

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: P1059684

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059684
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-65)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H560D850-X4F0-XX-UDD-SVL-W
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

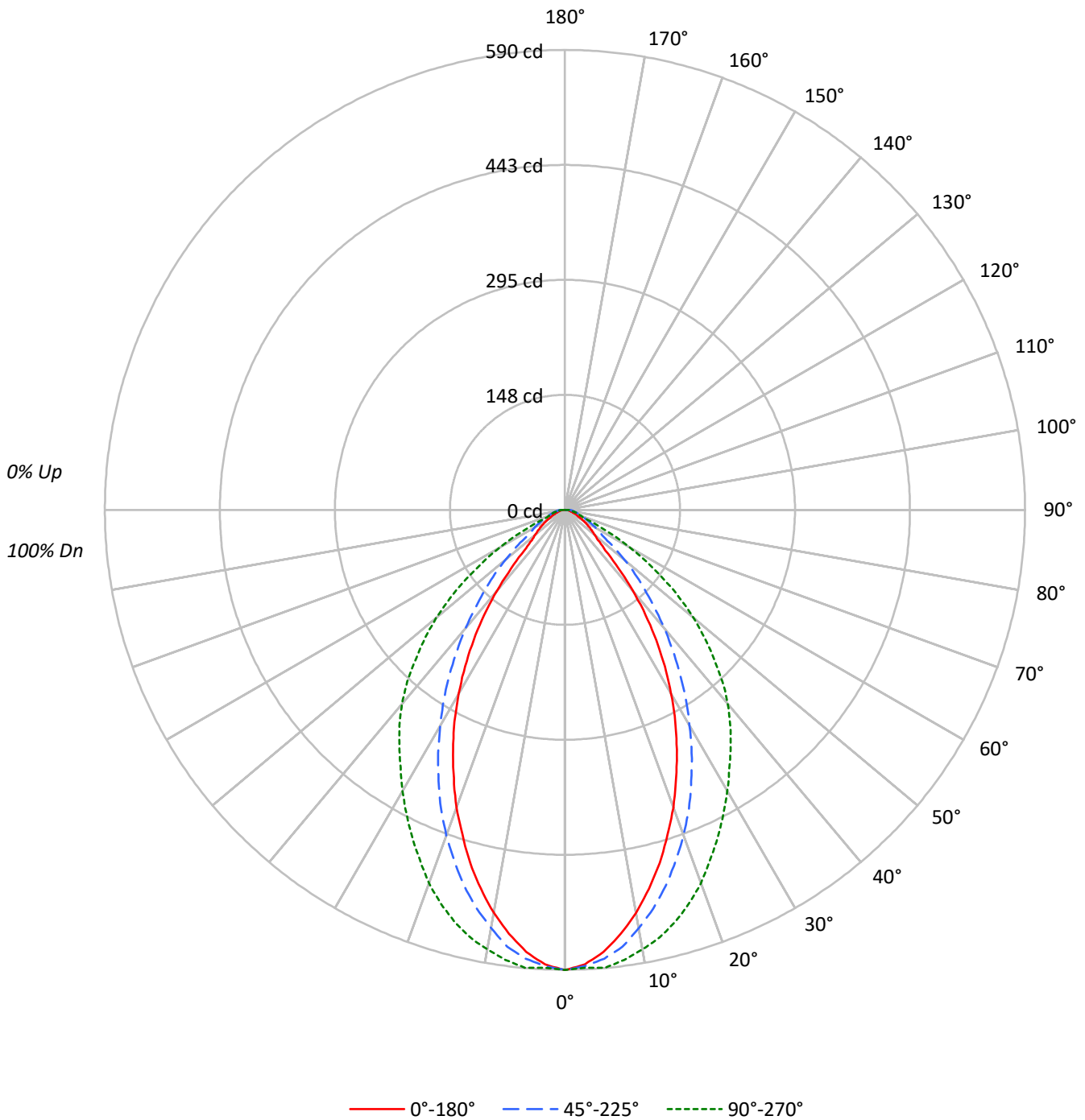
Lumens per Lamp: N/A
Luminaire Lumens: 792.4 lumens
Efficiency: N/A
Efficacy: 45.5 lumens/watt
Spacing Criteria (0/90/45): 0.83 / 1.08 / 0.98
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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	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	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89				
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79				
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71				
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	66	64				
5	85	74	67	61	83	73	66	61	71	65	60	69	64	60	68	63	59	58				
6	79	68	61	55	78	67	60	55	66	59	55	64	59	54	63	58	54	52				
7	74	63	56	51	73	62	55	50	61	55	50	60	54	50	58	53	49	48				
8	70	58	51	46	69	58	51	46	57	50	46	55	50	46	54	49	45	44				
9	66	54	47	43	65	54	47	43	53	47	42	52	46	42	51	46	42	40				
10	62	51	44	39	61	50	44	39	49	43	39	49	43	39	48	43	39	37				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6932	6932	6932
5°	6708	6812	6950
10°	6261	6497	6829
15°	5705	6071	6651
20°	5077	5553	6369
25°	4399	4969	6005
30°	3689	4335	5647
35°	2923	3690	5308
40°	2068	3035	4980
45°	1217	2400	4482
50°	912	1821	3926
55°	766	1230	3153
60°	620	1050	2238
65°	489	897	1181
70°	429	779	731
75°	399	730	699
80°	399	791	697
85°	498	1186	889

