

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: P1058304

Luminaire Tested: S122RDR-H290D850-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1058304
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-57)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDR-H290D850-X4F0-XX-UDD-BVL-W
Description: DEFINE 2 WHITE 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

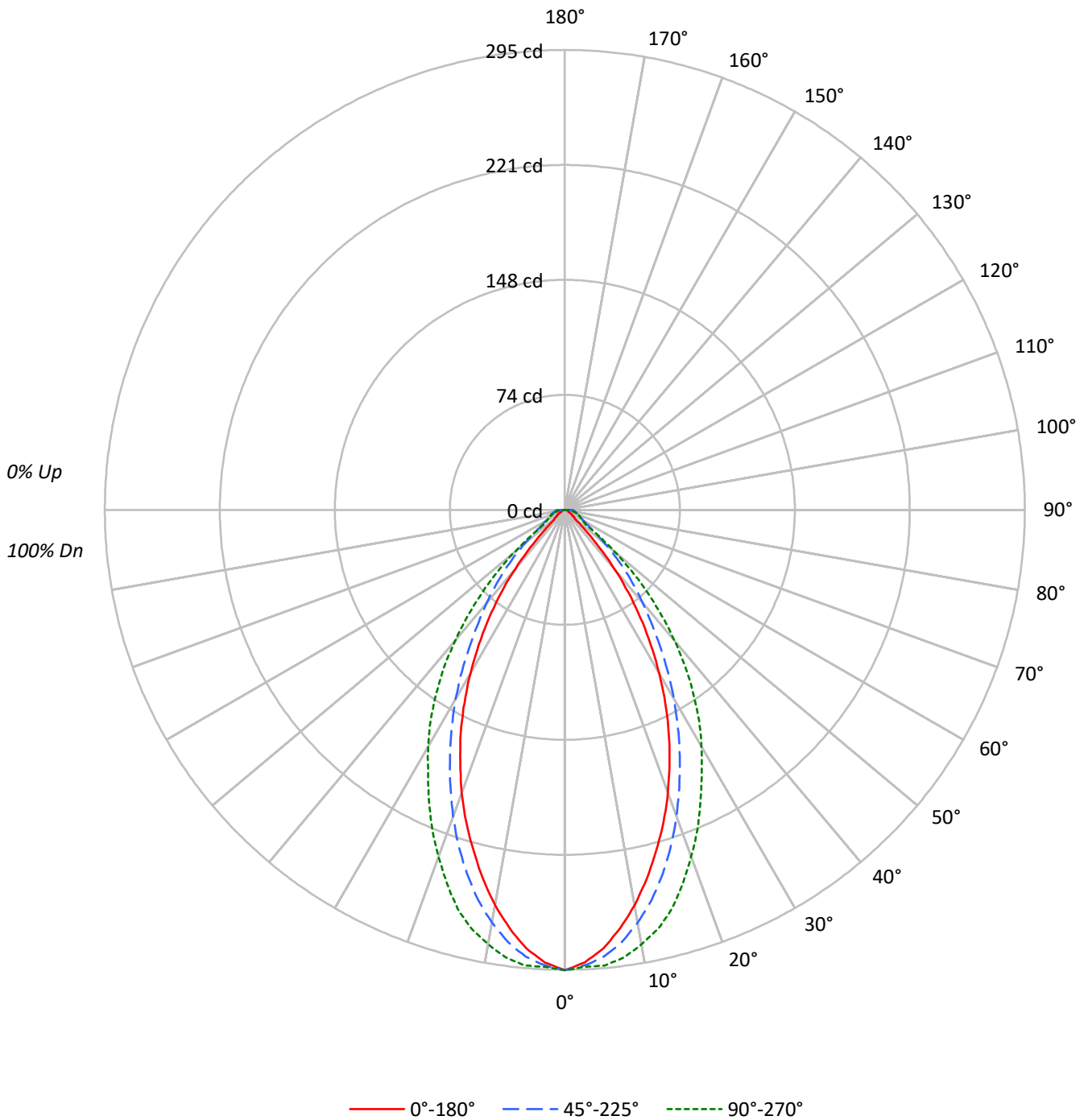
Lumens per Lamp: N/A
Luminaire Lumens: 321.4 lumens
Efficiency: N/A
Efficacy: 27.5 lumens/watt
Spacing Criteria (0/90/45): 0.78 / 0.96 / 0.91
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')
CIE Type: Direct

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													100															
1	112	108	105	102	109	106	103	101	102	100	97	98	96	95	95	93	92	90													90															
2	105	99	94	90	102	97	92	89	94	90	87	91	87	85	88	85	83	81													81															
3	98	91	85	80	96	89	84	79	86	82	78	84	80	76	81	78	75	74													74															
4	92	83	77	72	90	82	76	71	80	75	70	78	73	70	76	72	69	67													67															
5	87	77	70	65	85	76	70	65	74	69	64	72	67	64	71	66	63	61													61															
6	82	71	65	60	80	71	64	59	69	63	59	68	62	58	66	62	58	56													56															
7	77	67	60	55	76	66	59	55	64	59	54	63	58	54	62	57	54	52													52															
8	73	62	55	51	72	62	55	51	60	54	50	59	54	50	58	53	50	48													48															
9	69	58	52	47	68	58	51	47	57	51	47	56	50	47	55	50	46	45													45															
10	66	55	48	44	64	54	48	44	53	48	44	53	47	43	52	47	43	42													42															

