

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: P1059687

Luminaire Tested: S123RDR-H560D850-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059687
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-H560D850-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: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

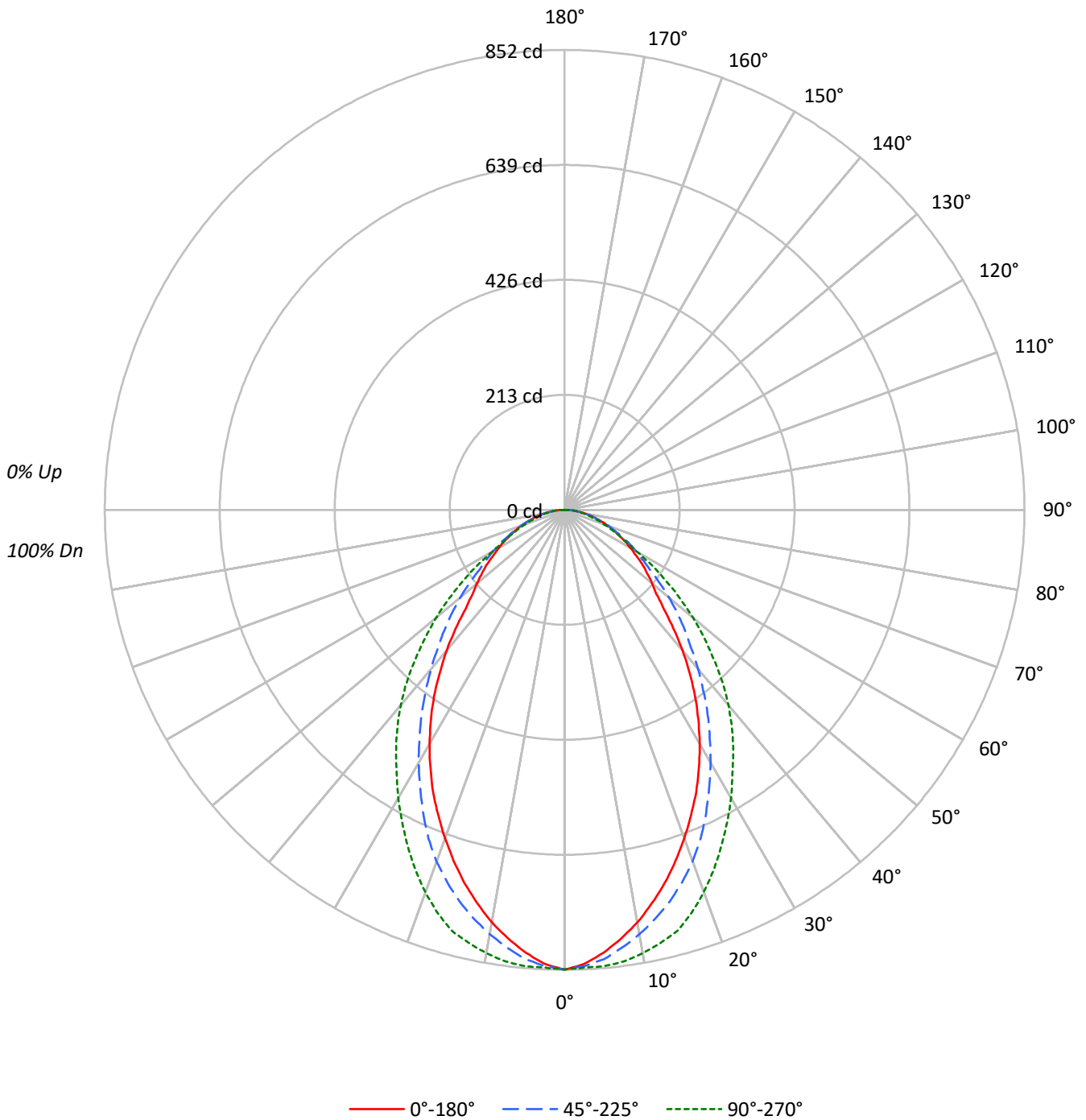
Lumens per Lamp: N/A
Luminaire Lumens: 1496.4 lumens
Efficiency: N/A
Efficacy: 86.0 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 1.1 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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									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													100															
1	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89	87													87															
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75													75															
3	94	85	77	72	92	83	76	71	80	75	70	78	73	69	75	71	68	66													66															
4	87	76	69	63	85	75	68	62	73	66	61	70	65	61	68	64	60	58													58															
5	81	69	61	55	79	68	61	55	66	59	54	64	58	54	62	57	53	51													51															
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46													46															
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	41													41															
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38													38															
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34													34															
10	58	46	39	34	57	45	38	34	45	38	34	44	38	33	43	37	33	32													32															

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10000	10000	10000
5°	9709	9848	10004
10°	9254	9516	9944
15°	8704	9132	9818
20°	8095	8664	9423
25°	7473	8033	8906
30°	6786	7334	8356
35°	6041	6618	7805
40°	5212	5898	7235
45°	4308	5221	6486
50°	3869	4605	5663
55°	3587	3931	4696
60°	3304	3579	3598
65°	3076	3237	3015
70°	2894	2942	2644
75°	2727	2627	2327
80°	2576	2380	2177
85°	2466	2668	2466

