

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1059265

Luminaire Tested: S123RDRP-S560D840-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1059265
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-30)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDRP-S560D840-X4F0-XX-UDD-BVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE
LOUVER WITH DIFFUSER
CORE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

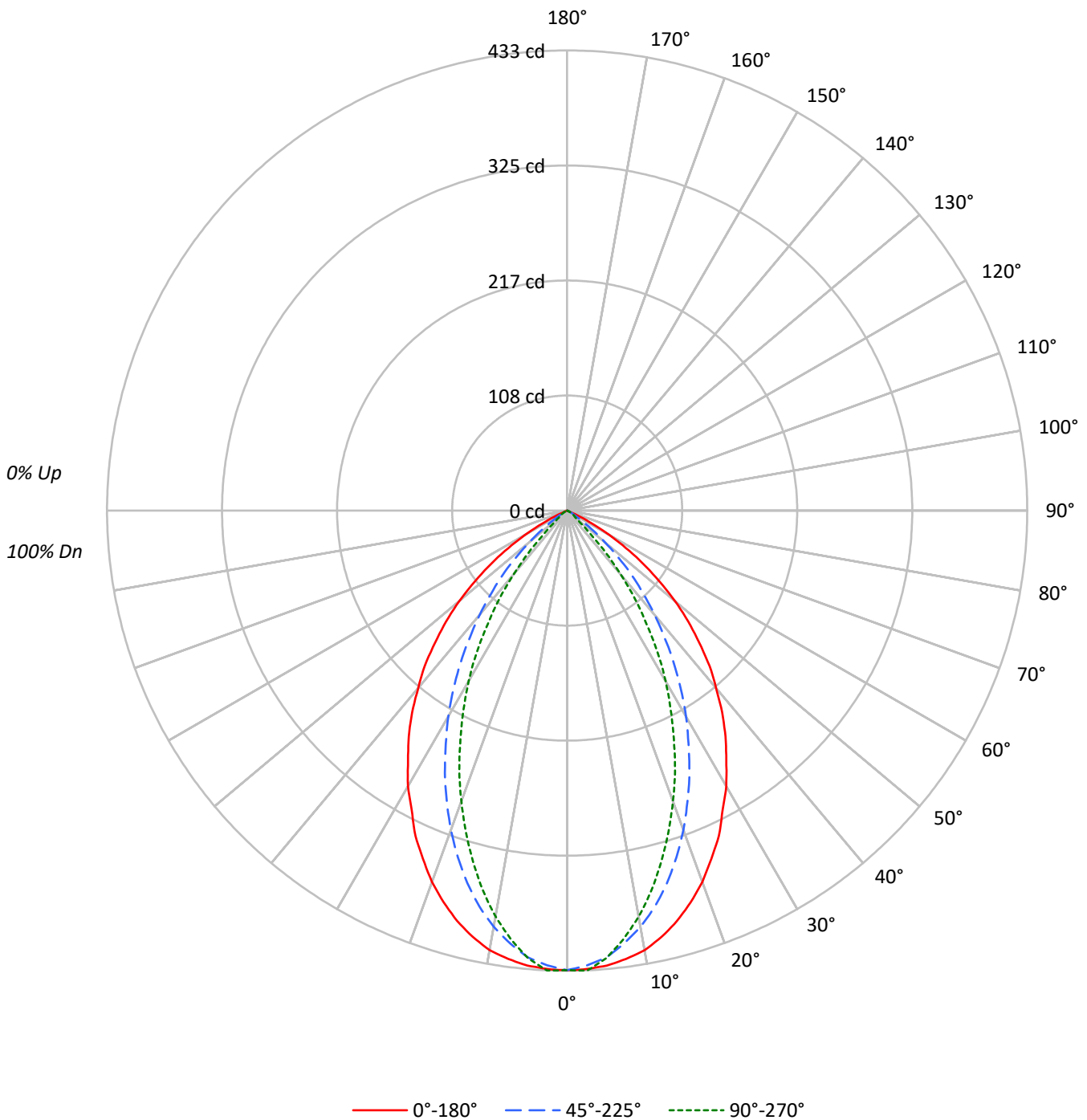
Lumens per Lamp: N/A
Luminaire Lumens: 493.6 lumens
Efficiency: N/A
Efficacy: 25.2 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 0.81 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 19.6
Input Voltage (V): 120
Input Current (A_{in}): 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	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	113	110	107	104	110	107	105	103	103	101	100	100	98	97	96	95	94	92					92			
2	106	101	96	92	104	99	95	91	96	92	89	93	90	87	90	87	85	84					84			
3	100	92	87	82	98	91	86	82	88	84	80	86	82	79	83	80	78	76					76			
4	94	85	79	74	92	84	78	74	82	77	73	80	75	72	78	74	71	69					69			
5	88	79	72	67	86	78	71	67	76	70	66	74	69	65	72	68	65	63					63			
6	83	73	66	61	81	72	66	61	70	65	60	69	64	60	67	63	60	58					58			
7	78	68	61	56	77	67	60	56	66	60	56	64	59	55	63	58	55	53					53			
8	74	63	56	52	72	62	56	51	61	55	51	60	55	51	59	54	51	49					49			
9	70	59	52	48	68	58	52	48	57	52	47	56	51	47	55	51	47	46					46			
10	66	55	49	44	65	55	48	44	54	48	44	53	48	44	52	47	44	42					42			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5079	5079	5079
5°	5065	4975	4982
10°	5008	4742	4625
15°	4860	4412	4158
20°	4647	3995	3638
25°	4377	3528	3077
30°	4061	3032	2512
35°	3724	2506	1866
40°	3342	1964	1196
45°	2914	1435	497
50°	2417	853	190
55°	1783	356	143
60°	1080	132	82
65°	289	78	39
70°	0	24	24
75°	0	0	32
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2914 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.8	8.1
10°-20°	102.8	20.8
20°-30°	128.1	25.9
30°-40°	114.5	23.2
40°-50°	72.3	14.6
50°-60°	30.3	6.1
60°-70°	5.7	1.2
70°-80°	0.2	0.0
80°-90°	0.0	0.0
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°	270.6	54.8
0°-40°	385.1	78.0
0°-60°	487.7	98.8
0°-90°	493.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	493.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	432	432	432	432	432	
5°	430	429	422	423	423	41
15°	400	390	363	348	342	112
