

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: P1059661

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059661
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: S123RDR-H560D835-X4F0-XX-UDD-BVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

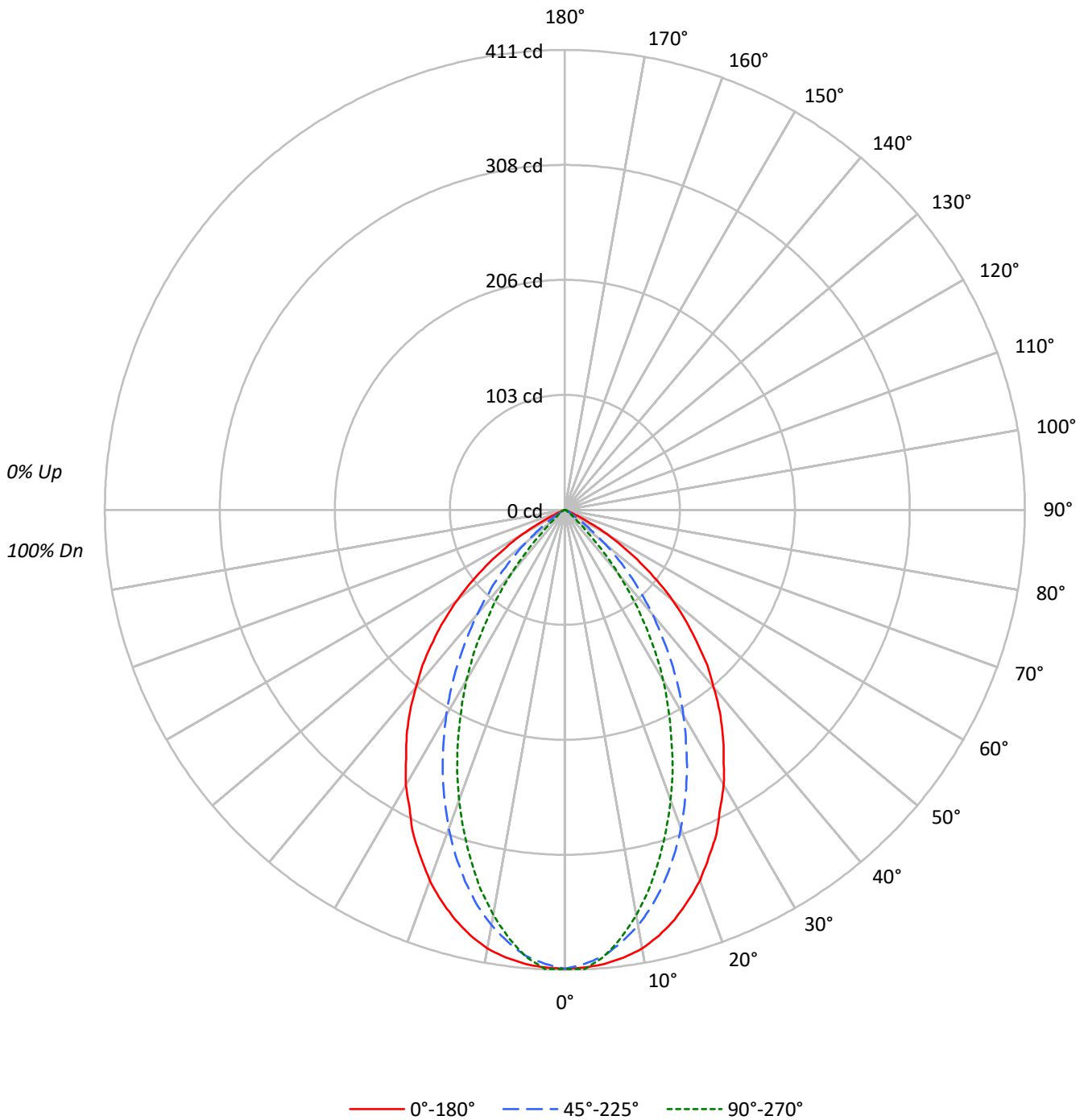
Lumens per Lamp: N/A
Luminaire Lumens: 467.9 lumens
Efficiency: N/A
Efficacy: 26.9 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 0.81 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4816	4816	4816
5°	4802	4717	4724
10°	4748	4496	4385
15°	4607	4182	3941
20°	4406	3788	3449
25°	4150	3345	2918
30°	3849	2875	2382
35°	3531	2375	1770
40°	3168	1862	1134
45°	2763	1360	472
50°	2293	807	181
55°	1689	338	135
60°	1024	124	78
65°	275	72	36
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: 2763 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.8	8.1
10°-20°	97.4	20.8
20°-30°	121.4	25.9
30°-40°	108.6	23.2
40°-50°	68.5	14.6
50°-60°	28.7	6.1
60°-70°	5.4	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°	256.6	54.8
0°-40°	365.2	78.0
0°-60°	462.4	98.8
0°-90°	467.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	467.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	410	410	410	410	410	
5°	407	407	400	402	401	39
15°	379	370	344	330	324	106
25°	320	294	258	236	225	147
35°	246	211	166	136	124	153
45°	166	129	82	44	28	128
55°	82	57	16	7	7	74
65°	10	7	3	1	1	14
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°	410.1	410.1	410.1	410.1	410.1
2.5°	409.4	410.1	406.1	410.1	410.7
5°	407.4	406.8	400.2	401.5	400.8
7.5°	403.5	401.5	389.6	387.0	385.6
10°	398.2	392.9	377.1	370.5	367.8
12.5°	389.6	382.3	361.9	351.3	347.3
15°	379.0	369.8	344.0	329.5	324.2
17.5°	366.5	353.3	324.2	308.4	300.5
20°	352.6	334.1	303.1	283.9	276.0
