

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: P1060806

Luminaire Tested: S124RDR-H350D840-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060806
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-75)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDR-H350D840-X4F0-XX-UDD-BVL-W
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

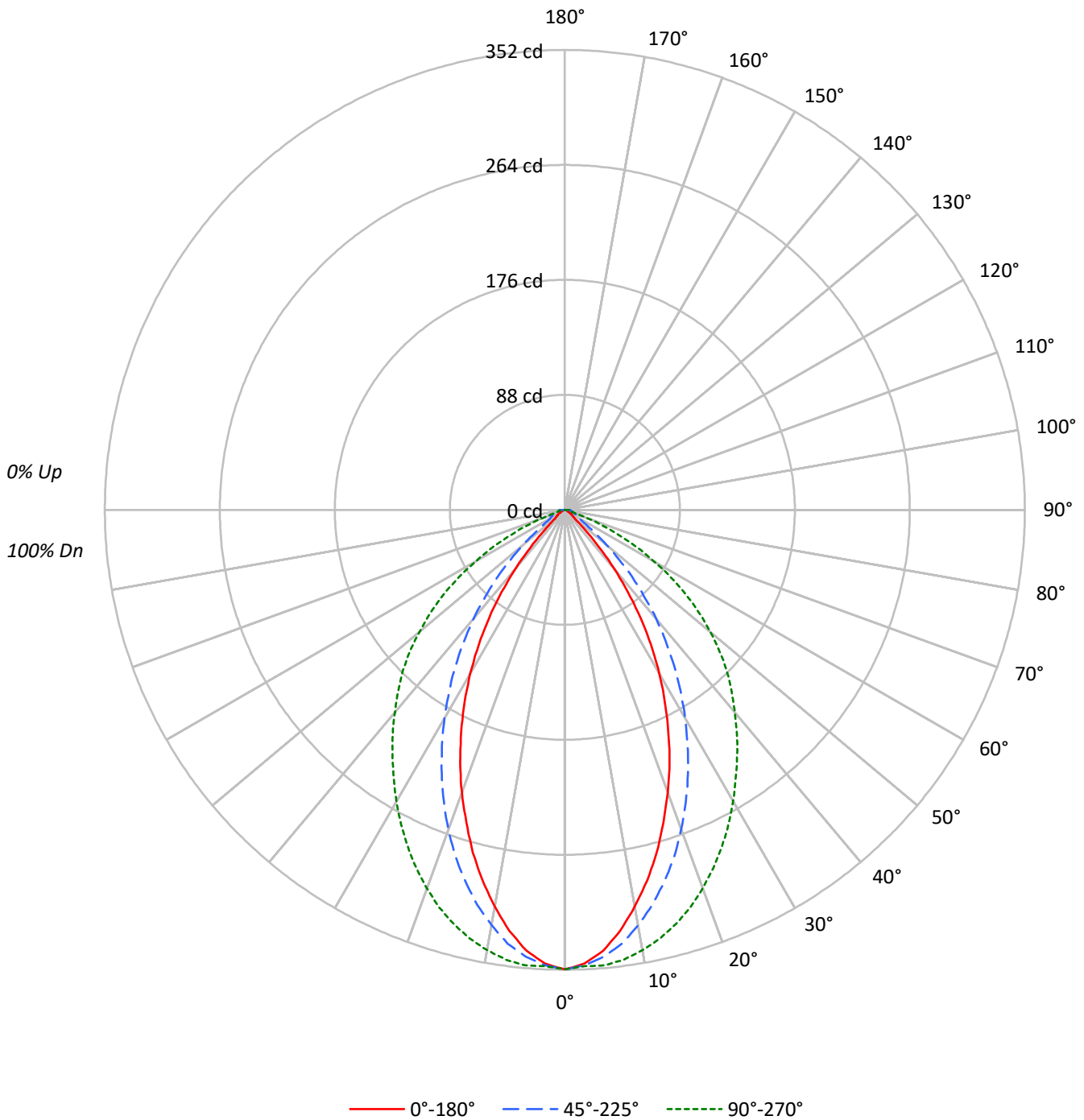
Lumens per Lamp: N/A
Luminaire Lumens: 443.2 lumens
Efficiency: N/A
Efficacy: 37.9 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.11 / 0.96
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90				
2	105	98	93	89	102	97	92	88	93	89	86	90	87	84	87	85	82	81				
3	98	90	84	79	96	88	83	78	86	81	77	83	79	75	81	77	74	72				
4	91	82	75	70	89	81	75	70	79	73	69	76	72	68	74	70	67	65				
5	86	75	68	63	84	74	68	63	72	67	62	71	66	62	69	65	61	59				
6	80	70	62	57	79	69	62	57	67	61	56	66	60	56	64	59	56	54				
7	75	64	57	52	74	64	57	52	62	56	52	61	55	51	60	55	51	49				
8	71	60	53	48	70	59	52	48	58	52	48	57	51	47	56	51	47	45				
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	44	42				
10	63	52	45	41	62	52	45	41	51	45	41	50	44	41	49	44	40	39				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3029	3029	3029
5°	2926	2968	3025
10°	2696	2823	2992
15°	2421	2624	2926
20°	2110	2387	2825
25°	1781	2118	2702
30°	1437	1831	2561
35°	1063	1532	2417
40°	659	1221	2274
45°	262	890	2141
50°	117	559	1947
55°	93	291	1704
60°	64	220	1357
65°	43	218	933
70°	43	196	436
75°	57	193	193
80°	84	223	223
85°	168	445	326

