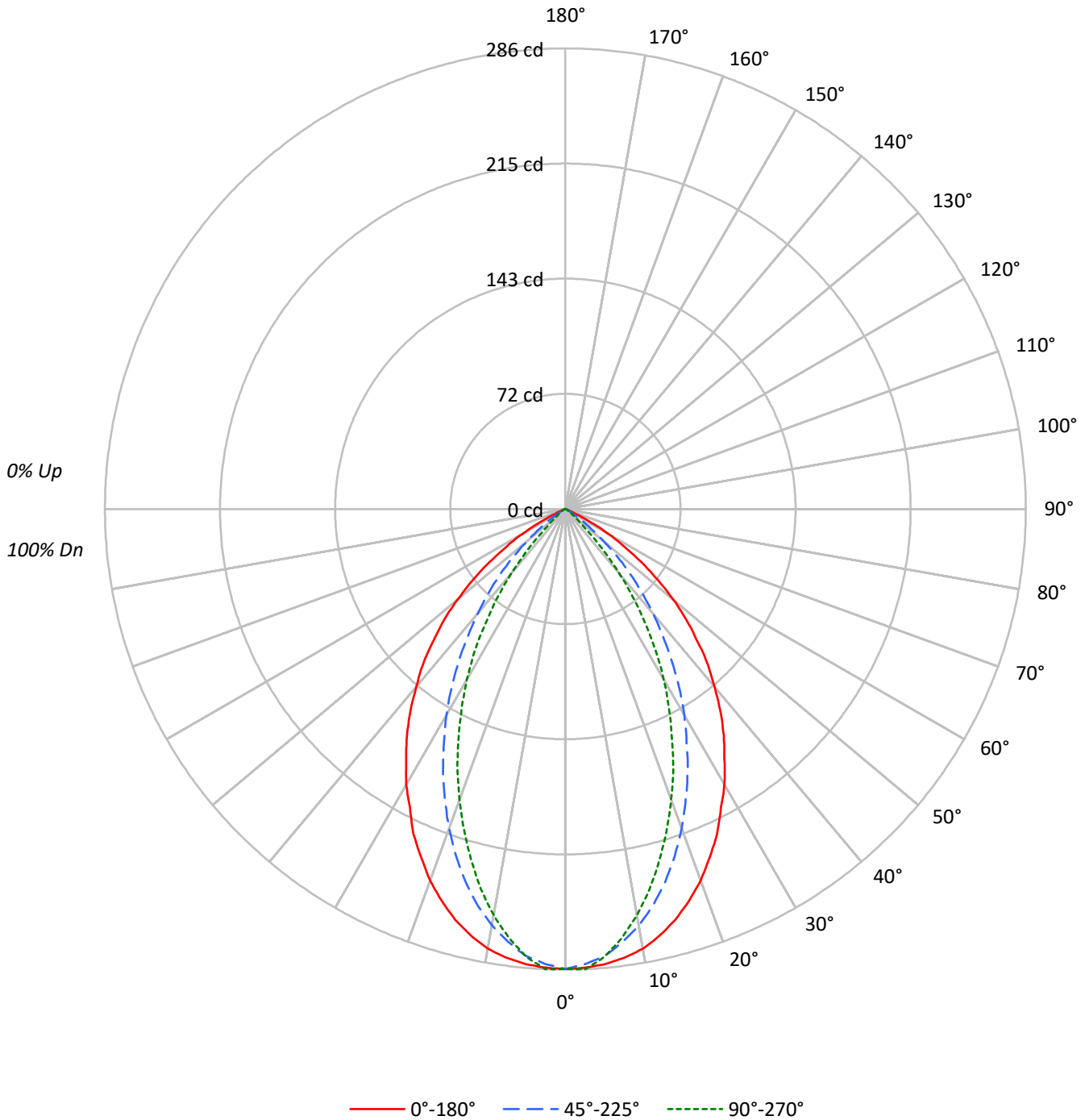
Lumens per Lamp: N/A
Luminaire Lumens: 325.9 lumens
Efficiency: N/A
Efficacy: 27.9 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 0.81 / 0.93
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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°	3354	3354	3354
5°	3344	3285	3290
10°	3306	3131	3054
15°	3209	2913	2745
20°	3069	2638	2402
25°	2889	2330	2032
30°	2681	2001	1658
35°	2458	1654	1233
40°	2206	1297	789
45°	1925	947	329
50°	1597	563	126
55°	1177	235	94
60°	714	87	54
65°	192	50	25
70°	0	17	17
75°	0	0	23
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1925 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	26.3	8.1
10°-20°	67.8	20.8
20°-30°	84.6	25.9
30°-40°	75.6	23.2
40°-50°	47.7	14.6
50°-60°	20.0	6.1
60°-70°	3.8	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°	178.7	54.8
0°-40°	254.3	78.0
0°-60°	322.0	98.8
0°-90°	325.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	325.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	286	286	286	286	286	
5°	284	283	279	280	279	27
15°	264	258	240	230	226	74
25°	223	205	180	164	157	102
35°	172	147	115	95	86	107
45°	116	90	57	30	20	89
55°	58	40	12	5	5	51
65°	7	5	2	1	1	10
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°	285.6	285.6	285.6	285.6	285.6
2.5°	285.1	285.6	282.8	285.6	286.0
5°	283.7	283.3	278.7	279.6	279.1
7.5°	281.0	279.6	271.3	269.5	268.6
10°	277.3	273.6	262.6	258.0	256.1
12.5°	271.3	266.3	252.0	244.6	241.9
15°	264.0	257.5	239.6	229.5	225.8
17.5°	255.2	246.0	225.8	214.8	209.2
20°	245.6	232.7	211.1	197.7	192.2
22.5°	234.1	219.8	195.4	181.2	175.2
25°	223.0	205.1	179.8	164.2	156.8
27.5°	209.2	190.4	163.2	147.2	139.3
