

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: P1060788

Luminaire Tested: S124RDR-H350D830-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060788
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-H350D830-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: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

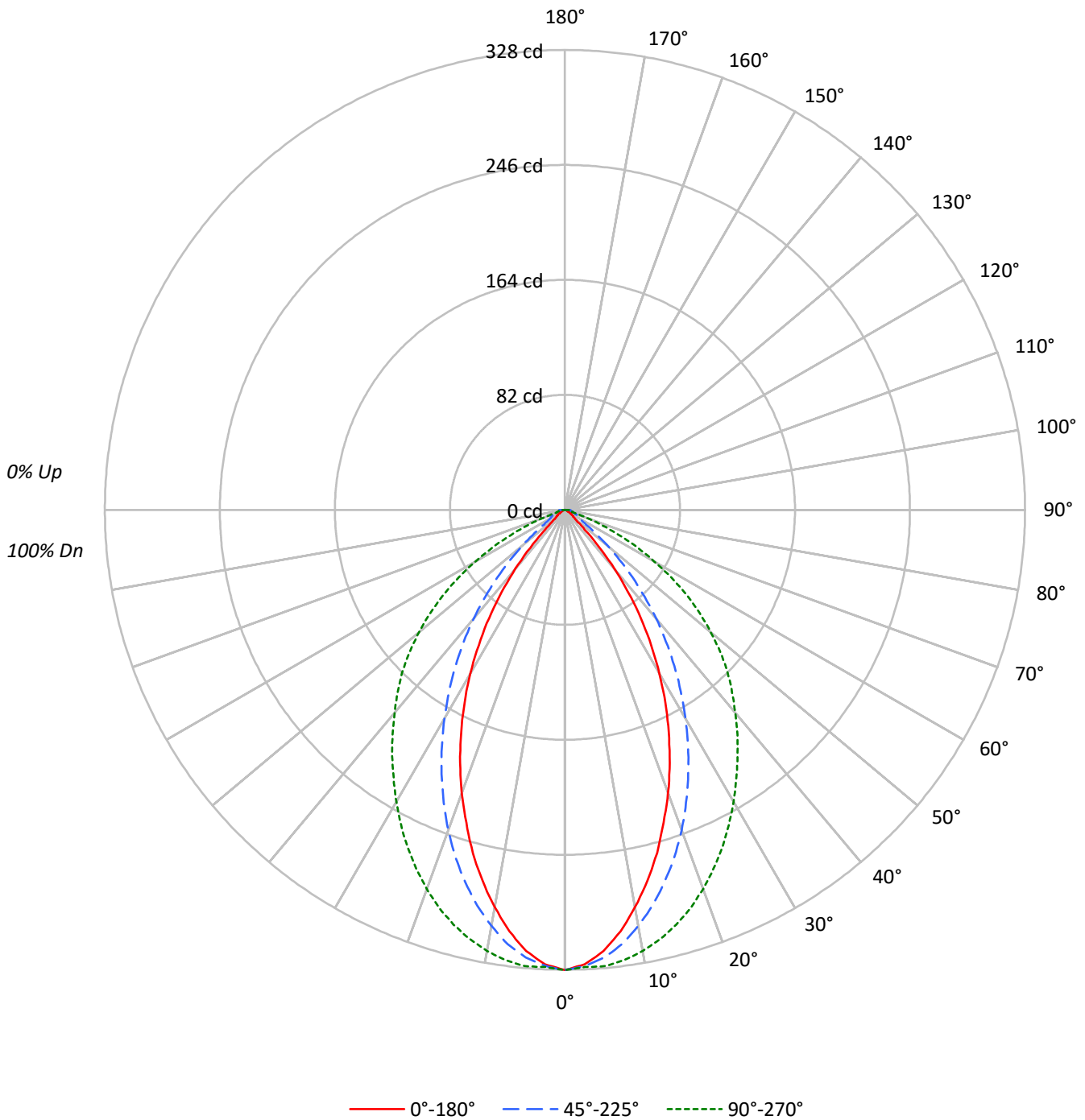
Lumens per Lamp: N/A
Luminaire Lumens: 413.7 lumens
Efficiency: N/A
Efficacy: 35.4 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.11 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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	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°	2826	2826	2826
5°	2731	2770	2824
10°	2517	2635	2793
15°	2260	2449	2731
20°	1970	2228	2637
25°	1662	1976	2522
30°	1340	1708	2390
35°	992	1430	2256
40°	615	1139	2122
45°	244	831	1998
50°	109	521	1817
55°	87	272	1590
60°	60	205	1268
65°	39	204	872
70°	38	184	408
75°	50	180	180
80°	74	208	208
85°	148	415	306