25°	338	311	272	249	238	155
35°	260	222	175	144	130	162
45°	176	136	86	46	30	135
55°	87	60	17	7	7	78
65°	10	8	3	1	1	15
75°	0	0	0	0	1	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	432.5	432.5	432.5	432.5	432.5
2.5°	431.8	432.5	428.3	432.5	433.2
5°	429.7	429.0	422.1	423.4	422.7
7.5°	425.5	423.4	410.9	408.1	406.7
10°	420.0	414.4	397.7	390.7	387.9
12.5°	410.9	403.2	381.7	370.5	366.3
15°	399.8	390.0	362.9	347.5	342.0
17.5°	386.5	372.6	342.0	325.2	316.9
20°	371.9	352.4	319.7	299.5	291.1
22.5°	354.5	332.9	296.0	274.4	265.3
25°	337.8	310.6	272.3	248.6	237.5
27.5°	316.9	288.3	247.2	222.9	211.0
30°	299.5	266.7	223.6	196.4	185.3
32.5°	278.6	244.5	199.2	169.2	158.8
35°	259.8	222.2	174.8	143.5	130.2
37.5°	239.6	200.6	150.4	117.7	105.2
40°	218.0	179.0	128.1	91.9	78.0
42.5°	198.5	157.4	105.9	68.3	54.3
45°	175.5	136.5	86.4	46.0	29.9
47.5°	154.6	117.0	65.5	25.8	16.0
50°	132.3	96.8	46.7	13.2	10.4
52.5°	109.3	77.3	30.6	9.1	8.4
55°	87.1	59.9	17.4	7.0	7.0
57.5°	65.5	43.2	9.1	5.6	4.9
60°	46.0	28.6	5.6	4.2	3.5
62.5°	26.5	16.7	4.2	2.8	2.8
65°	10.4	7.7	2.8	1.4	1.4
67.5°	0.7	2.1	1.4	0.7	0.7
70°	0.0	0.0	0.7	0.7	0.7
72.5°	0.0	0.0	0.7	0.7	0.7
75°	0.0	0.0	0.0	0.0	0.7
77.5°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
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	10.84	12.02	11.20	12.33	12.64	0.00	0.00	0.00	0.00	0.00
	3H	10.68	11.71	11.06	12.04	12.41	0.00	0.00	0.00	0.00	0.00
	4H	10.59	11.55	11.00	11.90	12.29	0.00	0.00	0.00	0.00	0.00
	6H	10.50	11.37	10.92	11.75	12.14	0.00	0.00	0.00	0.00	0.00
	8H	10.45	11.27	10.88	11.67	12.07	0.00	0.00	0.00	0.00	0.00
	12H	10.40	11.19	10.84	11.57	12.00	0.00	0.00	0.00	0.00	0.00
4H	2H	10.60	11.55	11.00	11.91	12.29	0.00	0.00	0.00	0.00	0.00
	3H	10.43	11.20	10.85	11.61	12.01	0.00	0.00	0.00	0.00	0.00
	4H	10.33	11.01	10.77	11.43	11.88	0.00	0.00	0.00	0.00	0.00
	6H	10.23	10.82	10.70	11.27	11.74	0.00	0.00	0.00	0.00	0.00
	8H	10.17	10.71	10.64	11.16	11.64	0.00	0.00	0.00	0.00	0.00
	12H	10.11	10.59	10.60	11.07	11.55	0.00	0.00	0.00	0.00	0.00
8H	4H	10.17	10.71	10.64	11.16	11.64	0.00	0.00	0.00	0.00	0.00
	6H	10.05	10.49	10.56	10.99	11.48	0.00	0.00	0.00	0.00	0.00
	8H	9.98	10.38	10.51	10.90	11.39	0.00	0.00	0.00	0.00	0.00
	12H	9.93	10.28	10.44	10.77	11.35	0.00	0.00	0.00	0.00	0.00
12H	4H	10.11	10.59	10.60	11.07	11.55	0.00	0.00	0.00	0.00	0.00
	6H	9.98	10.38	10.51	10.90	11.39	0.00	0.00	0.00	0.00	0.00
	8H	9.93	10.28	10.44	10.77	11.35	0.00	0.00	0.00	0.00	0.00