

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: P1060849

Luminaire Tested: S124RDR-H350D940-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060849
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-H350D940-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, 90 CRI LEDS
Ballast/Driver: -

Summary

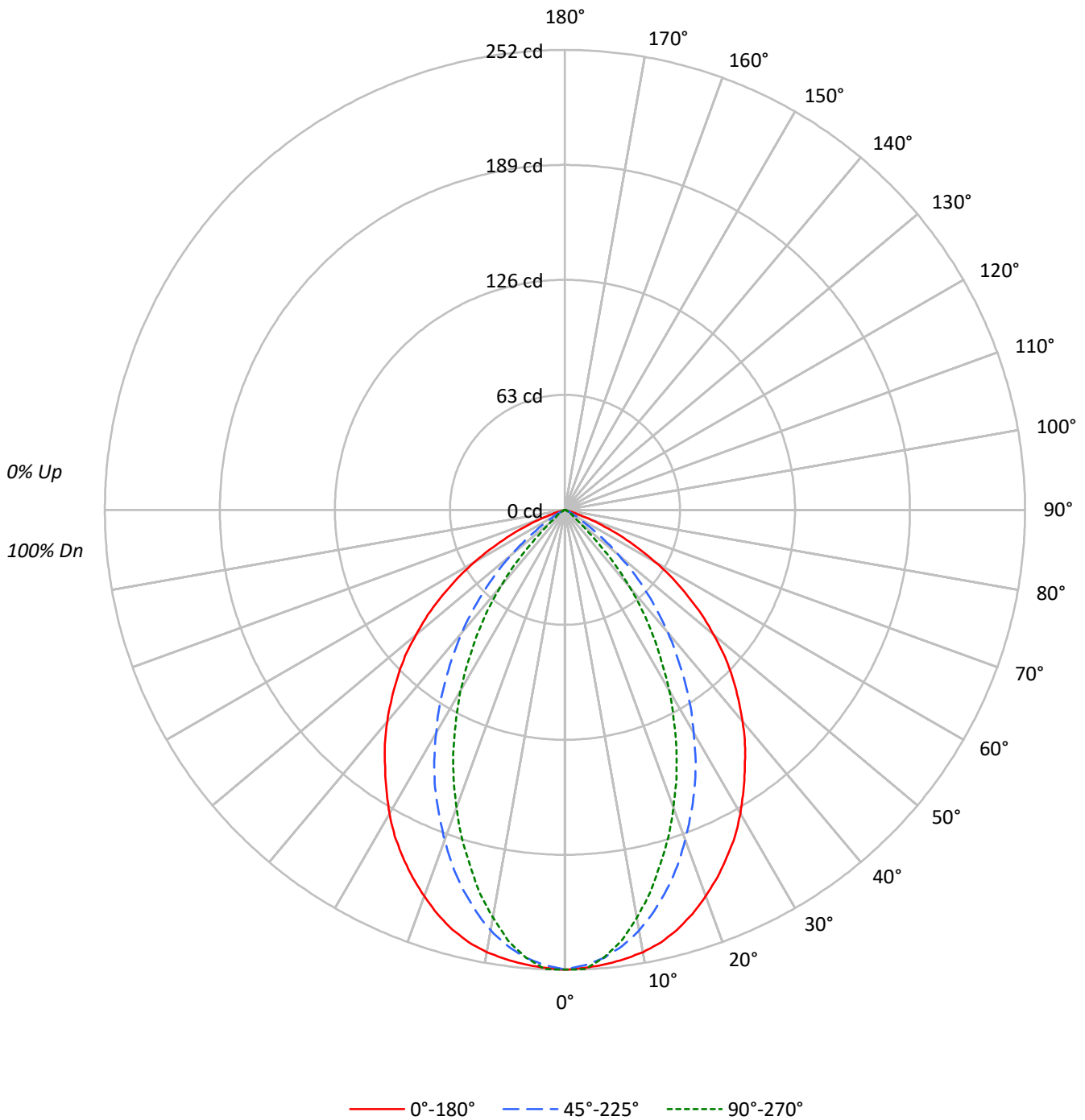
Lumens per Lamp: N/A
Luminaire Lumens: 328.9 lumens
Efficiency: N/A
Efficacy: 28.1 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 0.83 / 0.98
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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	44	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°	2169	2169	2169
5°	2162	2130	2127
10°	2152	2047	1983
15°	2123	1921	1795
20°	2065	1765	1591
25°	1995	1598	1373
30°	1911	1401	1137
35°	1806	1202	884
40°	1702	986	618
45°	1578	757	306
50°	1424	512	102
55°	1230	263	71
60°	983	95	50
65°	674	51	22
70°	302	28	18
75°	0	13	13
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1578 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	23.3	7.1
10°-20°	61.0	18.5
20°-30°	78.9	24.0
30°-40°	75.0	22.8
40°-50°	53.1	16.1
50°-60°	27.3	8.3
60°-70°	9.5	2.9
70°-80°	0.8	0.3
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°	163.2	49.6
0°-40°	238.2	72.4
0°-60°	318.6	96.8
0°-90°	328.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	328.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	252	252	252	252	252	
5°	250	250	246	246	246	24
15°	238	231	216	205	201	67
25°	210	194	168	150	144	97
35°	172	147	114	92	84	107
45°	130	100	62	36	25	100
55°	82	54	18	5	5	73
65°	33	16	2	2	1	33
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°	251.9	251.9	251.9	251.9	251.9
2.5°	251.2	251.9	249.7	251.5	251.9
5°	250.1	250.4	246.4	246.4	246.1
7.5°	248.3	247.5	241.0	238.4	238.1
