

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: P1059667

Luminaire Tested: S123RDR-H560D835-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059667
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-28)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H560D835-X4F0-XX-UDD-WVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

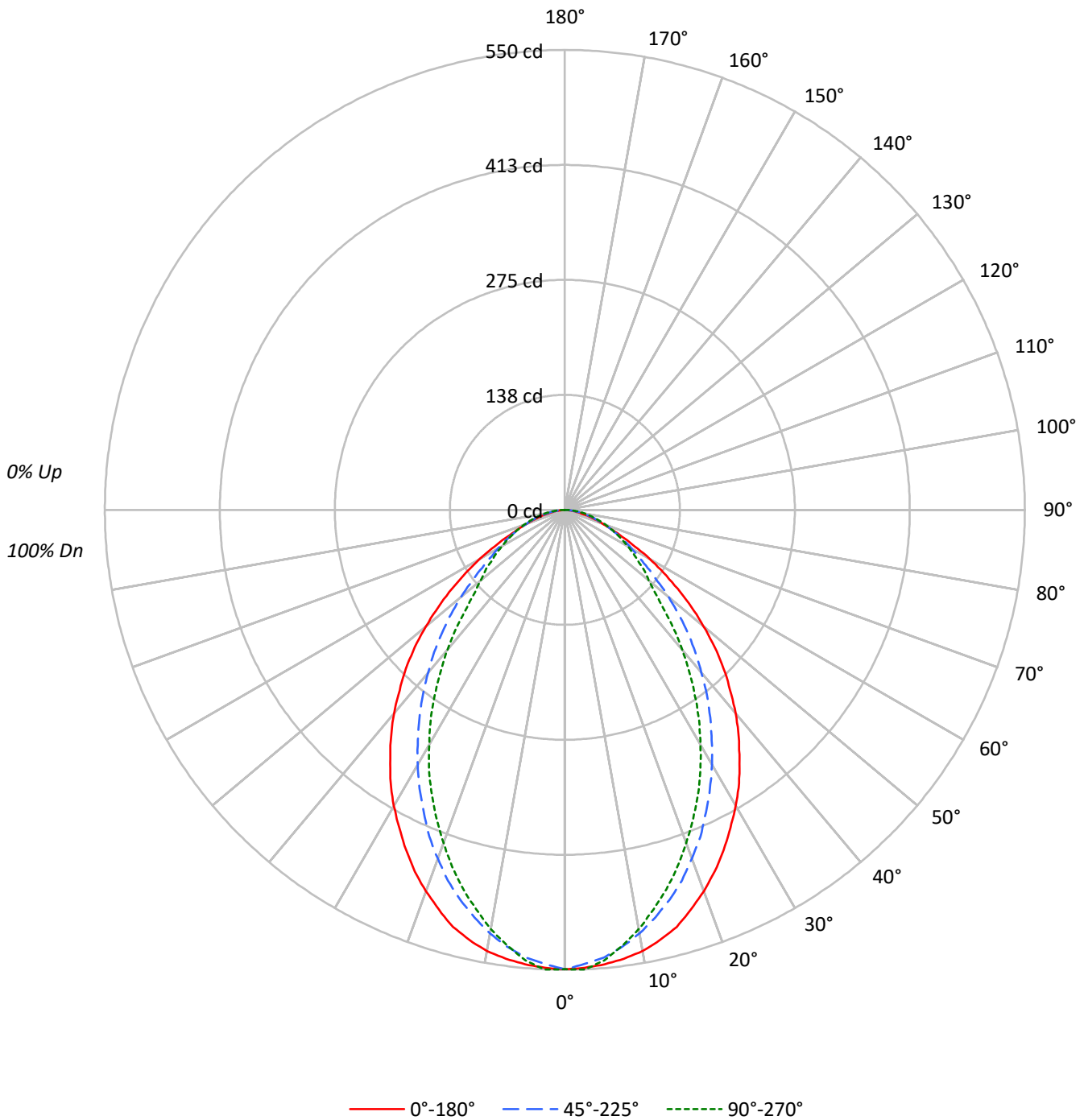
Lumens per Lamp: N/A
Luminaire Lumens: 960.9 lumens
Efficiency: N/A
Efficacy: 55.2 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 0.95 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 17.4
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	88
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76
3	94	85	78	73	92	84	77	72	81	75	71	78	73	69	76	72	68	66
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6451	6451	6451
5°	6430	6336	6375
10°	6386	6133	6071
15°	6278	5868	5708
20°	6066	5546	5298
25°	5819	5168	4877
30°	5543	4773	4396
35°	5216	4345	3890
40°	4868	3897	3351
45°	4464	3444	2753
50°	3957	2956	2389
55°	3366	2473	2191
60°	2745	2156	2031
65°	2092	1909	1889
70°	1631	1699	1768
75°	1320	1529	1647
80°	981	1251	1521
85°	539	795	1334

