

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: P1059586

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059586
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-28)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H340D835-X4F0-XX-UDD-WVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

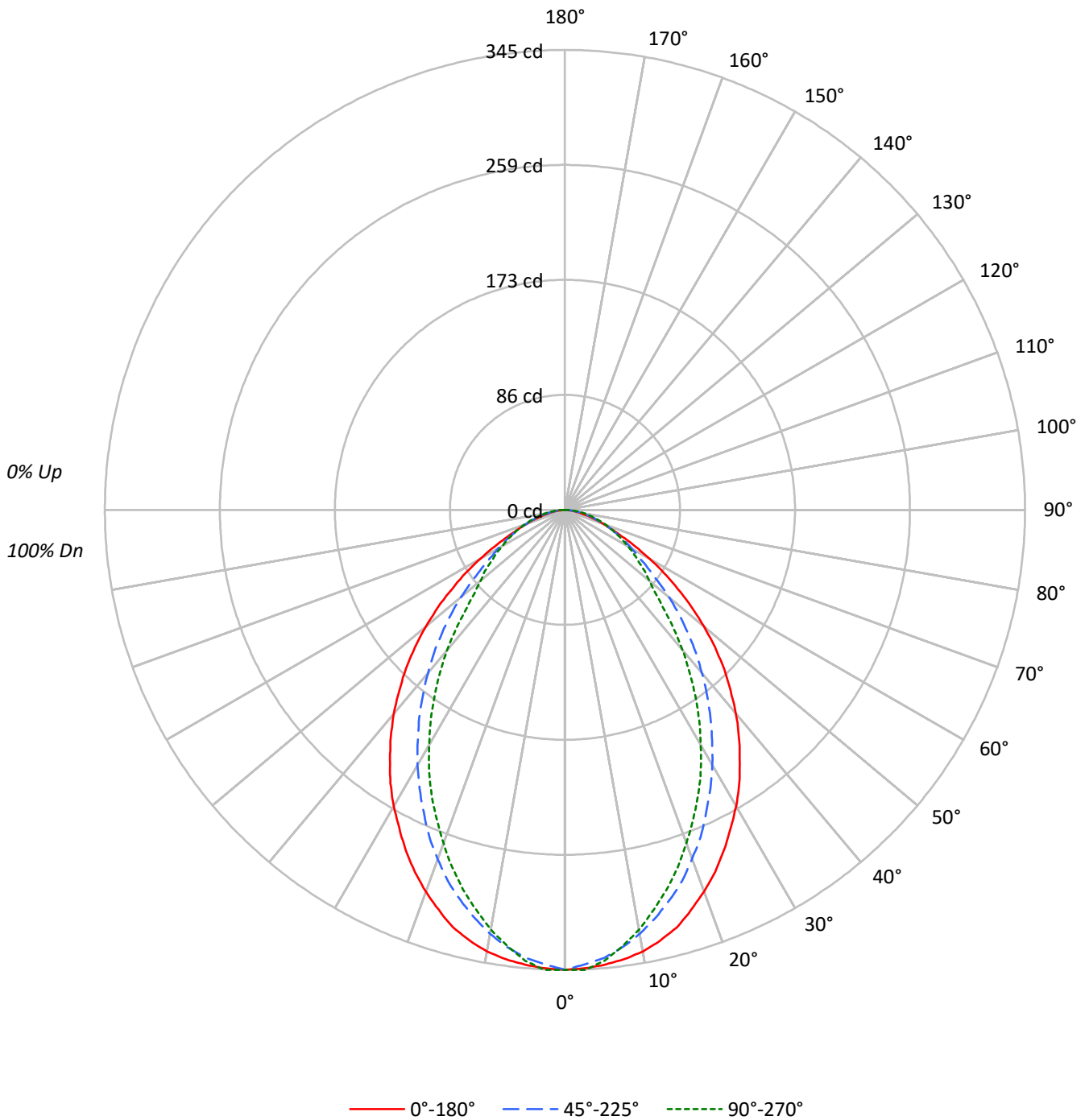
Lumens per Lamp: N/A
Luminaire Lumens: 603.4 lumens
Efficiency: N/A
Efficacy: 51.6 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 0.95 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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									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	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	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	88																												
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76																												
3	94	85	78	73	92	84	77	72	81	75	71	78	73	69	76	72	68	66																												
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58																												
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52																												
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47																												
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42																												
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38																												
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35																												
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4051	4051	4051
5°	4037	3978	4003
10°	4010	3851	3812
15°	3942	3685	3584
20°	3809	3483	3326
25°	3654	3246	3063
30°	3481	2997	2761
35°	3276	2728	2443
40°	3058	2448	2105
45°	2803	2162	1729
50°	2484	1856	1500
55°	2115	1554	1376
60°	1724	1353	1275
65°	1314	1198	1186
70°	1027	1068	1109
75°	826	957	1034
80°	615	784	953
85°	337	498	835