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 4482 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.3	6.9
10°-20°	141.2	17.8
20°-30°	179.8	22.7
30°-40°	169.1	21.3
40°-50°	121.8	15.4
50°-60°	70.3	8.9
60°-70°	32.2	4.1
70°-80°	16.1	2.0
80°-90°	7.6	1.0
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°	375.3	47.4
0°-40°	544.5	68.7
0°-60°	736.6	93.0
0°-90°	792.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	792.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	590	590	590	590	590	
5°	569	579	578	584	590	53
15°	469	486	499	527	547	131
25°	340	357	384	426	464	155
35°	204	222	257	317	370	126
45°	73	92	144	217	270	62
55°	37	39	60	114	154	34
65°	18	25	32	36	42	18
75°	9	17	16	15	15	9
85°	4	8	9	8	7	4
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	590.3	590.3	590.3	590.3	590.3
2.5°	583.7	591.1	585.9	586.7	588.1
5°	569.1	578.6	577.9	583.7	589.6
7.5°	548.5	559.5	565.4	574.2	582.3
10°	525.1	537.5	544.9	561.0	572.7
12.5°	497.9	514.1	523.6	544.9	561.7
15°	469.3	486.2	499.4	527.3	547.1
17.5°	437.1	455.4	472.3	505.3	529.5
20°	406.3	423.9	444.4	480.3	509.7
22.5°	372.5	391.6	415.1	453.2	486.2
25°	339.5	357.1	383.5	426.1	463.5
27.5°	306.5	324.1	352.0	398.9	440.0
30°	272.1	290.4	319.7	371.8	416.5
32.5°	238.3	255.9	288.9	345.4	392.3
35°	203.9	221.5	257.4	316.8	370.3
37.5°	170.1	188.5	226.6	293.3	348.3
40°	134.9	154.7	198.0	269.1	324.9
42.5°	101.9	123.2	169.4	244.2	299.2
45°	73.3	91.7	144.5	217.1	269.9
47.5°	57.2	66.7	121.7	189.2	242.7
50°	49.9	51.3	99.7	163.5	214.9
52.5°	43.3	44.7	78.5	139.3	185.5
55°	37.4	38.9	60.1	114.4	154.0
57.5°	31.5	33.7	49.9	90.9	123.9
60°	26.4	29.3	44.7	69.7	95.3
62.5°	21.3	26.4	38.1	51.3	68.2
65°	17.6	24.9	32.3	35.9	42.5
67.5°	14.7	22.7	27.1	25.7	24.9
70°	12.5	20.5	22.7	20.5	21.3
72.5°	10.3	19.1	19.1	17.6	17.6
75°	8.8	16.9	16.1	15.4	15.4
77.5°	7.3	14.7	13.9	13.2	12.5
80°	5.9	11.7	11.7	11.0	10.3
82.5°	5.1	9.5	9.5	9.5	8.1
85°	3.7	8.1	8.8	8.1	6.6
87.5°	2.9	7.3	7.3	6.6	4.4
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	6.69	8.01	7.06	8.32	8.64	14.06	15.38	14.42	15.69	16.00
	3H	8.08	9.25	8.46	9.58	9.95	14.29	15.46	14.67	15.79	16.15
	4H	8.64	9.73	9.04	10.08	10.46	14.40	15.49	14.81	15.85	16.23
	6H	9.07	10.07	9.49	10.44	10.84	14.52	15.52	14.93	15.89	16.29
	8H	9.25	10.20	9.68	10.59	10.99	14.57	15.52	15.00	15.91	16.32
	12H	9.40	10.31	9.84	10.69	11.12	14.63	15.54	15.06	15.92	16.35
4H	2H	7.79	8.89	8.20	9.24	9.62	14.02	15.11	14.42	15.46	15.84
	3H	9.46	10.35	9.87	10.75	11.16	14.38	15.27	14.79	15.67	16.08
	4H	10.27	11.07	10.71	11.49	11.93	14.57	15.37	15.01	15.79	16.24
	6H	10.91	11.60	11.37	12.04	12.51	14.80	15.49	15.27	15.94	16.41
	8H	11.14	11.79	11.61	12.23	12.70	14.91	15.55	15.38	16.00	16.47
	12H	11.35	11.93	11.84	12.41	12.88	15.04	15.61	15.52	16.09	16.56
8H	4H	10.71	11.36	11.18	11.81	12.28	14.61	15.26	15.08	15.70	16.18
	6H	11.62	12.15	12.12	12.65	13.13	14.94	15.47	15.44	15.97	16.45
	8H	12.04	12.51	12.56	13.03	13.52	15.13	15.61	15.65	16.12	16.61
	12H	12.46	12.88	12.97	13.37	13.95	15.38	15.80	15.90	16.30	16.87
12H	4H	10.77	11.34	11.26	11.82	12.30	14.60	15.17	15.09	15.66	16.13
	6H	11.75	12.23	12.28	12.75	13.24	14.96	15.43	15.48	15.95	16.44
	8H	12.29	12.71	12.81	13.21	13.78	15.21	15.63	15.73	16.13	16.70