

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: P1059580

Luminaire Tested: S123RDR-H340D835-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059580
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-H340D835-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: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

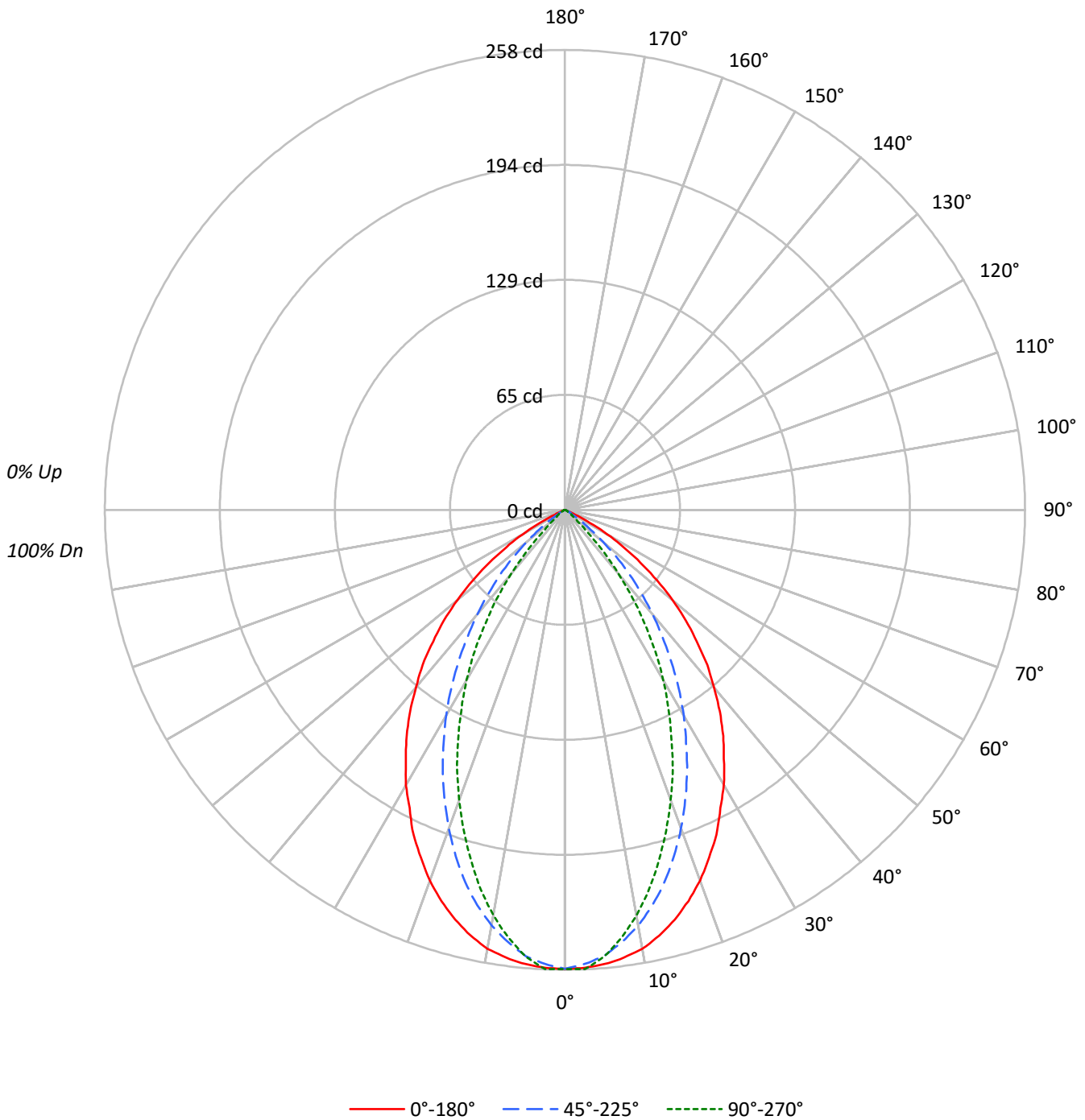
Lumens per Lamp: N/A
Luminaire Lumens: 293.8 lumens
Efficiency: N/A
Efficacy: 25.1 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 0.81 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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	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	
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°	3024	3024	3024
5°	3015	2962	2967
10°	2981	2824	2754
15°	2893	2626	2475
20°	2767	2378	2166
25°	2606	2100	1832
30°	2418	1805	1496
35°	2218	1492	1111
40°	1990	1170	711
45°	1735	854	296
50°	1440	508	113
55°	1060	213	84
60°	643	78	49
65°	172	47	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: 1735 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	23.7	8.1
10°-20°	61.2	20.8
20°-30°	76.2	25.9
30°-40°	68.2	23.2
40°-50°	43.0	14.6
50°-60°	18.0	6.1
60°-70°	3.4	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°	161.1	54.8
0°-40°	229.3	78.0
0°-60°	290.3	98.8
0°-90°	293.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	293.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	258	258	258	258	258	
5°	256	255	251	252	252	24
15°	238	232	216	207	204	67
25°	201	185	162	148	141	92
35°	155	132	104	85	78	96
45°	104	81	51	27	18	81
55°	52	36	10	4	4	46
65°	6	5	2	1	1	9
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°	257.5	257.5	257.5	257.5	257.5
2.5°	257.1	257.5	255.0	257.5	257.9
5°	255.8	255.4	251.3	252.1	251.7
7.5°	253.4	252.1	244.6	243.0	242.2