30°	197.7	176.1	147.6	129.7	122.3
32.5°	183.9	161.4	131.5	111.7	104.8
35°	171.5	146.7	115.4	94.7	86.0
37.5°	158.2	132.4	99.3	77.7	69.4
40°	143.9	118.2	84.6	60.7	51.5
42.5°	131.1	103.9	69.9	45.1	35.9
45°	115.9	90.1	57.0	30.4	19.8
47.5°	102.1	77.3	43.2	17.0	10.6
50°	87.4	63.9	30.8	8.7	6.9
52.5°	72.2	51.0	20.2	6.0	5.5
55°	57.5	39.5	11.5	4.6	4.6
57.5°	43.2	28.5	6.0	3.7	3.2
60°	30.4	18.9	3.7	2.8	2.3
62.5°	17.5	11.0	2.8	1.8	1.8
65°	6.9	5.1	1.8	0.9	0.9
67.5°	0.5	1.4	0.9	0.5	0.5
70°	0.0	0.0	0.5	0.5	0.5
72.5°	0.0	0.0	0.5	0.5	0.5
75°	0.0	0.0	0.0	0.0	0.5
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	9.39	10.57	9.76	10.88	11.20	0.00	0.00	0.00	0.00	0.00
	3H	9.23	10.26	9.61	10.60	10.96	0.00	0.00	0.00	0.00	0.00
	4H	9.15	10.10	9.55	10.45	10.84	0.00	0.00	0.00	0.00	0.00
	6H	9.05	9.93	9.47	10.30	10.69	0.00	0.00	0.00	0.00	0.00
	8H	9.00	9.83	9.44	10.22	10.63	0.00	0.00	0.00	0.00	0.00
	12H	8.95	9.74	9.39	10.12	10.55	0.00	0.00	0.00	0.00	0.00
4H	2H	9.15	10.11	9.56	10.46	10.84	0.00	0.00	0.00	0.00	0.00
	3H	8.99	9.75	9.40	10.16	10.57	0.00	0.00	0.00	0.00	0.00
	4H	8.88	9.56	9.32	9.99	10.43	0.00	0.00	0.00	0.00	0.00
	6H	8.79	9.37	9.25	9.82	10.29	0.00	0.00	0.00	0.00	0.00
	8H	8.72	9.26	9.19	9.71	10.19	0.00	0.00	0.00	0.00	0.00
	12H	8.66	9.14	9.15	9.63	10.10	0.00	0.00	0.00	0.00	0.00
8H	4H	8.72	9.26	9.19	9.71	10.19	0.00	0.00	0.00	0.00	0.00
	6H	8.60	9.04	9.11	9.54	10.03	0.00	0.00	0.00	0.00	0.00
	8H	8.53	8.93	9.06	9.45	9.94	0.00	0.00	0.00	0.00	0.00
	12H	8.48	8.83	9.00	9.32	9.90	0.00	0.00	0.00	0.00	0.00
12H	4H	8.66	9.14	9.15	9.63	10.10	0.00	0.00	0.00	0.00	0.00
	6H	8.53	8.93	9.06	9.45	9.94	0.00	0.00	0.00	0.00	0.00
	8H	8.48	8.83	9.00	9.32	9.90	0.00	0.00	0.00	0.00	0.00