

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: P1059650

Luminaire Tested: S123RDR-H340D950-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059650
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-H340D950-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: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

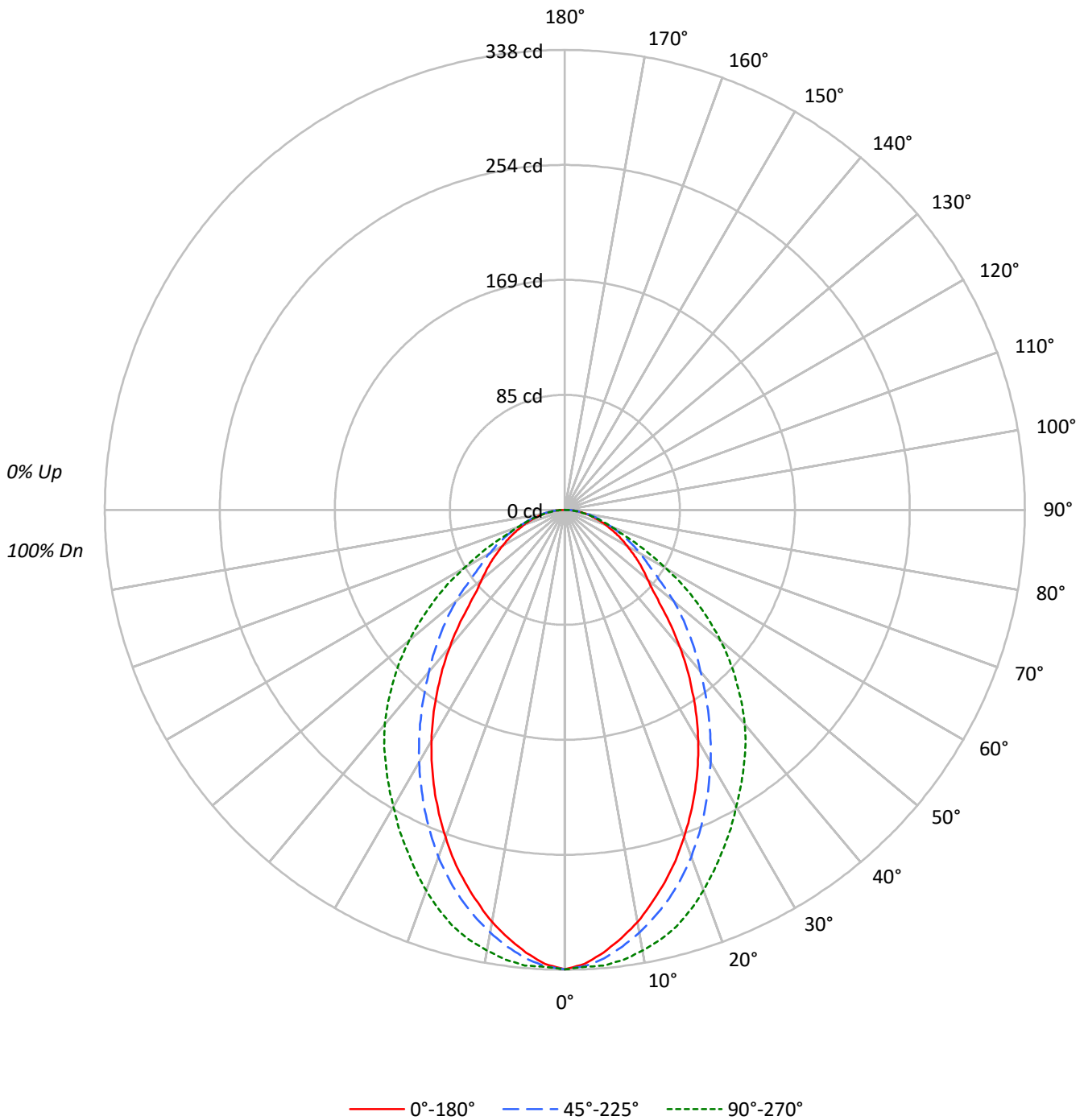
Lumens per Lamp: N/A
Luminaire Lumens: 609.9 lumens
Efficiency: N/A
Efficacy: 52.1 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 1.12 / 1.1
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3965	3965	3965
5°	3850	3900	3962
10°	3668	3762	3922
15°	3445	3595	3855
20°	3200	3393	3720
25°	2938	3154	3564
30°	2656	2904	3414
35°	2344	2639	3286
40°	2014	2379	3155
45°	1657	2142	2958
50°	1454	1909	2726
55°	1345	1630	2416
60°	1235	1496	1999
65°	1156	1375	1573
70°	1088	1250	1250
75°	1025	1148	1080
80°	967	1041	913
85°	903	1010	687

