

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: P1059674

Luminaire Tested: S123RDR-H560D840-X4F0-XX-UDD-SVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059674
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-68)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H560D840-X4F0-XX-UDD-SVL-S
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

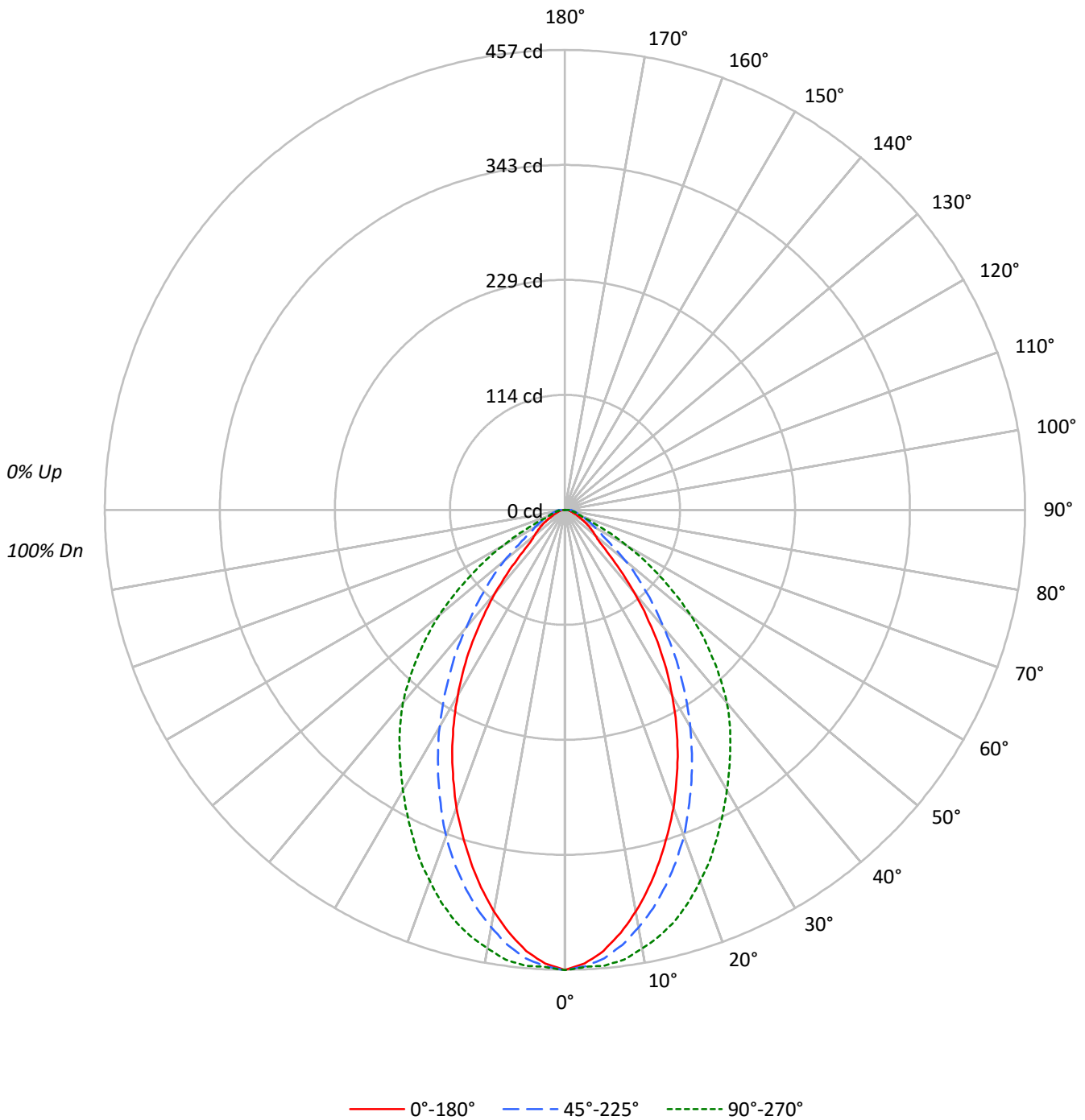
Lumens per Lamp: N/A
Luminaire Lumens: 612.4 lumens
Efficiency: N/A
Efficacy: 35.2 lumens/watt
Spacing Criteria (0/90/45): 0.83 / 1.07 / 0.98
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 17.4
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	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71
4	91	81	74	69	88	80	73	68	77	72	67	75	70	66	73	69	66	64
5	85	74	67	61	83	73	66	61	71	65	61	69	64	60	68	63	59	58
6	79	68	61	56	78	67	60	55	66	60	55	64	59	54	63	58	54	52
7	74	63	56	51	73	62	55	50	61	55	50	60	54	50	58	53	49	48
8	70	58	51	46	69	58	51	46	57	50	46	56	50	46	54	49	45	44
9	66	54	47	43	65	54	47	43	53	47	42	52	46	42	51	46	42	40
10	62	51	44	39	61	50	44	39	50	43	39	49	43	39	48	43	39	37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5370	5370	5370
5°	5186	5272	5359
10°	4831	5023	5277
15°	4398	4699	5137
20°	3938	4314	4906
25°	3433	3849	4636
30°	2888	3376	4363
35°	2296	2861	4106
40°	1637	2333	3838
45°	975	1873	3438
50°	720	1427	2976
55°	602	970	2365
60°	486	798	1663
65°	389	686	889
70°	319	597	549
75°	304	576	513
80°	318	629	494
85°	445	903	633