22.5°	336.1	315.6	280.6	260.2	251.6
25°	320.3	294.5	258.2	235.7	225.2
27.5°	300.5	273.4	234.4	211.3	200.1
30°	283.9	252.9	212.0	186.2	175.7
32.5°	264.1	231.8	188.9	160.5	150.6
35°	246.3	210.6	165.7	136.0	123.5
37.5°	227.2	190.2	142.6	111.6	99.7
40°	206.7	169.7	121.5	87.2	74.0
42.5°	188.2	149.2	100.4	64.7	51.5
45°	166.4	129.4	81.9	43.6	28.4
47.5°	146.6	110.9	62.1	24.4	15.2
50°	125.5	91.8	44.2	12.5	9.9
52.5°	103.7	73.3	29.1	8.6	7.9
55°	82.5	56.8	16.5	6.6	6.6
57.5°	62.1	40.9	8.6	5.3	4.6
60°	43.6	27.1	5.3	4.0	3.3
62.5°	25.1	15.8	4.0	2.6	2.6
65°	9.9	7.3	2.6	1.3	1.3
67.5°	0.7	2.0	1.3	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	10.65	11.82	11.01	12.14	12.45	0.00	0.00	0.00	0.00	0.00
	3H	10.49	11.52	10.87	11.85	12.22	0.00	0.00	0.00	0.00	0.00
	4H	10.40	11.36	10.81	11.71	12.09	0.00	0.00	0.00	0.00	0.00
	6H	10.31	11.18	10.73	11.55	11.95	0.00	0.00	0.00	0.00	0.00
	8H	10.26	11.08	10.69	11.47	11.88	0.00	0.00	0.00	0.00	0.00
	12H	10.21	10.99	10.64	11.38	11.81	0.00	0.00	0.00	0.00	0.00
4H	2H	10.41	11.36	10.81	11.71	12.10	0.00	0.00	0.00	0.00	0.00
	3H	10.24	11.01	10.66	11.42	11.82	0.00	0.00	0.00	0.00	0.00
	4H	10.14	10.82	10.57	11.24	11.69	0.00	0.00	0.00	0.00	0.00
	6H	10.04	10.62	10.51	11.07	11.54	0.00	0.00	0.00	0.00	0.00
	8H	9.98	10.52	10.45	10.97	11.44	0.00	0.00	0.00	0.00	0.00
	12H	9.92	10.39	10.41	10.88	11.36	0.00	0.00	0.00	0.00	0.00
8H	4H	9.98	10.52	10.45	10.97	11.44	0.00	0.00	0.00	0.00	0.00
	6H	9.86	10.30	10.37	10.80	11.28	0.00	0.00	0.00	0.00	0.00
	8H	9.79	10.18	10.31	10.70	11.20	0.00	0.00	0.00	0.00	0.00
	12H	9.73	10.08	10.25	10.58	11.16	0.00	0.00	0.00	0.00	0.00
12H	4H	9.92	10.39	10.41	10.88	11.36	0.00	0.00	0.00	0.00	0.00
	6H	9.79	10.18	10.31	10.70	11.20	0.00	0.00	0.00	0.00	0.00
	8H	9.73	10.08	10.25	10.58	11.16	0.00	0.00	0.00	0.00	0.00