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 1998 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.1	7.3
10°-20°	77.7	18.8
20°-30°	98.1	23.7
30°-40°	90.0	21.8
40°-50°	61.3	14.8
50°-60°	33.4	8.1
60°-70°	14.4	3.5
70°-80°	5.3	1.3
80°-90°	3.4	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°	205.9	49.8
0°-40°	295.9	71.5
0°-60°	390.6	94.4
0°-90°	413.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	413.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	328	328	328	328	328	
5°	316	320	320	324	327	29
15°	254	262	275	294	306	71
25°	175	187	208	241	265	80
35°	94	108	136	179	215	58
45°	20	34	68	121	164	19
55°	6	6	18	67	106	5
65°	2	3	10	21	43	2
75°	2	5	5	5	5	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°	328.2	328.2	328.2	328.2	328.2
2.5°	324.4	328.2	325.5	326.3	326.3
5°	315.9	320.1	320.5	324.0	326.7
7.5°	303.2	309.4	312.4	319.4	324.0
10°	287.8	295.1	301.3	313.2	319.4
12.5°	271.2	279.7	288.9	304.7	313.6
15°	253.5	262.4	274.7	294.3	306.3
17.5°	233.8	244.6	259.7	283.2	297.8
20°	215.0	225.8	243.1	269.7	287.8
22.5°	195.3	206.5	225.8	255.4	277.0
25°	174.9	187.2	208.0	241.2	265.4
27.5°	154.9	168.0	189.9	226.1	253.1
30°	134.8	147.9	171.8	210.7	240.4
32.5°	114.4	127.9	153.7	194.6	227.3
35°	94.4	108.3	136.0	179.1	214.6
37.5°	74.0	88.6	118.3	164.1	201.9
40°	54.7	69.3	101.3	149.1	188.8
42.5°	36.6	51.2	84.0	134.5	176.4
45°	20.0	33.5	68.2	121.0	164.1
47.5°	10.8	18.5	52.8	107.9	150.2
50°	8.1	10.0	38.9	94.0	135.6
52.5°	6.9	7.7	27.0	79.4	121.0
55°	5.8	6.2	18.1	66.6	105.9
57.5°	4.6	5.0	13.5	53.9	89.8
60°	3.5	4.2	11.9	41.6	73.6
62.5°	2.7	3.5	11.2	30.4	58.2
65°	1.9	2.7	10.0	20.8	42.8
67.5°	1.9	3.1	8.5	13.5	28.9
70°	1.5	4.2	7.3	8.9	16.2
72.5°	1.5	4.6	6.2	6.2	6.2
75°	1.5	5.0	5.4	5.4	5.4
77.5°	1.5	4.6	5.0	4.6	4.6
80°	1.5	4.2	4.2	4.2	4.2
82.5°	1.5	3.9	4.2	4.2	3.5
85°	1.5	3.5	4.2	4.2	3.1
87.5°	1.2	3.5	3.9	3.9	2.3
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	12.02	13.30	12.38	13.61	13.92
	3H	0.00	0.00	0.00	0.00	0.00	12.39	13.52	12.77	13.86	14.22
	4H	0.00	0.00	0.00	0.00	0.00	12.37	13.42	12.78	13.78	14.16
	6H	0.00	0.00	0.00	0.00	0.14	12.36	13.33	12.77	13.70	14.09
	8H	0.00	0.00	0.00	0.30	0.71	12.36	13.27	12.79	13.66	14.07
	12H	0.00	0.53	0.09	0.91	1.34	12.37	13.25	12.81	13.63	14.06
4H	2H	0.00	0.00	0.00	0.00	0.04	11.83	12.88	12.23	13.23	13.61
	3H	0.00	0.69	0.24	1.09	1.50	12.25	13.11	12.66	13.51	13.92
	4H	1.12	1.89	1.55	2.31	2.75	12.25	13.01	12.68	13.43	13.88
	6H	2.23	2.89	2.69	3.34	3.81	12.29	12.95	12.75	13.39	13.86
	8H	2.74	3.36	3.21	3.80	4.28	12.31	12.93	12.78	13.38	13.85
	12H	3.29	3.83	3.77	4.32	4.79	12.38	12.92	12.87	13.41	13.88
8H	4H	2.21	2.83	2.68	3.27	3.75	12.16	12.77	12.63	13.22	13.69
	6H	3.74	4.24	4.24	4.74	5.22	12.23	12.74	12.74	13.24	13.72
	8H	4.55	5.01	5.08	5.53	6.02	12.32	12.77	12.84	13.29	13.78
	12H	5.39	5.79	5.91	6.29	6.86	12.48	12.89	13.00	13.38	13.95
12H	4H	2.40	2.94	2.88	3.43	3.90	12.12	12.67	12.61	13.15	13.62
	6H	4.09	4.54	4.61	5.06	5.55	12.21	12.66	12.73	13.18	13.67
	8H	5.11	5.51	5.63	6.01	6.58	12.34	12.74	12.86	13.24	13.81