10°	250.0	246.7	236.8	232.6	231.0
12.5°	244.6	240.1	227.2	220.6	218.1
15°	238.0	232.2	216.0	206.9	203.6
17.5°	230.1	221.8	203.6	193.6	188.7
20°	221.4	209.8	190.3	178.3	173.3
22.5°	211.1	198.2	176.2	163.4	158.0
25°	201.1	184.9	162.1	148.0	141.4
27.5°	188.7	171.7	147.2	132.7	125.6
30°	178.3	158.8	133.1	116.9	110.3
32.5°	165.9	145.5	118.6	100.8	94.5
35°	154.7	132.3	104.1	85.4	77.5
37.5°	142.6	119.4	89.6	70.1	62.6
40°	129.8	106.6	76.3	54.7	46.4
42.5°	118.2	93.7	63.0	40.6	32.3
45°	104.5	81.3	51.4	27.4	17.8
47.5°	92.1	69.7	39.0	15.3	9.5
50°	78.8	57.6	27.8	7.9	6.2
52.5°	65.1	46.0	18.2	5.4	5.0
55°	51.8	35.7	10.4	4.1	4.1
57.5°	39.0	25.7	5.4	3.3	2.9
60°	27.4	17.0	3.3	2.5	2.1
62.5°	15.8	10.0	2.5	1.7	1.7
65°	6.2	4.6	1.7	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	9.03	10.21	9.40	10.52	10.84	0.00	0.00	0.00	0.00	0.00
	3H	8.87	9.91	9.26	10.24	10.60	0.00	0.00	0.00	0.00	0.00
	4H	8.79	9.74	9.19	10.10	10.48	0.00	0.00	0.00	0.00	0.00
	6H	8.70	9.57	9.11	9.94	10.34	0.00	0.00	0.00	0.00	0.00
	8H	8.65	9.47	9.08	9.86	10.27	0.00	0.00	0.00	0.00	0.00
	12H	8.60	9.38	9.03	9.76	10.19	0.00	0.00	0.00	0.00	0.00
4H	2H	8.79	9.75	9.20	10.10	10.49	0.00	0.00	0.00	0.00	0.00
	3H	8.63	9.40	9.04	9.80	10.21	0.00	0.00	0.00	0.00	0.00
	4H	8.52	9.21	8.96	9.63	10.07	0.00	0.00	0.00	0.00	0.00
	6H	8.43	9.01	8.90	9.46	9.93	0.00	0.00	0.00	0.00	0.00
	8H	8.36	8.91	8.84	9.36	9.83	0.00	0.00	0.00	0.00	0.00
	12H	8.31	8.78	8.79	9.27	9.74	0.00	0.00	0.00	0.00	0.00
8H	4H	8.36	8.91	8.84	9.36	9.83	0.00	0.00	0.00	0.00	0.00
	6H	8.25	8.69	8.75	9.19	9.67	0.00	0.00	0.00	0.00	0.00
	8H	8.17	8.57	8.70	9.09	9.58	0.00	0.00	0.00	0.00	0.00
	12H	8.12	8.47	8.64	8.97	9.54	0.00	0.00	0.00	0.00	0.00
12H	4H	8.31	8.78	8.79	9.27	9.74	0.00	0.00	0.00	0.00	0.00
	6H	8.17	8.57	8.70	9.09	9.58	0.00	0.00	0.00	0.00	0.00
	8H	8.12	8.47	8.64	8.97	9.54	0.00	0.00	0.00	0.00	0.00