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 2958 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.2	5.1
10°-20°	83.7	13.7
20°-30°	113.5	18.6
30°-40°	118.7	19.5
40°-50°	102.9	16.9
50°-60°	76.5	12.6
60°-70°	49.1	8.1
70°-80°	26.3	4.3
80°-90°	8.0	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°	228.4	37.4
0°-40°	347.1	56.9
0°-60°	526.5	86.3
0°-90°	609.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	609.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	338	338	338	338	338	
5°	327	332	331	333	336	31
15°	283	290	296	308	317	79
25°	227	234	243	260	275	104
35°	164	171	184	207	229	102
45°	100	107	129	157	178	79
55°	66	67	80	102	118	59
65°	42	45	50	53	57	41
75°	23	26	25	24	24	24
85°	7	8	8	6	5	8
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	337.7	337.7	337.7	337.7	337.7
2.5°	334.1	338.8	335.7	335.7	336.1
5°	326.6	332.1	330.9	333.3	336.1
7.5°	317.5	323.4	323.8	329.3	333.3
10°	307.6	313.5	315.5	323.4	328.9
12.5°	295.7	302.4	306.0	315.9	323.8
15°	283.4	290.2	295.7	307.6	317.1
17.5°	270.4	277.1	284.2	297.7	308.0
20°	256.1	263.2	271.5	285.0	297.7
22.5°	241.5	249.0	257.7	272.3	286.6
25°	226.8	233.9	243.4	259.7	275.1
27.5°	211.4	218.9	228.8	246.6	264.0
30°	195.9	203.5	214.2	233.2	251.8
32.5°	180.1	187.6	199.1	220.5	240.7
35°	163.5	171.4	184.1	207.4	229.2
37.5°	147.7	155.2	169.4	195.2	218.1
40°	131.4	139.3	155.2	182.9	205.8
42.5°	115.6	123.5	142.1	169.8	192.4
45°	99.8	107.3	129.0	156.8	178.1
47.5°	87.5	93.0	116.8	142.9	164.3
50°	79.6	81.5	104.5	129.4	149.2
52.5°	72.4	74.0	91.0	116.0	133.8
55°	65.7	67.3	79.6	102.1	118.0
57.5°	59.0	61.0	70.9	87.9	102.1
60°	52.6	55.0	63.7	75.2	85.1
62.5°	47.1	49.9	56.6	63.7	70.5
65°	41.6	45.1	49.5	52.6	56.6
67.5°	36.4	40.4	42.8	43.5	43.9
70°	31.7	35.6	36.4	36.4	36.4
72.5°	26.9	31.3	30.5	30.1	29.7
75°	22.6	26.1	25.3	24.1	23.8
77.5°	18.2	21.4	20.2	19.4	18.2
80°	14.3	16.6	15.4	14.6	13.5
82.5°	10.7	12.3	11.1	10.3	9.1
85°	6.7	8.3	7.5	6.3	5.1
87.5°	3.6	4.8	4.0	3.6	2.0
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	11.58	13.06	11.94	13.37	13.69	14.33	15.81	14.69	16.13	16.44
	3H	13.28	14.61	13.66	14.94	15.30	15.35	16.68	15.73	17.00	17.37
	4H	13.94	15.19	14.35	15.54	15.92	15.71	16.96	16.11	17.31	17.69
	6H	14.45	15.60	14.86	15.96	16.35	15.97	17.12	16.38	17.49	17.88
	8H	14.63	15.72	15.05	16.11	16.51	16.04	17.13	16.47	17.52	17.93
	12H	14.75	15.80	15.18	16.18	16.61	16.07	17.12	16.51	17.50	17.93
4H	2H	12.35	13.60	12.75	13.95	14.32	14.60	15.85	15.00	16.19	16.57
	3H	14.28	15.31	14.69	15.71	16.11	15.85	16.89	16.26	17.29	17.69
	4H	15.08	16.01	15.52	16.43	16.87	16.34	17.27	16.77	17.68	18.12
	6H	15.73	16.53	16.18	16.98	17.44	16.72	17.53	17.18	17.97	18.43
	8H	15.95	16.71	16.42	17.15	17.62	16.83	17.59	17.30	18.03	18.50
	12H	16.13	16.80	16.61	17.28	17.75	16.90	17.58	17.38	18.05	18.53
8H	4H	15.40	16.16	15.87	16.60	17.07	16.53	17.29	16.99	17.73	18.20
	6H	16.20	16.82	16.69	17.31	17.79	17.02	17.64	17.52	18.13	18.61
	8H	16.52	17.09	17.04	17.60	18.08	17.19	17.75	17.71	18.27	18.75
	12H	16.80	17.30	17.31	17.79	18.36	17.33	17.82	17.84	18.31	18.88
12H	4H	15.43	16.10	15.91	16.58	17.05	16.55	17.22	17.03	17.70	18.17
	6H	16.25	16.81	16.77	17.32	17.81	17.05	17.62	17.57	18.13	18.62
	8H	16.65	17.14	17.16	17.63	18.20	17.28	17.78	17.80	18.27	18.84