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5449	5449	5449
5°	5233	5329	5435
10°	4825	5037	5303
15°	4323	4621	5064
20°	3794	4110	4648
25°	3213	3549	4194
30°	2578	2981	3735
35°	1906	2383	3235
40°	1195	1867	2628
45°	470	1407	1949
50°	230	950	1194
55°	183	624	531
60°	140	506	487
65°	105	476	476
70°	129	486	486
75°	135	542	506
80°	202	701	553
85°	402	1207	805

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 87.5°
 Luminance: 2200 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	27.0	8.4
10°-20°	68.2	21.2
20°-30°	81.6	25.4
30°-40°	68.6	21.4
40°-50°	39.1	12.2
50°-60°	15.4	4.8
60°-70°	9.7	3.0
70°-80°	7.2	2.2
80°-90°	4.6	1.4
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°	176.7	55.0
0°-40°	245.4	76.3
0°-60°	299.9	93.3
0°-90°	321.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	321.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	295	295	295	295	295	
5°	282	289	288	291	293	26
15°	226	234	242	256	265	63
25°	158	165	174	192	206	72
35°	85	92	106	128	144	52
45°	18	32	54	68	75	17
55°	6	12	19	20	16	5
65°	2	11	11	10	11	3
75°	2	8	8	7	7	2
85°	2	5	6	5	4	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	295.3	295.3	295.3	295.3	295.3
2.5°	290.6	295.8	292.5	292.9	293.4
5°	282.5	288.7	287.7	291.0	293.4
7.5°	270.7	277.3	279.7	285.4	289.6
10°	257.5	265.1	268.8	277.8	283.0
12.5°	242.4	250.9	256.6	267.9	275.5
15°	226.3	234.3	241.9	256.1	265.1
17.5°	210.2	218.3	226.3	241.9	251.4
20°	193.2	200.8	209.3	225.8	236.7
22.5°	175.3	183.3	191.8	208.8	222.1
25°	157.8	164.9	174.3	192.3	206.0
27.5°	139.4	146.5	156.9	175.3	189.9
30°	121.0	128.0	139.9	158.8	175.3
32.5°	102.5	110.1	122.8	143.6	160.2
35°	84.6	92.1	105.8	128.5	143.6
37.5°	67.1	75.6	90.7	112.9	127.1
40°	49.6	59.5	77.5	97.3	109.1
42.5°	33.1	45.4	65.2	81.7	91.7
45°	18.0	31.7	53.9	67.6	74.7
47.5°	9.9	20.3	43.0	53.9	58.1
50°	8.0	14.2	33.1	41.1	41.6
52.5°	6.6	12.8	24.6	29.3	26.9
55°	5.7	12.3	19.4	19.8	16.5
57.5°	4.7	11.8	16.1	14.2	14.2
60°	3.8	11.8	13.7	12.8	13.2
62.5°	2.8	11.8	12.3	11.3	11.8
65°	2.4	10.9	10.9	10.4	10.9
67.5°	2.4	9.9	9.9	9.4	9.9
70°	2.4	9.4	9.0	9.0	9.0
72.5°	1.9	8.5	8.5	8.0	8.0
75°	1.9	7.6	7.6	7.1	7.1
77.5°	1.9	7.1	7.1	6.6	6.1
80°	1.9	6.1	6.6	6.1	5.2
82.5°	1.9	5.7	6.1	5.7	4.3
85°	1.9	5.2	5.7	5.2	3.8
87.5°	1.4	5.2	5.2	4.3	2.8
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	3.57	4.79	3.94	5.11	5.42	5.62	6.84	5.98	7.15	7.47
	3H	5.12	6.21	5.50	6.54	6.90	7.58	8.67	7.96	9.00	9.36
	4H	5.68	6.69	6.09	7.04	7.43	8.50	9.51	8.90	9.86	10.24
	6H	6.24	7.17	6.66	7.54	7.94	9.37	10.30	9.79	10.67	11.07
	8H	6.54	7.42	6.97	7.81	8.21	9.78	10.66	10.21	11.05	11.46
	12H	6.90	7.74	7.33	8.12	8.56	10.23	11.07	10.66	11.46	11.89
4H	2H	4.77	5.78	5.17	6.13	6.52	6.24	7.25	6.64	7.60	7.99
	3H	6.97	7.80	7.38	8.20	8.61	8.48	9.31	8.89	9.71	10.12
	4H	8.03	8.78	8.46	9.20	9.64	9.55	10.29	9.98	10.72	11.16
	6H	8.92	9.57	9.39	10.02	10.48	10.65	11.30	11.11	11.74	12.21
	8H	9.31	9.91	9.78	10.36	10.83	11.18	11.78	11.65	12.23	12.70
	12H	9.73	10.27	10.22	10.75	11.23	11.76	12.29	12.25	12.78	13.25
8H	4H	8.83	9.44	9.30	9.89	10.36	10.04	10.65	10.51	11.09	11.57
	6H	10.21	10.70	10.71	11.20	11.68	11.43	11.92	11.93	12.42	12.90
	8H	10.93	11.37	11.45	11.89	12.38	12.17	12.62	12.70	13.14	13.63
	12H	11.68	12.08	12.20	12.57	13.14	13.01	13.40	13.53	13.90	14.47
12H	4H	8.99	9.53	9.48	10.01	10.49	10.14	10.67	10.63	11.16	11.63
	6H	10.53	10.98	11.06	11.50	11.99	11.64	12.09	12.17	12.60	13.10
	8H	11.45	11.85	11.97	12.34	12.92	12.53	12.93	13.05	13.42	14.00