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 6486 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.9	5.3
10°-20°	212.5	14.2
20°-30°	287.5	19.2
30°-40°	295.4	19.7
40°-50°	248.1	16.6
50°-60°	177.9	11.9
60°-70°	113.2	7.6
70°-80°	62.2	4.2
80°-90°	20.7	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°	578.8	38.7
0°-40°	874.2	58.4
0°-60°	1300.2	86.9
0°-90°	1496.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1496.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	852	852	852	852	852	
5°	824	838	836	841	849	77
15°	716	736	751	783	808	201
25°	577	599	620	654	687	264
35°	421	444	462	503	544	262
45°	259	282	314	360	391	205
55°	175	179	192	218	229	156
65°	111	117	116	110	108	110
75°	60	66	58	54	51	64
85°	18	19	20	20	18	20
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	851.6	851.6	851.6	851.6	851.6
2.5°	842.1	853.8	845.7	846.5	848.7
5°	823.7	838.4	835.5	841.3	848.7
7.5°	801.0	817.1	817.9	831.8	843.5
10°	776.1	793.0	798.1	819.3	834.0
12.5°	746.8	765.1	776.1	802.5	821.5
15°	716.0	735.8	751.2	783.4	807.6
17.5°	682.3	703.5	723.3	757.8	782.7
20°	647.8	670.6	693.3	725.5	754.1
22.5°	611.9	635.4	658.8	690.4	721.9
25°	576.8	598.7	620.0	653.7	687.4
27.5°	538.7	561.4	579.7	617.1	652.2
30°	500.5	523.3	540.9	579.7	616.3
32.5°	461.0	484.4	500.5	540.9	579.0
35°	421.4	444.1	461.7	502.7	544.5
37.5°	379.6	404.5	422.1	468.3	509.3
40°	340.0	363.5	384.8	433.1	472.0
42.5°	299.0	323.2	347.4	397.2	433.1
45°	259.4	282.2	314.4	359.8	390.6
47.5°	230.9	245.5	282.9	321.0	350.3
50°	211.8	217.7	252.1	285.8	310.0
52.5°	192.7	197.1	220.6	251.4	269.7
55°	175.2	178.8	192.0	217.7	229.4
57.5°	156.1	159.8	170.8	185.4	192.0
60°	140.7	143.6	152.4	154.6	153.2
62.5°	125.3	129.7	134.1	129.0	126.8
65°	110.7	117.3	116.5	109.9	108.5
67.5°	97.5	104.1	100.4	93.8	91.6
70°	84.3	90.9	85.7	79.1	77.0
72.5°	71.8	79.1	71.1	65.2	63.8
75°	60.1	66.0	57.9	53.5	51.3
77.5°	49.1	53.5	46.2	42.5	41.0
80°	38.1	41.0	35.2	33.0	32.2
82.5°	27.8	29.3	25.7	27.1	26.4
85°	18.3	19.1	19.8	20.5	18.3
87.5°	8.8	12.5	12.5	11.7	9.5
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	15.19	16.65	15.55	16.96	17.28	16.25	17.72	16.62	18.03	18.34
	3H	16.88	18.19	17.26	18.52	18.88	17.34	18.65	17.72	18.98	19.34
	4H	17.54	18.76	17.94	19.11	19.49	17.74	18.97	18.14	19.32	19.70
	6H	18.04	19.17	18.45	19.54	19.93	18.05	19.18	18.46	19.55	19.94
	8H	18.21	19.29	18.64	19.68	20.08	18.18	19.26	18.61	19.65	20.05
	12H	18.34	19.37	18.77	19.75	20.18	18.30	19.34	18.74	19.72	20.15
4H	2H	15.79	17.01	16.19	17.36	17.74	16.66	17.88	17.06	18.23	18.61
	3H	17.71	18.73	18.13	19.13	19.54	17.97	18.99	18.39	19.39	19.80
	4H	18.53	19.44	18.96	19.86	20.30	18.49	19.41	18.93	19.83	20.27
	6H	19.17	19.97	19.63	20.41	20.88	18.93	19.72	19.38	20.17	20.63
	8H	19.39	20.14	19.86	20.58	21.05	19.12	19.86	19.58	20.31	20.77
	12H	19.57	20.23	20.05	20.71	21.18	19.30	19.96	19.78	20.44	20.91
8H	4H	18.76	19.51	19.23	19.95	20.42	18.74	19.48	19.20	19.93	20.40
	6H	19.55	20.17	20.05	20.66	21.14	19.29	19.90	19.79	20.40	20.87
	8H	19.86	20.42	20.38	20.93	21.42	19.56	20.12	20.08	20.63	21.12
	12H	20.13	20.62	20.64	21.11	21.68	19.86	20.35	20.37	20.84	21.40
12H	4H	18.78	19.44	19.26	19.92	20.39	18.77	19.43	19.25	19.91	20.38
	6H	19.59	20.14	20.10	20.65	21.14	19.34	19.89	19.86	20.40	20.89
	8H	19.96	20.45	20.47	20.94	21.51	19.68	20.17	20.19	20.66	21.23