

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: P1059717

Luminaire Tested: S123RDR-H560D940-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059717
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-66)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H560D940-X4F0-XX-UDD-BVL-W
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

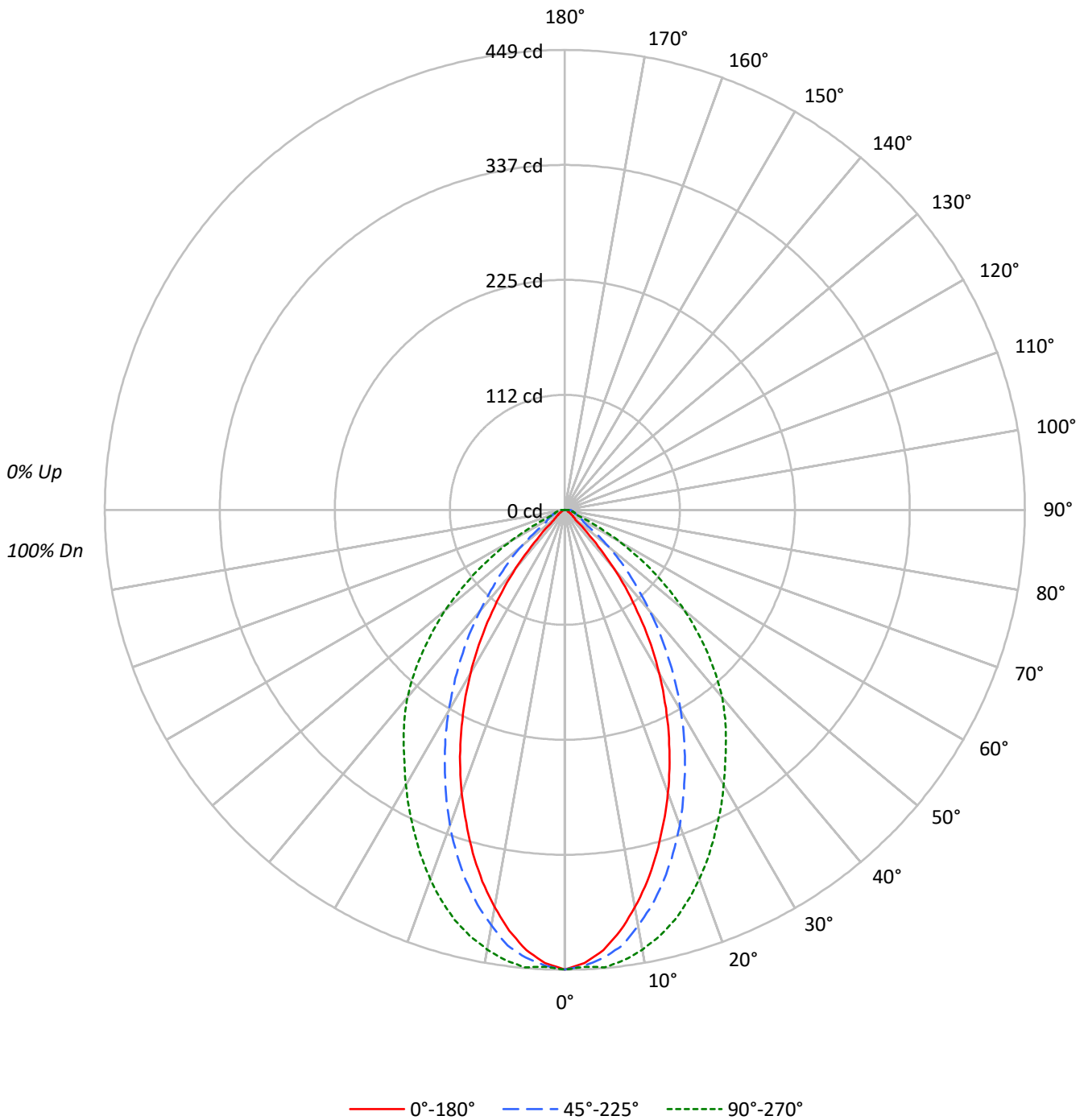
Lumens per Lamp: N/A
Luminaire Lumens: 538.9 lumens
Efficiency: N/A
Efficacy: 31.0 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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										
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	100	100	100	100	100														
1	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90	90	90	90	90	90	90														
2	105	99	94	90	102	97	92	88	94	90	87	91	87	85	88	85	83	81	81	81	81	81	81	81														
3	98	90	84	79	96	89	83	79	86	81	77	83	79	76	81	78	75	73	73	73	73	73	73	73														
4	92	83	76	71	90	81	75	70	79	74	70	77	72	69	75	71	68	66	66	66	66	66	66	66														
5	86	76	69	64	84	75	69	64	73	67	63	71	66	62	70	65	62	60	60	60	60	60	60	60														
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	57	55	55	55	55	55	55	55														
7	76	65	58	53	75	65	58	53	63	57	53	62	56	52	61	56	52	50	50	50	50	50	50	50														
8	72	61	54	49	70	60	53	49	59	53	49	58	52	48	57	52	48	47	47	47	47	47	47	47														
9	68	57	50	45	67	56	50	45	55	49	45	54	49	45	53	48	45	43	43	43	43	43	43	43														
10	64	53	46	42	63	53	46	42	52	46	42	51	45	42	50	45	42	40	40	40	40	40	40	40														

