

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: P1059479

Luminaire Tested: S123RDR-H1000D940-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059479
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-H1000D940-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: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

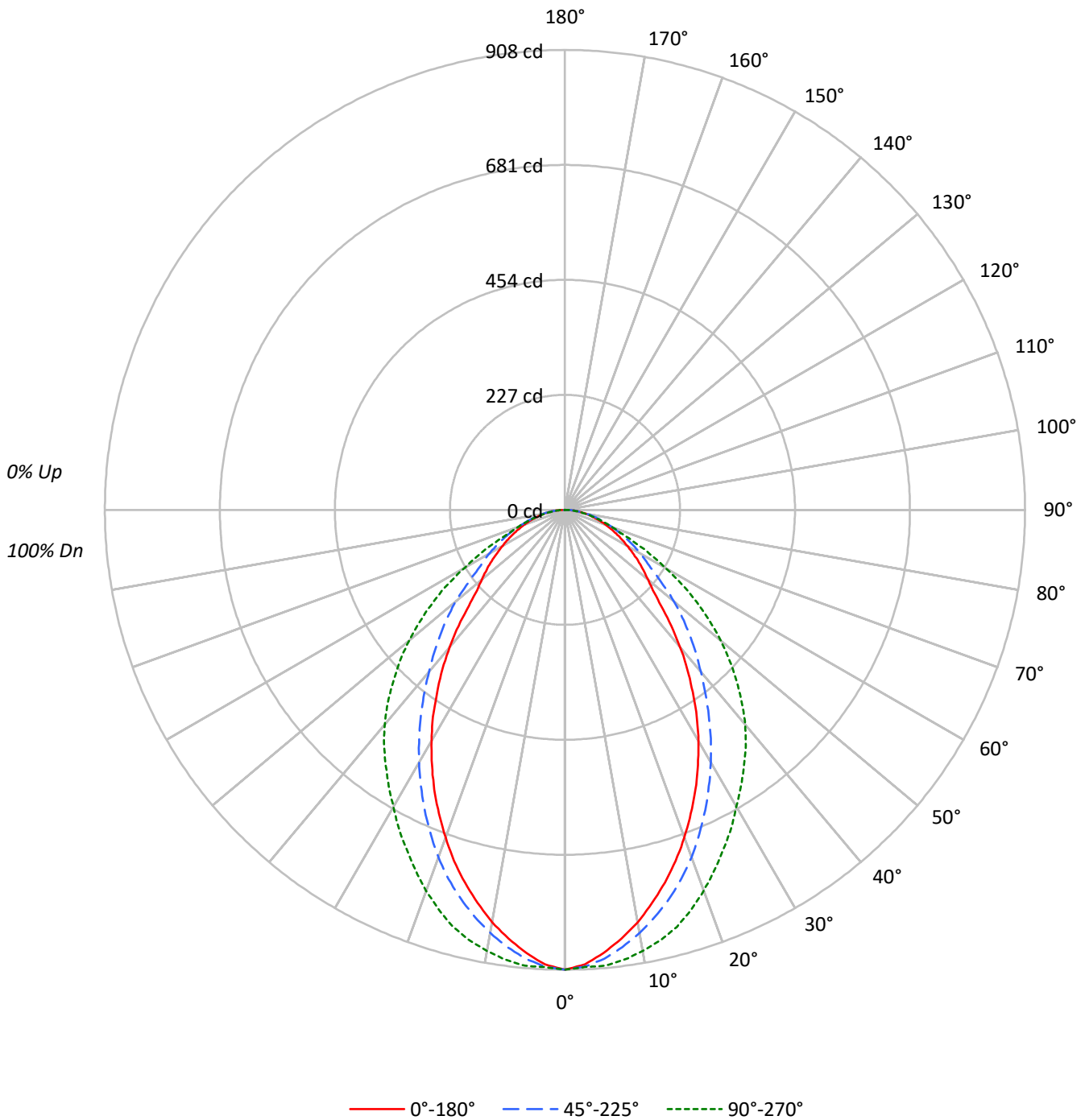
Lumens per Lamp: N/A
Luminaire Lumens: 1639.8 lumens
Efficiency: N/A
Efficacy: 52.6 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 1.12 / 1.1
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 31.2
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	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°	10660	10660	10660
5°	10349	10487	10650
10°	9860	10114	10545
15°	9263	9665	10362
20°	8604	9122	10001
25°	7901	8480	9583
30°	7143	7806	9177
35°	6300	7094	8833
40°	5416	6395	8483
45°	4454	5761	7953
50°	3908	5133	7329
55°	3617	4379	6492
60°	3323	4023	5373
65°	3104	3695	4229
70°	2922	3361	3361
75°	2754	3090	2899
80°	2590	2806	2448
85°	2439	2722	1859

