

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: P1059434

Luminaire Tested: S123RDR-H1000D840-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059434
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-H1000D840-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, 80 CRI LEDS
Ballast/Driver: -

Summary

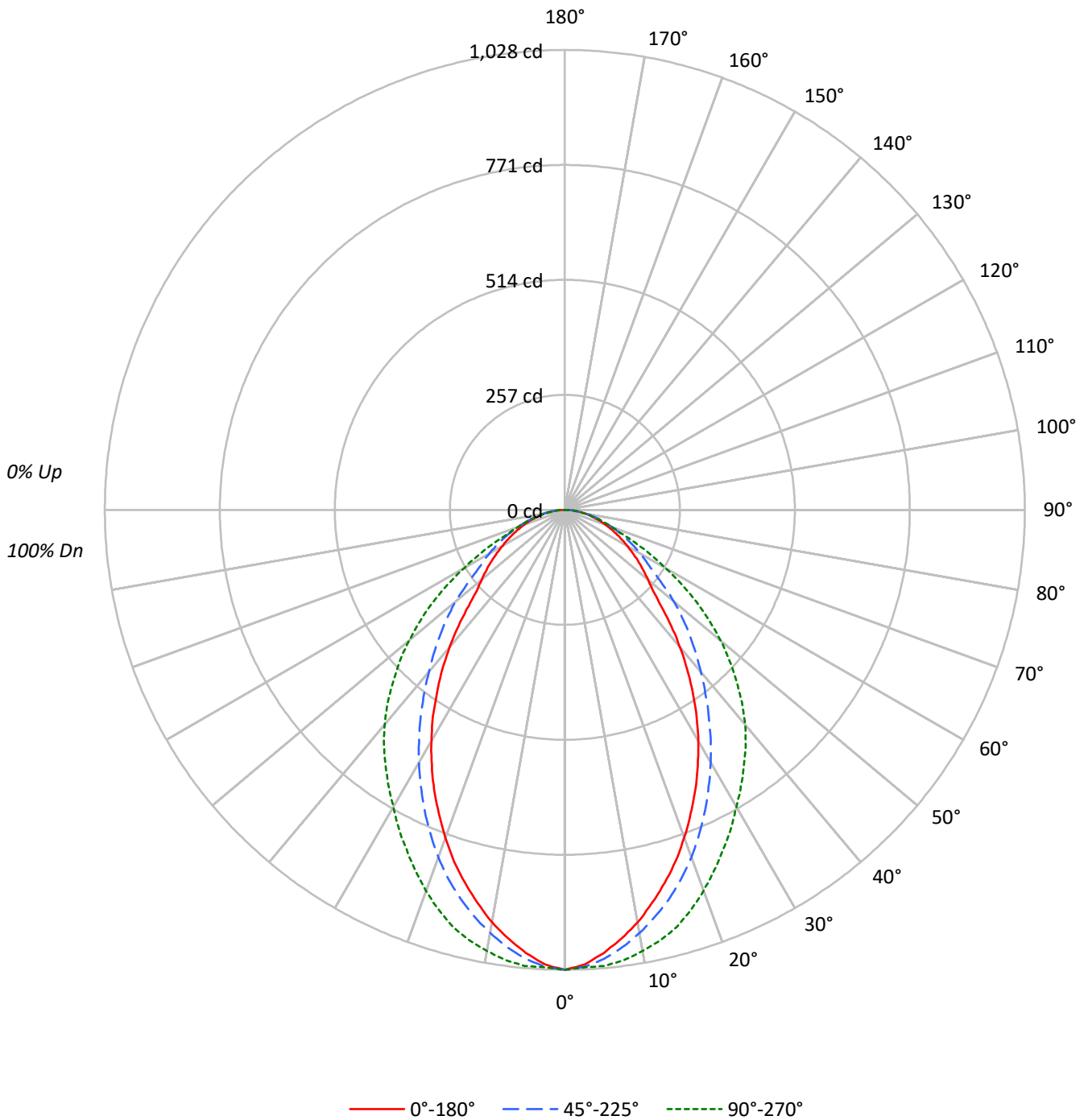
Lumens per Lamp: N/A
Luminaire Lumens: 1857.0 lumens
Efficiency: N/A
Efficacy: 59.5 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 1.12 / 1.1
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12072	12072	12072
5°	11720	11877	12061
10°	11166	11454	11941
15°	10490	10945	11736
20°	9744	10332	11325
25°	8948	9603	10852
30°	8089	8840	10393
35°	7136	8033	10003
40°	6133	7241	9606
45°	5043	6525	9006
50°	4425	5813	8301
55°	4097	4958	7354
60°	3765	4556	6085
65°	3515	4187	4787
70°	3310	3807	3807
75°	3117	3498	3280
80°	2935	3178	2773
85°	2762	3085	2115

