

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: P1059597

Luminaire Tested: S123RDR-H340D840-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059597
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-64)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H340D840-X4F0-XX-UDD-WVL-W
Description: DEFINE 3 WHITE 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

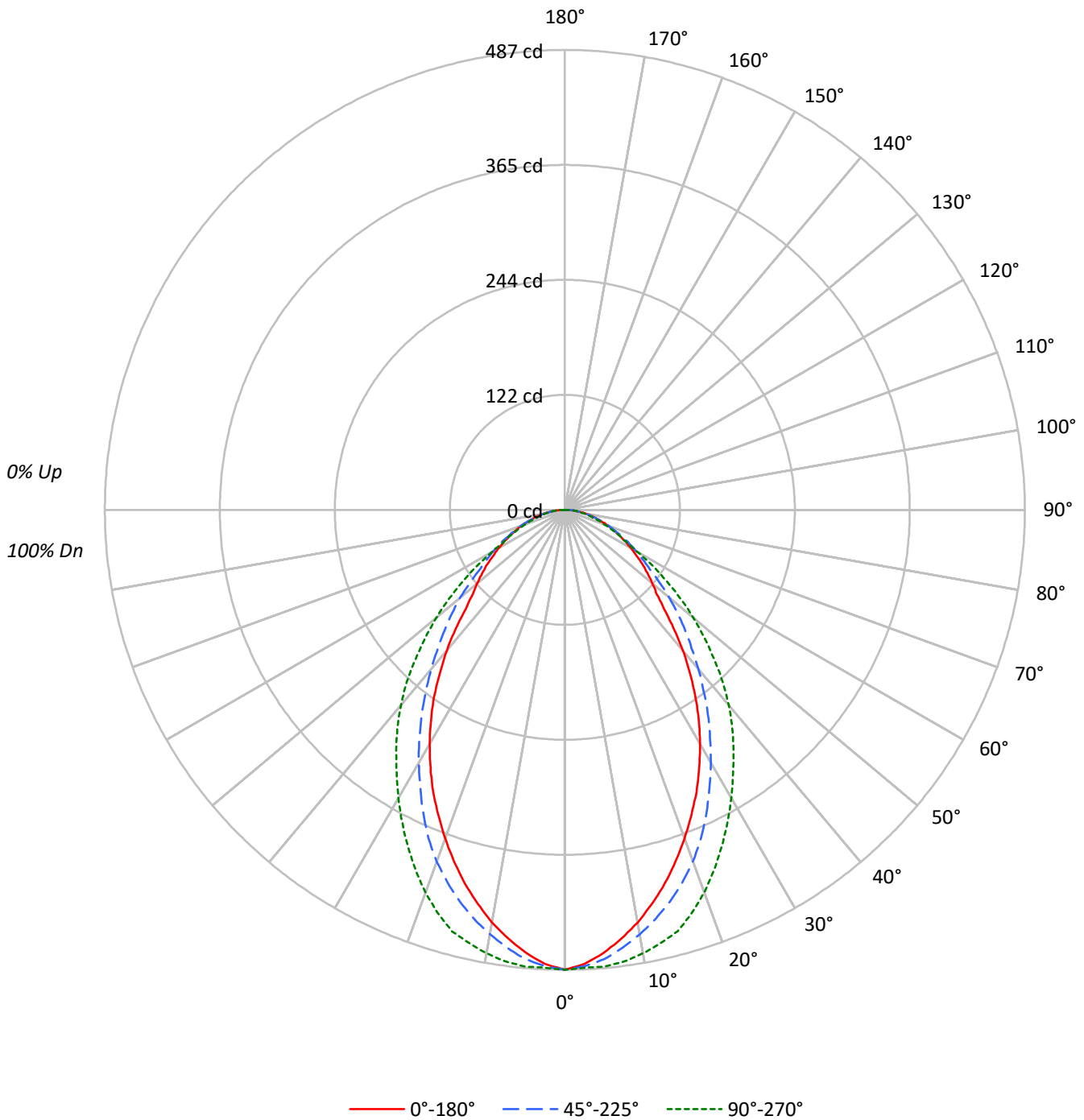
Lumens per Lamp: N/A
Luminaire Lumens: 855.7 lumens
Efficiency: N/A
Efficacy: 73.1 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 1.1 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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									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	101	97	100	97	94	96	94	92	92	91	89	87																												
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75																												
3	94	85	77	72	92	83	76	71	80	75	70	78	73	69	75	71	68	66																												
4	87	76	69	63	85	75	68	62	73	66	61	70	65	61	68	64	60	58																												
5	81	69	61	55	79	68	61	55	66	59	54	64	58	54	62	57	53	51																												
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46																												
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	41																												
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38																												
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34																												
10	58	46	39	34	57	45	38	34	45	38	34	44	38	33	43	37	33	32																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5717	5717	5717
5°	5552	5631	5720
10°	5292	5442	5686
15°	4977	5221	5614
20°	4629	4953	5388
25°	4273	4593	5093
30°	3881	4194	4778
35°	3455	3784	4464
40°	2980	3372	4137
45°	2463	2986	3710
50°	2212	2634	3239
55°	2051	2248	2686
60°	1891	2048	2057
65°	1759	1850	1723
70°	1655	1682	1511
75°	1561	1502	1329
80°	1474	1359	1244
85°	1415	1522	1415