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2803 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.0	5.3
10°-20°	86.2	14.3
20°-30°	117.1	19.4
30°-40°	121.4	20.1
40°-50°	102.4	17.0
50°-60°	72.7	12.0
60°-70°	44.4	7.4
70°-80°	22.1	3.7
80°-90°	5.0	0.8
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°	235.3	39.0
0°-40°	356.8	59.1
0°-60°	531.9	88.1
0°-90°	603.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	603.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	345	345	345	345	345	
5°	342	342	338	340	340	33
15°	324	318	303	298	295	91
25°	282	270	250	241	236	130
35°	228	211	190	177	170	143
45°	169	151	130	112	104	130
55°	103	92	76	69	67	93
65°	47	46	43	43	43	48
75°	18	20	21	22	23	20
85°	2	3	4	5	6	3
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	345.0	345.0	345.0	345.0	345.0
2.5°	344.2	344.6	341.3	345.0	345.4
5°	342.5	342.5	337.5	339.6	339.6
7.5°	340.0	339.2	330.9	330.9	330.1
10°	336.3	333.8	323.0	321.0	319.7
12.5°	330.9	326.8	313.5	309.8	307.3
15°	324.3	318.1	303.1	297.7	294.8
17.5°	314.7	308.5	291.9	284.5	281.2
20°	304.8	295.7	278.7	271.2	266.2
22.5°	294.0	282.4	265.8	256.7	251.3
25°	282.0	269.5	250.5	241.3	236.4
27.5°	269.1	255.4	236.0	225.6	220.6
30°	256.7	240.9	221.0	209.4	203.6
32.5°	243.4	225.6	205.3	193.2	187.4
35°	228.5	211.1	190.3	177.1	170.4
37.5°	214.4	196.6	175.0	160.9	153.4
40°	199.5	181.6	159.7	145.1	137.3
42.5°	183.7	166.7	145.1	128.1	120.7
45°	168.8	150.9	130.2	112.4	104.1
47.5°	152.6	136.0	115.7	97.4	91.6
50°	136.0	120.7	101.6	85.0	82.1
52.5°	119.8	107.0	87.5	76.7	75.5
55°	103.3	92.5	75.9	69.3	67.2
57.5°	87.9	80.0	65.1	61.8	61.0
60°	73.4	66.8	57.6	55.6	54.3
62.5°	59.3	55.6	50.2	49.3	48.5
65°	47.3	45.6	43.1	43.1	42.7
67.5°	37.3	37.3	36.9	37.7	37.3
70°	29.9	30.3	31.1	31.9	32.3
72.5°	23.6	24.9	25.7	27.0	27.4
75°	18.2	19.5	21.1	22.0	22.8
77.5°	13.3	14.5	16.2	17.4	18.2
80°	9.1	10.0	11.6	13.3	14.1
82.5°	5.8	6.2	7.5	9.1	10.0
85°	2.5	2.9	3.7	5.4	6.2
87.5°	0.0	0.0	0.4	1.7	2.9
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	13.67	15.12	14.03	15.43	15.75	11.77	13.22	12.13	13.53	13.85
	3H	14.57	15.86	14.94	16.19	16.55	13.34	14.63	13.72	14.96	15.33
	4H	14.85	16.06	15.25	16.41	16.79	13.93	15.15	14.34	15.50	15.88
	6H	15.00	16.12	15.41	16.48	16.88	14.38	15.50	14.80	15.87	16.26
	8H	15.02	16.08	15.45	16.47	16.88	14.53	15.60	14.96	15.99	16.39
	12H	15.01	16.03	15.45	16.41	16.84	14.63	15.65	15.06	16.03	16.46
4H	2H	13.91	15.12	14.31	15.47	15.85	12.31	13.52	12.71	13.87	14.25
	3H	15.03	16.03	15.44	16.43	16.83	14.08	15.08	14.49	15.48	15.88
	4H	15.42	16.31	15.85	16.73	17.17	14.79	15.69	15.23	16.11	16.55
	6H	15.66	16.44	16.12	16.88	17.34	15.36	16.14	15.82	16.59	17.05
	8H	15.70	16.43	16.17	16.87	17.34	15.56	16.28	16.02	16.73	17.20
	12H	15.71	16.36	16.19	16.84	17.31	15.70	16.34	16.18	16.82	17.30
8H	4H	15.57	16.30	16.04	16.75	17.21	15.00	15.73	15.47	16.18	16.64
	6H	15.89	16.49	16.39	16.98	17.46	15.68	16.28	16.18	16.77	17.25
	8H	15.96	16.50	16.48	17.01	17.50	15.94	16.47	16.45	16.98	17.47
	12H	16.00	16.47	16.51	16.97	17.53	16.14	16.62	16.66	17.11	17.68
12H	4H	15.58	16.22	16.06	16.70	17.18	15.00	15.65	15.48	16.13	16.60
	6H	15.90	16.44	16.42	16.95	17.44	15.69	16.22	16.20	16.74	17.23
	8H	16.02	16.49	16.53	16.98	17.55	15.99	16.47	16.50	16.96	17.53