

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: P1060804

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060804
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-39)
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-B
Description: DEFINE 4 BLACK 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

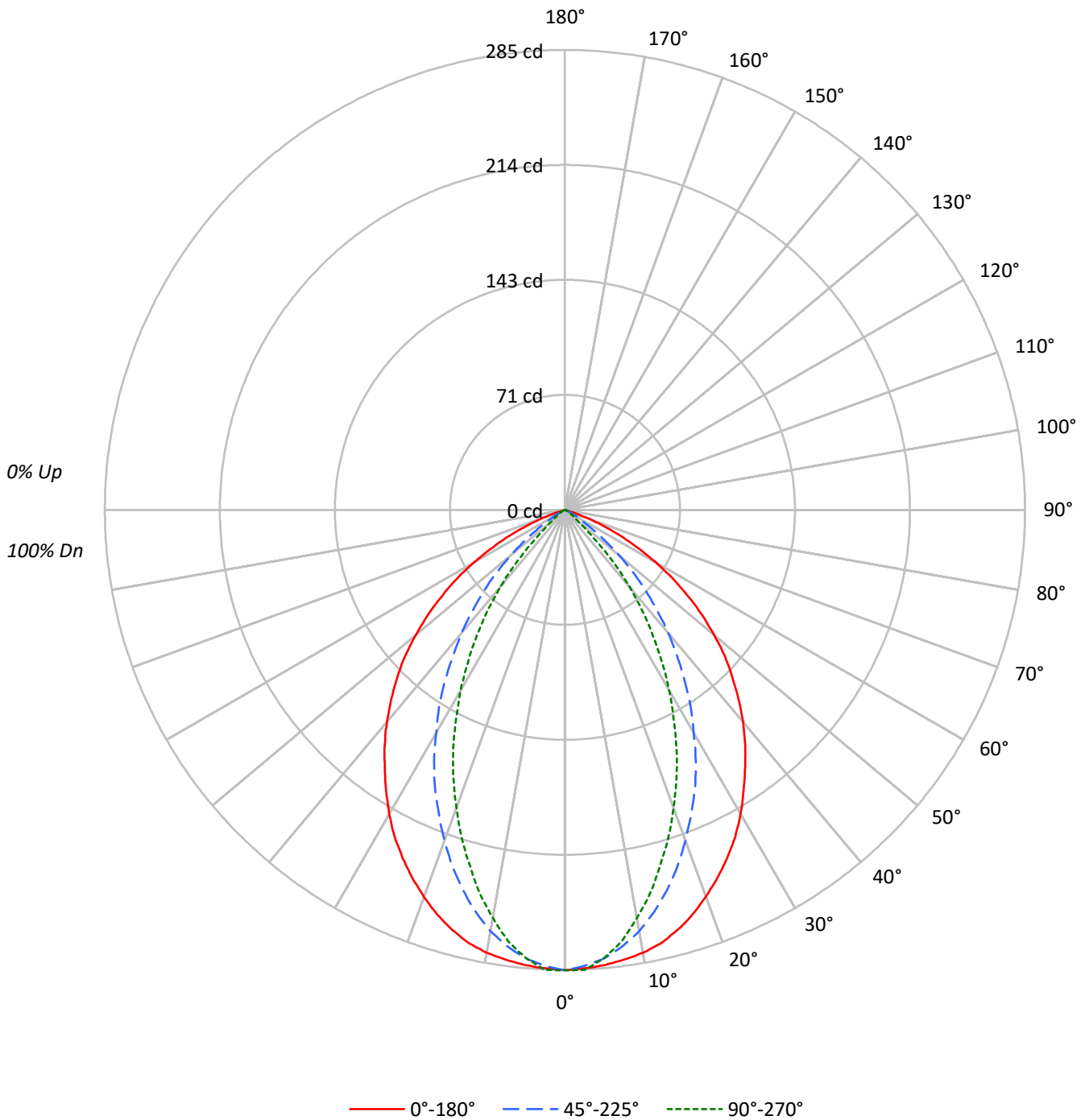
Lumens per Lamp: N/A
Luminaire Lumens: 372.5 lumens
Efficiency: N/A
Efficacy: 31.8 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 0.83 / 0.98
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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	109	106	103	110	107	104	102	103	101	99	99	97	96	96	94	93	91
2	105	99	95	90	103	98	93	89	94	91	87	91	88	86	88	86	84	82
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74
4	92	83	76	71	90	82	76	71	79	74	70	77	73	69	75	71	68	66
5	86	76	69	64	84	75	69	64	73	67	63	71	66	62	70	65	62	60
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	56	55
7	76	65	58	53	74	64	57	53	63	57	52	61	56	52	60	55	52	50
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	47	46
9	67	56	49	45	66	56	49	44	54	48	44	54	48	44	53	48	44	42
10	64	52	46	41	63	52	45	41	51	45	41	50	45	41	49	44	41	39