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5270	5270	5270
5°	5089	5172	5283
10°	4698	4916	5197
15°	4216	4545	5040
20°	3678	4097	4797
25°	3103	3591	4501
30°	2495	3071	4206
35°	1826	2527	3931
40°	1139	1971	3662
45°	432	1470	3261
50°	205	1012	2780
55°	158	555	2150
60°	110	472	1414
65°	81	408	589
70°	82	385	385
75°	109	399	399
80°	162	480	440
85°	323	795	633

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 3261 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.2	7.6
10°-20°	105.6	19.6
20°-30°	130.8	24.3
30°-40°	117.2	21.8
40°-50°	76.9	14.3
50°-60°	38.5	7.1
60°-70°	15.0	2.8
70°-80°	8.4	1.6
80°-90°	5.2	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°	277.6	51.5
0°-40°	394.9	73.3
0°-60°	510.2	94.7
0°-90°	538.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	538.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	449	449	449	449	449	
5°	432	439	439	444	448	40
15°	347	361	374	399	415	97
25°	240	254	277	317	347	109
35°	127	144	176	229	274	79
45°	26	42	88	152	196	25
55°	8	9	27	74	105	7
65°	3	9	15	20	21	3
75°	2	9	9	9	9	3
85°	2	6	6	6	5	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	448.8	448.8	448.8	448.8	448.8
2.5°	442.9	449.4	445.3	445.9	446.5
5°	431.7	438.8	438.8	443.5	448.2
7.5°	414.6	422.9	428.8	437.0	443.5
10°	394.0	404.0	412.3	427.0	435.9
12.5°	371.6	383.9	394.6	414.0	426.4
15°	346.8	360.9	373.9	398.7	414.6
17.5°	320.3	334.4	351.5	380.4	399.9
20°	294.3	308.5	327.9	360.4	383.9
22.5°	267.2	281.9	302.6	338.5	366.3
25°	239.5	254.2	277.2	316.7	347.4
27.5°	211.7	226.5	252.4	295.5	329.1
30°	184.0	198.8	226.5	272.5	310.2
32.5°	156.3	172.2	201.1	251.2	291.4
35°	127.4	144.5	176.3	229.4	274.2
37.5°	100.9	116.8	152.8	210.6	257.1
40°	74.3	91.4	128.6	192.3	238.9
42.5°	48.4	66.6	106.8	172.2	218.2
45°	26.0	41.9	88.5	151.6	196.4
47.5°	14.2	23.0	71.4	129.8	174.0
50°	11.2	13.0	55.4	110.9	152.2
52.5°	9.4	10.6	39.5	93.2	128.0
55°	7.7	9.4	27.1	74.3	105.0
57.5°	6.5	8.3	21.2	57.8	82.0
60°	4.7	7.1	20.1	42.5	60.2
62.5°	3.5	7.7	17.7	29.5	39.5
65°	2.9	8.8	14.7	19.5	21.2
67.5°	2.4	9.4	13.0	12.4	12.4
70°	2.4	8.8	11.2	10.6	11.2
72.5°	2.4	9.4	10.0	9.4	10.0
75°	2.4	8.8	8.8	8.8	8.8
77.5°	2.4	8.3	8.3	7.7	7.7
80°	2.4	7.1	7.1	7.1	6.5
82.5°	2.4	6.5	6.5	6.5	5.3
85°	2.4	5.9	5.9	5.9	4.7
87.5°	1.8	5.3	5.9	5.3	3.5
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	0.00	0.00	0.00	0.00	0.05	12.38	13.64	12.74	13.95	14.26
	3H	0.48	1.59	0.86	1.92	2.29	12.46	13.57	12.84	13.90	14.27
	4H	1.58	2.62	1.99	2.97	3.35	12.54	13.57	12.94	13.92	14.31
	6H	2.59	3.54	3.00	3.91	4.30	12.64	13.59	13.06	13.96	14.36
	8H	3.08	3.97	3.51	4.37	4.77	12.70	13.60	13.13	13.99	14.40
	12H	3.64	4.50	4.08	4.88	5.31	12.78	13.64	13.21	14.02	14.45
4H	2H	1.38	2.41	1.78	2.77	3.15	12.23	13.27	12.64	13.62	14.00
	3H	3.69	4.54	4.11	4.94	5.35	12.41	13.25	12.82	13.66	14.06
	4H	5.06	5.81	5.49	6.23	6.68	12.56	13.31	12.99	13.73	14.18
	6H	6.16	6.81	6.63	7.26	7.73	12.79	13.44	13.25	13.89	14.35
	8H	6.63	7.24	7.10	7.68	8.16	12.91	13.52	13.38	13.97	14.44
	12H	7.13	7.67	7.61	8.15	8.62	13.08	13.62	13.57	14.11	14.58
8H	4H	6.04	6.65	6.51	7.09	7.57	12.56	13.17	13.03	13.61	14.08
	6H	7.57	8.07	8.08	8.57	9.05	12.90	13.40	13.40	13.89	14.37
	8H	8.35	8.80	8.88	9.32	9.81	13.13	13.58	13.65	14.09	14.59
	12H	9.16	9.56	9.68	10.05	10.63	13.46	13.86	13.98	14.36	14.93
12H	4H	6.22	6.75	6.70	7.24	7.71	12.54	13.08	13.03	13.56	14.04
	6H	7.89	8.34	8.41	8.86	9.35	12.92	13.37	13.44	13.88	14.37
	8H	8.85	9.25	9.37	9.74	10.32	13.23	13.62	13.74	14.12	14.69