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 2141 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.3	7.3
10°-20°	83.3	18.8
20°-30°	105.1	23.7
30°-40°	96.4	21.8
40°-50°	65.7	14.8
50°-60°	35.8	8.1
60°-70°	15.5	3.5
70°-80°	5.7	1.3
80°-90°	3.6	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°	220.6	49.8
0°-40°	317.0	71.5
0°-60°	418.5	94.4
0°-90°	443.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	443.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	352	352	352	352	352	
5°	338	343	343	347	350	31
15°	272	281	294	315	328	76
25°	187	201	223	258	284	86
35°	101	116	146	192	230	62
45°	22	36	73	130	176	20
55°	6	7	19	71	114	6
65°	2	3	11	22	46	2
75°	2	5	6	6	6	2
85°	2	4	4	4	3	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	351.7	351.7	351.7	351.7	351.7
2.5°	347.6	351.7	348.8	349.6	349.6
5°	338.5	343.0	343.4	347.1	350.0
7.5°	324.9	331.5	334.8	342.2	347.1
10°	308.3	316.2	322.8	335.6	342.2
12.5°	290.6	299.7	309.6	326.5	336.0
15°	271.6	281.1	294.3	315.4	328.2
17.5°	250.6	262.1	278.2	303.4	319.1
20°	230.3	241.9	260.5	288.9	308.3
22.5°	209.3	221.2	241.9	273.7	296.8
25°	187.4	200.6	222.9	258.4	284.4
27.5°	165.9	180.0	203.5	242.3	271.2
30°	144.5	158.5	184.1	225.8	257.6
32.5°	122.6	137.0	164.7	208.5	243.5
35°	101.1	116.0	145.7	191.9	229.9
37.5°	79.3	94.9	126.7	175.8	216.3
40°	58.6	74.3	108.6	159.7	202.3
42.5°	39.2	54.9	90.0	144.1	189.0
45°	21.5	35.9	73.1	129.6	175.8
47.5°	11.6	19.8	56.5	115.6	161.0
50°	8.7	10.7	41.7	100.7	145.3
52.5°	7.4	8.3	28.9	85.0	129.6
55°	6.2	6.6	19.4	71.4	113.5
57.5°	5.0	5.4	14.4	57.8	96.2
60°	3.7	4.5	12.8	44.6	78.8
62.5°	2.9	3.7	12.0	32.6	62.3
65°	2.1	2.9	10.7	22.3	45.8
67.5°	2.1	3.3	9.1	14.4	31.0
70°	1.7	4.5	7.8	9.5	17.3
72.5°	1.7	5.0	6.6	6.6	6.6
75°	1.7	5.4	5.8	5.8	5.8
77.5°	1.7	5.0	5.4	5.0	5.0
80°	1.7	4.5	4.5	4.5	4.5
82.5°	1.7	4.1	4.5	4.5	3.7
85°	1.7	3.7	4.5	4.5	3.3
87.5°	1.2	3.7	4.1	4.1	2.5
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	0.00	12.26	13.54	12.63	13.85	14.17
	3H	0.00	0.00	0.00	0.00	0.00	12.64	13.77	13.02	14.10	14.46
	4H	0.00	0.00	0.00	0.00	0.00	12.61	13.67	13.02	14.02	14.40
	6H	0.00	0.00	0.00	0.13	0.52	12.60	13.57	13.02	13.94	14.33
	8H	0.00	0.30	0.00	0.69	1.10	12.60	13.52	13.03	13.91	14.31
	12H	0.07	0.94	0.50	1.33	1.76	12.61	13.49	13.05	13.87	14.30
4H	2H	0.00	0.00	0.00	0.00	0.29	12.07	13.12	12.47	13.47	13.86
	3H	0.09	0.95	0.50	1.35	1.76	12.49	13.35	12.90	13.75	14.16
	4H	1.40	2.17	1.84	2.59	3.03	12.49	13.26	12.92	13.68	14.12
	6H	2.54	3.20	3.00	3.65	4.12	12.53	13.19	12.99	13.64	14.10
	8H	3.05	3.67	3.52	4.12	4.59	12.55	13.17	13.02	13.62	14.09
	12H	3.61	4.16	4.10	4.64	5.12	12.62	13.16	13.11	13.65	14.12
8H	4H	2.49	3.11	2.96	3.55	4.03	12.40	13.02	12.87	13.46	13.94
	6H	4.02	4.53	4.53	5.03	5.51	12.48	12.98	12.98	13.48	13.96
	8H	4.83	5.28	5.35	5.80	6.29	12.56	13.01	13.08	13.53	14.02
	12H	5.66	6.07	6.18	6.56	7.13	12.73	13.13	13.24	13.62	14.19
12H	4H	2.67	3.22	3.16	3.70	4.18	12.36	12.91	12.85	13.39	13.87
	6H	4.37	4.83	4.89	5.34	5.83	12.45	12.90	12.97	13.42	13.91
	8H	5.38	5.78	5.89	6.27	6.85	12.58	12.99	13.10	13.48	14.05