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 3710 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.1	5.3
10°-20°	121.5	14.2
20°-30°	164.4	19.2
30°-40°	168.9	19.7
40°-50°	141.9	16.6
50°-60°	101.7	11.9
60°-70°	64.8	7.6
70°-80°	35.6	4.2
80°-90°	11.9	1.4
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°	331.0	38.7
0°-40°	499.9	58.4
0°-60°	743.5	86.9
0°-90°	855.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	855.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	487	487	487	487	487	
5°	471	479	478	481	485	44
15°	409	421	430	448	462	115
25°	330	342	354	374	393	151
35°	241	254	264	288	311	150
45°	148	161	180	206	223	117
55°	100	102	110	124	131	89
65°	63	67	67	63	62	63
75°	34	38	33	31	29	37
85°	10	11	11	12	10	12
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	486.9	486.9	486.9	486.9	486.9
2.5°	481.5	488.2	483.6	484.0	485.3
5°	471.0	479.4	477.7	481.1	485.3
7.5°	458.0	467.2	467.7	475.6	482.3
10°	443.8	453.4	456.4	468.5	476.9
12.5°	427.0	437.5	443.8	458.9	469.8
15°	409.4	420.7	429.5	448.0	461.8
17.5°	390.1	402.3	413.6	433.3	447.6
20°	370.4	383.4	396.4	414.9	431.2
22.5°	349.9	363.3	376.7	394.8	412.8
25°	329.8	342.4	354.5	373.8	393.1
27.5°	308.0	321.0	331.5	352.8	373.0
30°	286.2	299.2	309.3	331.5	352.4
32.5°	263.6	277.0	286.2	309.3	331.1
35°	241.0	253.9	264.0	287.5	311.4
37.5°	217.1	231.3	241.4	267.8	291.2
40°	194.4	207.9	220.0	247.7	269.9
42.5°	171.0	184.8	198.6	227.1	247.7
45°	148.3	161.3	179.8	205.8	223.4
47.5°	132.0	140.4	161.8	183.5	200.3
50°	121.1	124.5	144.2	163.4	177.3
52.5°	110.2	112.7	126.1	143.7	154.2
55°	100.2	102.2	109.8	124.5	131.2
57.5°	89.3	91.4	97.6	106.0	109.8
60°	80.5	82.1	87.2	88.4	87.6
62.5°	71.7	74.2	76.7	73.8	72.5
65°	63.3	67.0	66.6	62.9	62.0
67.5°	55.7	59.5	57.4	53.6	52.4
70°	48.2	52.0	49.0	45.3	44.0
72.5°	41.1	45.3	40.6	37.3	36.5
75°	34.4	37.7	33.1	30.6	29.3
77.5°	28.1	30.6	26.4	24.3	23.5
80°	21.8	23.5	20.1	18.9	18.4
82.5°	15.9	16.8	14.7	15.5	15.1
85°	10.5	10.9	11.3	11.7	10.5
87.5°	5.0	7.1	7.1	6.7	5.4
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	13.25	14.71	13.61	15.02	15.34	14.31	15.77	14.68	16.09	16.40
	3H	14.94	16.25	15.32	16.58	16.94	15.40	16.71	15.77	17.04	17.40
	4H	15.60	16.82	16.00	17.17	17.55	15.80	17.03	16.20	17.37	17.75
	6H	16.10	17.23	16.51	17.60	17.99	16.11	17.24	16.52	17.61	18.00
	8H	16.27	17.35	16.70	17.74	18.14	16.24	17.32	16.67	17.71	18.11
	12H	16.40	17.43	16.83	17.81	18.24	16.36	17.40	16.79	17.78	18.21
4H	2H	13.85	15.07	14.25	15.42	15.80	14.71	15.94	15.11	16.29	16.67
	3H	15.77	16.79	16.18	17.19	17.59	16.03	17.05	16.44	17.45	17.85
	4H	16.58	17.50	17.02	17.92	18.36	16.55	17.47	16.99	17.88	18.32
	6H	17.23	18.03	17.69	18.47	18.93	16.99	17.78	17.44	18.22	18.69
	8H	17.45	18.20	17.92	18.64	19.11	17.18	17.92	17.64	18.36	18.83
	12H	17.63	18.29	18.11	18.77	19.24	17.36	18.02	17.84	18.50	18.97
8H	4H	16.82	17.57	17.29	18.01	18.48	16.80	17.54	17.26	17.99	18.46
	6H	17.61	18.23	18.11	18.72	19.20	17.35	17.96	17.84	18.45	18.93
	8H	17.92	18.48	18.44	18.99	19.48	17.62	18.18	18.14	18.69	19.18
	12H	18.19	18.68	18.70	19.17	19.74	17.92	18.40	18.43	18.90	19.46
12H	4H	16.83	17.50	17.32	17.98	18.45	16.82	17.49	17.31	17.97	18.44
	6H	17.64	18.20	18.16	18.71	19.20	17.40	17.95	17.91	18.46	18.95
	8H	18.02	18.51	18.53	19.00	19.57	17.74	18.23	18.25	18.72	19.29