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 9006 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.1	5.1
10°-20°	254.8	13.7
20°-30°	345.5	18.6
30°-40°	361.2	19.5
40°-50°	313.3	16.9
50°-60°	233.1	12.6
60°-70°	149.6	8.1
70°-80°	80.2	4.3
80°-90°	24.2	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°	695.4	37.4
0°-40°	1056.7	56.9
0°-60°	1603.1	86.3
0°-90°	1857.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1857.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1028	1028	1028	1028	1028	
5°	994	1011	1008	1015	1023	93
15°	863	883	900	936	965	242
25°	691	712	741	791	838	317
35°	498	522	560	632	698	311
45°	304	327	393	477	542	239
55°	200	205	242	311	359	179
65°	126	137	151	160	172	126
75°	69	80	77	74	72	73
85°	20	25	23	19	16	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1028.1	1028.1	1028.1	1028.1	1028.1
2.5°	1017.2	1031.7	1022.0	1022.0	1023.2
5°	994.3	1011.2	1007.6	1014.8	1023.2
7.5°	966.6	984.7	985.9	1002.7	1014.8
10°	936.5	954.5	960.6	984.7	1001.5
12.5°	900.3	920.8	931.6	961.8	985.9
15°	862.9	883.4	900.3	936.5	965.4
17.5°	823.2	843.7	865.3	906.3	937.7
20°	779.8	801.5	826.8	867.8	906.3
22.5°	735.2	758.1	784.6	829.2	872.6
25°	690.6	712.3	741.2	790.6	837.6
27.5°	643.6	666.5	696.6	750.9	803.9
30°	596.6	619.5	652.0	709.9	766.5
32.5°	548.4	571.3	606.2	671.3	732.8
35°	497.8	521.9	560.4	631.5	697.8
37.5°	449.5	472.4	515.8	594.2	664.1
40°	400.1	424.2	472.4	556.8	626.7
42.5°	351.9	376.0	432.7	517.0	585.7
45°	303.7	326.6	392.9	477.3	542.3
47.5°	266.4	283.2	355.5	435.1	500.2
50°	242.2	248.3	318.2	394.1	454.4
52.5°	220.6	225.4	277.2	353.1	407.4
55°	200.1	204.9	242.2	310.9	359.2
57.5°	179.6	185.6	215.7	267.6	310.9
60°	160.3	167.5	194.0	229.0	259.1
62.5°	143.4	151.9	172.3	194.0	214.5
65°	126.5	137.4	150.7	160.3	172.3
67.5°	110.9	122.9	130.2	132.6	133.8
70°	96.4	108.5	110.9	110.9	110.9
72.5°	82.0	95.2	92.8	91.6	90.4
75°	68.7	79.5	77.1	73.5	72.3
77.5°	55.4	65.1	61.5	59.1	55.4
80°	43.4	50.6	47.0	44.6	41.0
82.5°	32.5	37.4	33.7	31.3	27.7
85°	20.5	25.3	22.9	19.3	15.7
87.5°	10.8	14.5	12.1	10.8	6.0
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	15.44	16.92	15.80	17.24	17.55	18.20	19.68	18.56	19.99	20.31
	3H	17.15	18.48	17.53	18.81	19.17	19.22	20.55	19.60	20.87	21.24
	4H	17.81	19.06	18.21	19.41	19.78	19.58	20.83	19.98	21.18	21.56
	6H	18.31	19.46	18.72	19.83	20.22	19.84	20.99	20.25	21.35	21.75
	8H	18.49	19.58	18.92	19.97	20.38	19.91	21.00	20.34	21.39	21.79
	12H	18.62	19.66	19.05	20.05	20.48	19.94	20.99	20.37	21.37	21.80
4H	2H	16.22	17.46	16.62	17.81	18.19	18.47	19.71	18.87	20.06	20.44
	3H	18.14	19.17	18.55	19.58	19.98	19.72	20.76	20.13	21.16	21.56
	4H	18.95	19.88	19.38	20.30	20.74	20.21	21.14	20.64	21.55	21.99
	6H	19.59	20.40	20.05	20.84	21.30	20.59	21.40	21.05	21.84	22.30
	8H	19.82	20.57	20.28	21.02	21.49	20.70	21.46	21.17	21.90	22.37
	12H	19.99	20.67	20.48	21.15	21.62	20.77	21.45	21.26	21.93	22.40
8H	4H	19.27	20.03	19.73	20.47	20.94	20.40	21.16	20.86	21.60	22.07
	6H	20.06	20.69	20.56	21.18	21.66	20.89	21.51	21.39	22.00	22.48
	8H	20.39	20.95	20.91	21.46	21.95	21.06	21.62	21.58	22.13	22.62
	12H	20.67	21.16	21.18	21.66	22.22	21.20	21.69	21.71	22.19	22.75
12H	4H	19.30	19.97	19.78	20.45	20.92	20.42	21.09	20.90	21.57	22.04
	6H	20.12	20.68	20.63	21.19	21.68	20.92	21.49	21.44	22.00	22.49
	8H	20.51	21.01	21.02	21.50	22.07	21.15	21.65	21.67	22.14	22.71