

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: P1059614

Luminaire Tested: S123RDR-H340D927-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059614
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-67)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H340D927-X4F0-XX-UDD-WVL-S
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

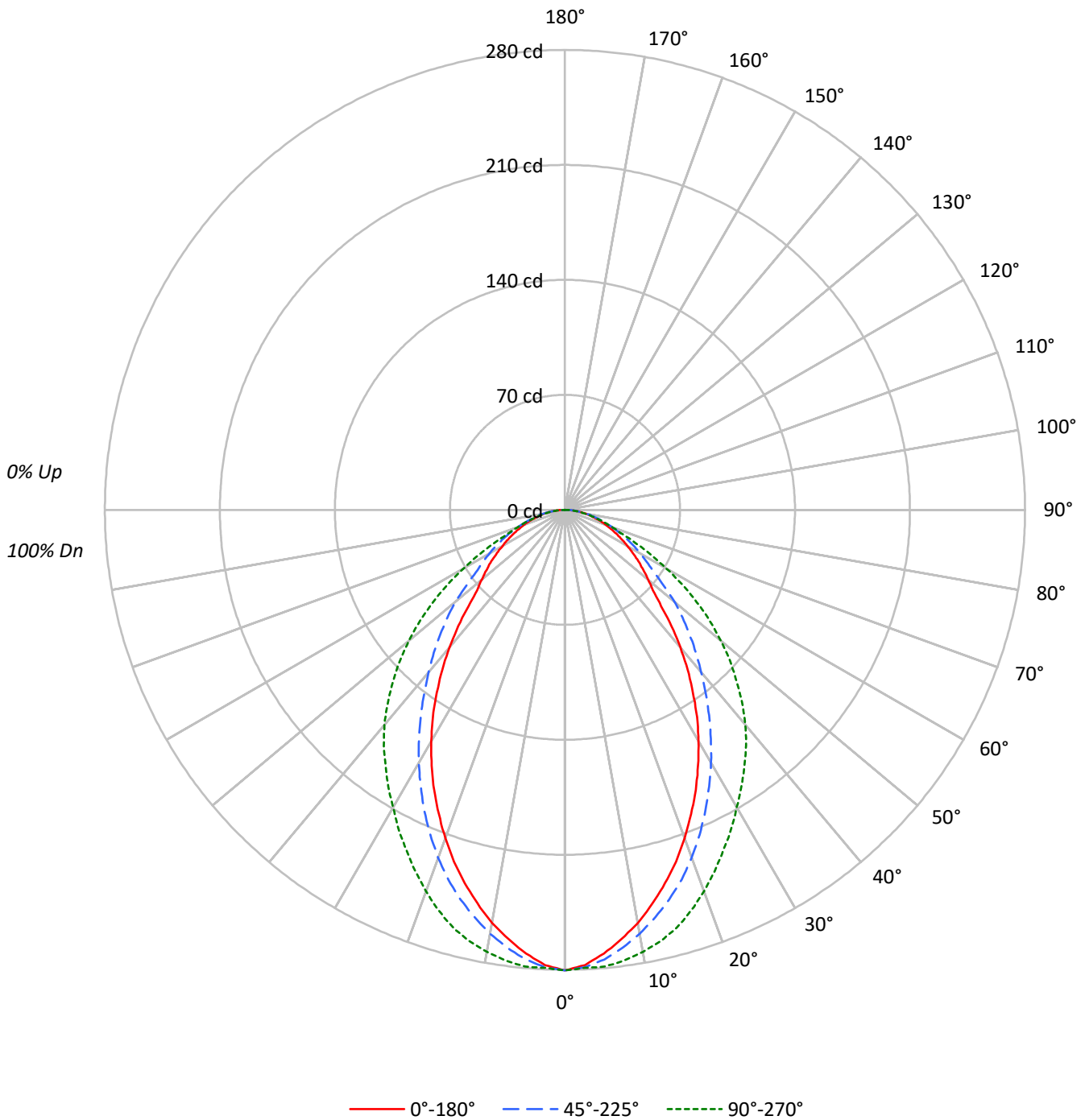
Lumens per Lamp: N/A
Luminaire Lumens: 506.5 lumens
Efficiency: N/A
Efficacy: 43.3 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 1.12 / 1.1
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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										
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	0														
RCR																																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100															
1	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87					87															
2	102	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	75					75															
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65					65															
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57					57															
5	80	69	60	54	78	68	60	54	66	59	54	64	58	53	62	57	53	51					51															
6	75	63	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	45					45															
7	70	57	49	44	68	56	49	43	55	48	43	54	47	43	52	47	43	41					41															
8	65	53	45	39	64	52	45	39	51	44	39	50	43	39	48	43	39	37					37															
9	61	49	41	36	60	48	41	36	47	40	36	46	40	36	45	39	35	34					34															
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31					31															

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3293	3293	3293
5°	3197	3239	3290
10°	3045	3124	3258
15°	2862	2984	3201
20°	2658	2818	3089
25°	2440	2620	2959
30°	2206	2411	2835
35°	1947	2190	2728
40°	1672	1976	2620
45°	1375	1780	2456
50°	1208	1586	2263
55°	1118	1353	2006
60°	1026	1242	1660
65°	959	1142	1306
70°	903	1037	1037
75°	848	953	894
80°	798	866	757
85°	754	835	579