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 7953 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.0	5.1
10°-20°	225.0	13.7
20°-30°	305.1	18.6
30°-40°	319.0	19.5
40°-50°	276.7	16.9
50°-60°	205.8	12.6
60°-70°	132.0	8.1
70°-80°	70.8	4.3
80°-90°	21.4	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°	614.1	37.4
0°-40°	933.0	56.9
0°-60°	1415.5	86.3
0°-90°	1639.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1639.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	908	908	908	908	908	
5°	878	893	890	896	904	82
15°	762	780	795	827	852	214
25°	610	629	654	698	740	280
35°	440	461	495	558	616	274
45°	268	288	347	421	479	211
55°	177	181	214	275	317	158
65°	112	121	133	142	152	111
75°	61	70	68	65	64	64
85°	18	22	20	17	14	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	907.8	907.8	907.8	907.8	907.8
2.5°	898.2	911.0	902.4	902.4	903.5
5°	878.0	892.9	889.7	896.1	903.5
7.5°	853.5	869.5	870.5	885.4	896.1
10°	826.9	842.9	848.2	869.5	884.4
12.5°	795.0	813.1	822.6	849.2	870.5
15°	762.0	780.1	795.0	826.9	852.4
17.5°	726.9	744.9	764.1	800.3	828.0
20°	688.5	707.7	730.0	766.2	800.3
22.5°	649.2	669.4	692.8	732.2	770.5
25°	609.8	628.9	654.5	698.1	739.6
27.5°	568.3	588.5	615.1	663.0	709.8
30°	526.8	547.0	575.7	626.8	676.8
32.5°	484.2	504.4	535.3	592.8	647.0
35°	439.5	460.8	494.9	557.6	616.2
37.5°	397.0	417.2	455.5	524.7	586.4
40°	353.3	374.6	417.2	491.7	553.4
42.5°	310.7	332.0	382.1	456.5	517.2
45°	268.2	288.4	346.9	421.4	478.9
47.5°	235.2	250.1	313.9	384.2	441.6
50°	213.9	219.2	281.0	348.0	401.2
52.5°	194.8	199.0	244.8	311.8	359.7
55°	176.7	180.9	213.9	274.6	317.1
57.5°	158.6	163.9	190.5	236.3	274.6
60°	141.5	147.9	171.3	202.2	228.8
62.5°	126.6	134.1	152.2	171.3	189.4
65°	111.7	121.3	133.0	141.5	152.2
67.5°	97.9	108.5	114.9	117.1	118.1
70°	85.1	95.8	97.9	97.9	97.9
72.5°	72.4	84.1	81.9	80.9	79.8
75°	60.7	70.2	68.1	64.9	63.9
77.5°	49.0	57.5	54.3	52.1	49.0
80°	38.3	44.7	41.5	39.4	36.2
82.5°	28.7	33.0	29.8	27.7	24.5
85°	18.1	22.3	20.2	17.0	13.8
87.5°	9.6	12.8	10.6	9.6	5.3
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	15.01	16.49	15.37	16.80	17.12	17.77	19.25	18.13	19.56	19.88
	3H	16.72	18.05	17.10	18.37	18.74	18.79	20.11	19.16	20.44	20.80
	4H	17.38	18.62	17.78	18.97	19.35	19.15	20.40	19.55	20.75	21.12
	6H	17.88	19.03	18.29	19.40	19.79	19.41	20.56	19.82	20.92	21.31
	8H	18.06	19.15	18.49	19.54	19.94	19.48	20.57	19.90	20.96	21.36
	12H	18.18	19.23	18.62	19.61	20.04	19.51	20.56	19.94	20.94	21.37
4H	2H	15.78	17.03	16.18	17.38	17.76	18.04	19.28	18.44	19.63	20.01
	3H	17.71	18.74	18.12	19.14	19.54	19.29	20.32	19.70	20.72	21.12
	4H	18.52	19.45	18.95	19.86	20.30	19.78	20.71	20.21	21.12	21.56
	6H	19.16	19.97	19.62	20.41	20.87	20.16	20.97	20.62	21.41	21.87
	8H	19.39	20.14	19.85	20.59	21.06	20.27	21.02	20.73	21.47	21.94
	12H	19.56	20.24	20.04	20.71	21.19	20.34	21.01	20.82	21.49	21.96
8H	4H	18.84	19.59	19.30	20.04	20.51	19.97	20.72	20.43	21.17	21.64
	6H	19.63	20.26	20.13	20.75	21.23	20.46	21.08	20.95	21.57	22.05
	8H	19.96	20.52	20.47	21.03	21.52	20.63	21.19	21.15	21.70	22.19
	12H	20.24	20.73	20.75	21.22	21.79	20.76	21.26	21.28	21.75	22.32
12H	4H	18.86	19.54	19.35	20.02	20.49	19.98	20.66	20.47	21.14	21.61
	6H	19.69	20.25	20.20	20.76	21.25	20.49	21.05	21.01	21.56	22.05
	8H	20.08	20.58	20.59	21.07	21.63	20.72	21.22	21.23	21.71	22.28