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4464 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.0	5.3
10°-20°	137.2	14.3
20°-30°	186.5	19.4
30°-40°	193.4	20.1
40°-50°	163.1	17.0
50°-60°	115.8	12.0
60°-70°	70.8	7.4
70°-80°	35.2	3.7
80°-90°	8.0	0.8
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°	374.8	39.0
0°-40°	568.1	59.1
0°-60°	847.0	88.1
0°-90°	960.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	960.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	549	549	549	549	549	
5°	546	546	538	541	541	52
15°	516	506	483	474	470	145
25°	449	429	399	384	376	206
35°	364	336	303	282	271	228
45°	269	240	207	179	166	206
55°	164	147	121	110	107	148
65°	75	73	69	69	68	77
75°	29	31	34	35	36	31
85°	4	5	6	9	10	6
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	549.4	549.4	549.4	549.4	549.4
2.5°	548.1	548.8	543.5	549.4	550.1
5°	545.5	545.5	537.5	540.8	540.8
7.5°	541.5	540.2	527.0	527.0	525.7
10°	535.6	531.6	514.4	511.1	509.2
12.5°	527.0	520.4	499.2	493.3	489.3
15°	516.4	506.5	482.7	474.2	469.5
17.5°	501.2	491.3	464.9	453.0	447.7
20°	485.4	470.8	443.8	431.9	424.0
22.5°	468.2	449.7	423.3	408.8	400.2
25°	449.1	429.2	398.9	384.3	376.4
27.5°	428.6	406.8	375.8	359.2	351.3
30°	408.8	383.7	352.0	333.5	324.2
32.5°	387.6	359.2	326.9	307.7	298.5
35°	363.9	336.1	303.1	282.0	271.4
37.5°	341.4	313.0	278.7	256.2	244.3
40°	317.6	289.2	254.2	231.1	218.6
42.5°	292.5	265.5	231.1	204.1	192.2
45°	268.8	240.4	207.4	179.0	165.8
47.5°	243.0	216.6	184.2	155.2	145.9
50°	216.6	192.2	161.8	135.4	130.8
52.5°	190.8	170.4	139.3	122.2	120.2
55°	164.4	147.3	120.8	110.3	107.0
57.5°	140.0	127.5	103.7	98.4	97.1
60°	116.9	106.3	91.8	88.5	86.5
62.5°	94.4	88.5	79.9	78.6	77.3
65°	75.3	72.6	68.7	68.7	68.0
67.5°	59.4	59.4	58.8	60.1	59.4
70°	47.5	48.2	49.5	50.8	51.5
72.5°	37.6	39.6	40.9	42.9	43.6
75°	29.1	31.0	33.7	35.0	36.3
77.5°	21.1	23.1	25.8	27.7	29.1
80°	14.5	15.8	18.5	21.1	22.5
82.5°	9.2	9.9	11.9	14.5	15.8
85°	4.0	4.6	5.9	8.6	9.9
87.5°	0.0	0.0	0.7	2.6	4.6
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	15.29	16.74	15.65	17.05	17.37	13.38	14.83	13.75	15.15	15.46
	3H	16.18	17.48	16.56	17.81	18.17	14.96	16.25	15.33	16.58	16.94
	4H	16.47	17.68	16.87	18.03	18.41	15.55	16.76	15.95	17.11	17.49
	6H	16.62	17.73	17.03	18.10	18.49	16.00	17.12	16.42	17.49	17.88
	8H	16.64	17.70	17.07	18.09	18.49	16.15	17.21	16.58	17.60	18.01
	12H	16.63	17.65	17.06	18.03	18.46	16.25	17.27	16.68	17.65	18.08
4H	2H	15.53	16.74	15.93	17.09	17.47	13.93	15.14	14.33	15.49	15.87
	3H	16.64	17.64	17.06	18.05	18.45	15.70	16.70	16.11	17.10	17.50
	4H	17.03	17.93	17.47	18.35	18.79	16.41	17.31	16.84	17.72	18.16
	6H	17.27	18.05	17.73	18.50	18.96	16.98	17.76	17.44	18.20	18.67
	8H	17.32	18.04	17.78	18.49	18.96	17.17	17.90	17.64	18.34	18.81
	12H	17.33	17.97	17.81	18.45	18.92	17.31	17.96	17.79	18.44	18.91
8H	4H	17.19	17.92	17.66	18.36	18.83	16.62	17.35	17.08	17.79	18.26
	6H	17.50	18.10	18.00	18.59	19.07	17.29	17.89	17.79	18.39	18.87
	8H	17.58	18.12	18.10	18.63	19.12	17.55	18.09	18.07	18.60	19.09
	12H	17.61	18.09	18.13	18.58	19.15	17.76	18.23	18.27	18.73	19.29
12H	4H	17.20	17.84	17.68	18.32	18.80	16.62	17.26	17.10	17.74	18.22
	6H	17.52	18.05	18.03	18.57	19.06	17.30	17.84	17.82	18.35	18.84
	8H	17.63	18.11	18.14	18.60	19.17	17.61	18.08	18.12	18.57	19.14