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 2456 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	25.9	5.1
10°-20°	69.5	13.7
20°-30°	94.2	18.6
30°-40°	98.5	19.5
40°-50°	85.5	16.9
50°-60°	63.6	12.6
60°-70°	40.8	8.1
70°-80°	21.9	4.3
80°-90°	6.6	1.3
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°	189.7	37.4
0°-40°	288.2	56.9
0°-60°	437.2	86.3
0°-90°	506.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	506.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	280	280	280	280	280	
5°	271	276	275	277	279	25
15°	235	241	246	255	263	66
25°	188	194	202	216	228	86
35°	136	142	153	172	190	85
45°	83	89	107	130	148	65
55°	55	56	66	85	98	49
65°	34	38	41	44	47	34
75°	19	22	21	20	20	20
85°	6	7	6	5	4	6
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	280.4	280.4	280.4	280.4	280.4
2.5°	277.4	281.4	278.7	278.7	279.1
5°	271.2	275.8	274.8	276.8	279.1
7.5°	263.6	268.5	268.9	273.5	276.8
10°	255.4	260.3	262.0	268.5	273.2
12.5°	245.5	251.1	254.1	262.3	268.9
15°	235.4	240.9	245.5	255.4	263.3
17.5°	224.5	230.1	236.0	247.2	255.7
20°	212.7	218.6	225.5	236.7	247.2
22.5°	200.5	206.8	214.0	226.1	238.0
25°	188.3	194.3	202.2	215.6	228.4
27.5°	175.5	181.8	190.0	204.8	219.2
30°	162.7	169.0	177.8	193.6	209.1
32.5°	149.6	155.8	165.3	183.1	199.9
35°	135.8	142.3	152.8	172.2	190.3
37.5°	122.6	128.9	140.7	162.0	181.1
40°	109.1	115.7	128.9	151.9	170.9
42.5°	96.0	102.6	118.0	141.0	159.7
45°	82.8	89.1	107.2	130.2	147.9
47.5°	72.6	77.2	97.0	118.7	136.4
50°	66.1	67.7	86.8	107.5	123.9
52.5°	60.2	61.5	75.6	96.3	111.1
55°	54.6	55.9	66.1	84.8	98.0
57.5°	49.0	50.6	58.8	73.0	84.8
60°	43.7	45.7	52.9	62.5	70.7
62.5°	39.1	41.4	47.0	52.9	58.5
65°	34.5	37.5	41.1	43.7	47.0
67.5°	30.2	33.5	35.5	36.2	36.5
70°	26.3	29.6	30.2	30.2	30.2
72.5°	22.4	26.0	25.3	25.0	24.7
75°	18.7	21.7	21.0	20.1	19.7
77.5°	15.1	17.7	16.8	16.1	15.1
80°	11.8	13.8	12.8	12.2	11.2
82.5°	8.9	10.2	9.2	8.5	7.6
85°	5.6	6.9	6.2	5.3	4.3
87.5°	3.0	3.9	3.3	3.0	1.6
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	10.92	12.41	11.29	12.72	13.03	13.68	15.17	14.05	15.48	15.80
	3H	12.63	13.96	13.01	14.29	14.65	14.70	16.03	15.08	16.36	16.72
	4H	13.29	14.54	13.69	14.89	15.27	15.07	16.32	15.47	16.66	17.04
	6H	13.79	14.94	14.21	15.31	15.70	15.32	16.47	15.74	16.84	17.23
	8H	13.97	15.07	14.40	15.46	15.86	15.40	16.49	15.82	16.88	17.28
	12H	14.10	15.15	14.53	15.53	15.96	15.43	16.48	15.86	16.86	17.29
4H	2H	11.70	12.95	12.10	13.30	13.67	13.96	15.20	14.36	15.55	15.93
	3H	13.63	14.66	14.04	15.06	15.46	15.21	16.24	15.62	16.64	17.04
	4H	14.44	15.37	14.87	15.78	16.22	15.70	16.63	16.13	17.04	17.48
	6H	15.07	15.88	15.53	16.33	16.79	16.08	16.89	16.54	17.33	17.79
	8H	15.30	16.06	15.77	16.50	16.97	16.19	16.94	16.65	17.39	17.86
	12H	15.48	16.15	15.96	16.63	17.10	16.26	16.94	16.74	17.41	17.89
8H	4H	14.76	15.51	15.22	15.96	16.42	15.89	16.64	16.35	17.09	17.56
	6H	15.55	16.17	16.04	16.66	17.14	16.38	17.00	16.87	17.49	17.97
	8H	15.87	16.44	16.39	16.95	17.43	16.55	17.11	17.07	17.62	18.11
	12H	16.15	16.65	16.66	17.14	17.71	16.69	17.18	17.20	17.67	18.24
12H	4H	14.78	15.45	15.26	15.93	16.40	15.90	16.58	16.39	17.06	17.53
	6H	15.60	16.16	16.12	16.67	17.16	16.41	16.97	16.93	17.48	17.97
	8H	16.00	16.49	16.51	16.98	17.55	16.64	17.14	17.15	17.63	18.20