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 3438 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.0	6.9
10°-20°	109.1	17.8
20°-30°	139.2	22.7
30°-40°	131.0	21.4
40°-50°	94.1	15.4
50°-60°	53.9	8.8
60°-70°	24.7	4.0
70°-80°	12.4	2.0
80°-90°	6.0	1.0
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°	290.3	47.4
0°-40°	421.3	68.8
0°-60°	569.3	93.0
0°-90°	612.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	612.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	457	457	457	457	457	
5°	440	449	447	451	455	41
15°	362	374	386	407	423	101
25°	265	277	297	329	358	121
35°	160	172	200	245	286	99
45°	59	71	113	166	207	49
55°	29	30	47	88	116	26
65°	14	19	25	27	32	14
75°	7	13	13	11	11	7
85°	3	7	7	6	5	3
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	457.3	457.3	457.3	457.3	457.3
2.5°	451.3	458.0	454.0	454.0	454.6
5°	440.0	448.6	447.3	450.6	454.6
7.5°	423.9	433.3	436.0	444.0	450.6
10°	405.2	415.9	421.3	433.9	442.6
12.5°	384.5	396.6	405.2	421.3	433.9
15°	361.8	374.5	386.5	407.2	422.6
17.5°	338.5	351.2	366.5	390.6	408.6
20°	315.1	327.8	345.2	370.5	392.6
22.5°	289.7	302.4	321.1	349.8	376.5
25°	265.0	277.1	297.1	329.1	357.8
27.5°	239.0	251.0	273.1	307.8	339.8
30°	213.0	225.0	249.0	286.4	321.8
32.5°	186.9	198.3	224.3	265.7	303.8
35°	160.2	171.6	199.6	245.0	286.4
37.5°	132.9	144.2	176.9	226.3	269.0
40°	106.8	119.5	152.2	207.6	250.4
42.5°	81.4	94.8	132.2	187.6	229.0
45°	58.7	71.4	112.8	166.2	207.0
47.5°	44.7	51.4	95.5	144.9	185.6
50°	39.4	40.1	78.1	125.5	162.9
52.5°	34.0	34.7	60.8	106.8	138.9
55°	29.4	30.0	47.4	87.5	115.5
57.5°	24.7	26.0	38.7	69.4	92.8
60°	20.7	23.4	34.0	52.7	70.8
62.5°	16.7	21.4	29.4	38.7	50.7
65°	14.0	19.4	24.7	27.4	32.0
67.5°	11.3	18.0	20.7	19.4	19.4
70°	9.3	16.0	17.4	16.0	16.0
72.5°	8.0	15.4	14.7	13.4	13.4
75°	6.7	13.4	12.7	11.3	11.3
77.5°	6.0	11.3	10.7	10.0	9.3
80°	4.7	9.3	9.3	8.7	7.3
82.5°	4.0	8.0	8.0	7.3	6.0
85°	3.3	6.7	6.7	6.0	4.7
87.5°	2.7	6.0	6.0	5.3	3.3
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	5.82	7.14	6.18	7.45	7.76	13.05	14.36	13.41	14.68	14.99
	3H	7.21	8.38	7.59	8.71	9.08	13.28	14.45	13.66	14.78	15.15
	4H	7.78	8.87	8.18	9.22	9.60	13.39	14.48	13.79	14.83	15.21
	6H	8.24	9.24	8.65	9.61	10.01	13.49	14.50	13.91	14.87	15.26
	8H	8.43	9.37	8.86	9.77	10.17	13.54	14.49	13.97	14.88	15.29
	12H	8.61	9.52	9.05	9.90	10.33	13.59	14.50	14.03	14.88	15.31
4H	2H	6.89	7.98	7.30	8.33	8.72	13.01	14.10	13.41	14.45	14.83
	3H	8.58	9.47	8.99	9.88	10.28	13.38	14.27	13.79	14.67	15.08
	4H	9.42	10.22	9.86	10.64	11.08	13.56	14.36	13.99	14.78	15.22
	6H	10.08	10.77	10.54	11.21	11.68	13.78	14.47	14.24	14.92	15.38
	8H	10.33	10.98	10.80	11.42	11.89	13.88	14.52	14.35	14.97	15.44
	12H	10.58	11.16	11.07	11.64	12.11	14.00	14.57	14.48	15.05	15.52
8H	4H	9.86	10.50	10.33	10.95	11.42	13.60	14.25	14.07	14.70	15.17
	6H	10.80	11.33	11.30	11.83	12.31	13.93	14.46	14.44	14.96	15.44
	8H	11.27	11.74	11.79	12.26	12.75	14.12	14.60	14.64	15.11	15.61
	12H	11.75	12.17	12.26	12.66	13.23	14.36	14.78	14.87	15.27	15.84
12H	4H	9.92	10.49	10.40	10.97	11.44	13.60	14.17	14.08	14.65	15.12
	6H	10.95	11.43	11.47	11.94	12.43	13.96	14.44	14.48	14.95	15.44
	8H	11.54	11.96	12.06	12.46	13.03	14.22	14.64	14.73	15.14	15.71