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2457	2457	2457
5°	2448	2413	2409
10°	2437	2318	2245
15°	2403	2175	2033
20°	2339	1999	1802
25°	2260	1810	1555
30°	2165	1586	1287
35°	2046	1360	1001
40°	1928	1116	699
45°	1788	859	346
50°	1613	580	117
55°	1393	297	81
60°	1114	107	57
65°	764	59	24
70°	342	30	20
75°	0	13	13
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1788 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	26.3	7.1
10°-20°	69.1	18.5
20°-30°	89.4	24.0
30°-40°	84.9	22.8
40°-50°	60.2	16.2
50°-60°	30.9	8.3
60°-70°	10.8	2.9
70°-80°	0.9	0.2
80°-90°	0.0	0.0
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°	184.8	49.6
0°-40°	269.7	72.4
0°-60°	360.8	96.9
0°-90°	372.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	372.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	285	285	285	285	285	
5°	283	284	279	279	279	27
15°	270	261	244	232	228	76
25°	238	219	190	170	164	109
35°	195	166	129	104	95	122
45°	147	113	70	40	28	113
55°	93	61	20	6	5	83
65°	38	18	3	2	1	37
75°	0	0	0	0	0	3
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	285.3	285.3	285.3	285.3	285.3
2.5°	284.4	285.3	282.8	284.9	285.3
5°	283.2	283.6	279.1	279.1	278.7
7.5°	281.1	280.3	272.9	270.0	269.6
10°	278.7	275.8	265.1	258.9	256.8
12.5°	275.0	269.6	255.2	246.1	243.6
15°	269.6	261.4	244.0	232.5	228.0
17.5°	263.0	252.3	231.7	217.7	213.1
20°	255.2	241.6	218.1	202.4	196.6
22.5°	246.9	231.3	204.1	186.3	180.6
25°	237.9	219.3	190.5	170.3	163.7
27.5°	228.4	206.5	175.6	154.6	145.9
30°	217.7	193.8	159.5	137.7	129.4
32.5°	206.1	179.7	145.1	121.6	111.7
35°	194.6	166.1	129.4	104.3	95.2
37.5°	183.4	153.4	113.8	87.4	78.7
40°	171.5	139.3	99.3	72.1	62.2
42.5°	159.1	125.7	84.5	56.5	45.8
45°	146.8	113.0	70.5	40.4	28.4
47.5°	134.4	99.3	56.9	25.6	15.3
50°	120.4	86.2	43.3	13.6	8.7
52.5°	107.2	73.8	30.9	7.8	6.6
55°	92.8	61.0	19.8	5.8	5.4
57.5°	79.1	48.6	11.1	4.5	4.1
60°	64.7	37.5	6.2	3.7	3.3
62.5°	50.3	27.2	4.1	2.5	2.1
65°	37.5	18.1	2.9	1.6	1.2
67.5°	24.7	10.3	2.1	0.8	0.8
70°	13.6	4.9	1.2	0.8	0.8
72.5°	4.9	1.6	0.8	0.4	0.4
75°	0.0	0.4	0.4	0.4	0.4
77.5°	0.0	0.0	0.0	0.0	0.4
80°	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
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	11.65	12.90	12.01	13.21	13.53	0.00	0.00	0.00	0.00	0.00
	3H	11.92	13.03	12.30	13.36	13.72	0.00	0.00	0.00	0.00	0.00
	4H	11.85	12.87	12.25	13.22	13.61	0.00	0.00	0.00	0.00	0.00
	6H	11.76	12.70	12.18	13.07	13.46	0.00	0.00	0.00	0.00	0.00
	8H	11.71	12.60	12.15	12.99	13.40	0.00	0.00	0.00	0.00	0.00
	12H	11.67	12.51	12.10	12.90	13.33	0.00	0.00	0.00	0.00	0.00
4H	2H	11.42	12.44	11.82	12.80	13.18	0.00	0.00	0.00	0.00	0.00
	3H	11.70	12.53	12.12	12.94	13.34	0.00	0.00	0.00	0.00	0.00
	4H	11.61	12.34	12.05	12.77	13.21	0.00	0.00	0.00	0.00	0.00
	6H	11.52	12.15	11.99	12.60	13.07	0.00	0.00	0.00	0.00	0.00
	8H	11.46	12.05	11.93	12.50	12.97	0.00	0.00	0.00	0.00	0.00
	12H	11.41	11.92	11.90	12.41	12.88	0.00	0.00	0.00	0.00	0.00
8H	4H	11.46	12.05	11.93	12.50	12.97	0.00	0.00	0.00	0.00	0.00
	6H	11.35	11.83	11.86	12.33	12.81	0.00	0.00	0.00	0.00	0.00
	8H	11.28	11.71	11.81	12.23	12.72	0.00	0.00	0.00	0.00	0.00
	12H	11.23	11.61	11.75	12.11	12.68	0.00	0.00	0.00	0.00	0.00
12H	4H	11.41	11.93	11.90	12.41	12.89	0.00	0.00	0.00	0.00	0.00
	6H	11.28	11.71	11.81	12.23	12.72	0.00	0.00	0.00	0.00	0.00
	8H	11.23	11.61	11.75	12.11	12.68	0.00	0.00	0.00	0.00	0.00