10°	246.1	243.5	234.1	228.6	226.8
12.5°	242.8	238.1	225.3	217.3	215.1
15°	238.1	230.8	215.5	205.3	201.3
17.5°	232.2	222.8	204.6	192.2	188.2
20°	225.3	213.3	192.6	178.7	173.6
22.5°	218.0	204.2	180.2	164.5	159.4
25°	210.0	193.7	168.2	150.3	144.5
27.5°	201.7	182.4	155.1	136.5	128.9
30°	192.2	171.1	140.9	121.6	114.3
32.5°	182.0	158.7	128.1	107.4	98.6
35°	171.8	146.7	114.3	92.1	84.1
37.5°	162.0	135.4	100.5	77.2	69.5
40°	151.4	123.0	87.7	63.7	55.0
42.5°	140.5	111.0	74.6	49.9	40.4
45°	129.6	99.7	62.2	35.7	25.1
47.5°	118.7	87.7	50.2	22.6	13.5
50°	106.3	76.1	38.2	12.0	7.6
52.5°	94.6	65.2	27.3	6.9	5.8
55°	81.9	53.9	17.5	5.1	4.7
57.5°	69.9	43.0	9.8	4.0	3.6
60°	57.1	33.1	5.5	3.3	2.9
62.5°	44.4	24.0	3.6	2.2	1.8
65°	33.1	16.0	2.5	1.5	1.1
67.5°	21.8	9.1	1.8	0.7	0.7
70°	12.0	4.4	1.1	0.7	0.7
72.5°	4.4	1.5	0.7	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	11.22	12.48	11.59	12.79	13.11	0.00	0.00	0.00	0.00	0.00
	3H	11.50	12.61	11.88	12.94	13.30	0.00	0.00	0.00	0.00	0.00
	4H	11.42	12.45	11.83	12.80	13.19	0.00	0.00	0.00	0.00	0.00
	6H	11.34	12.28	11.75	12.65	13.04	0.00	0.00	0.00	0.00	0.00
	8H	11.29	12.18	11.72	12.57	12.98	0.00	0.00	0.00	0.00	0.00
	12H	11.25	12.09	11.68	12.47	12.91	0.00	0.00	0.00	0.00	0.00
4H	2H	11.00	12.02	11.40	12.37	12.76	0.00	0.00	0.00	0.00	0.00
	3H	11.28	12.11	11.69	12.51	12.92	0.00	0.00	0.00	0.00	0.00
	4H	11.19	11.92	11.62	12.34	12.79	0.00	0.00	0.00	0.00	0.00
	6H	11.10	11.73	11.56	12.18	12.65	0.00	0.00	0.00	0.00	0.00
	8H	11.04	11.63	11.51	12.07	12.55	0.00	0.00	0.00	0.00	0.00
	12H	10.99	11.50	11.47	11.99	12.46	0.00	0.00	0.00	0.00	0.00
8H	4H	11.04	11.63	11.51	12.08	12.55	0.00	0.00	0.00	0.00	0.00
	6H	10.93	11.41	11.43	11.91	12.39	0.00	0.00	0.00	0.00	0.00
	8H	10.86	11.29	11.39	11.81	12.30	0.00	0.00	0.00	0.00	0.00
	12H	10.81	11.19	11.33	11.69	12.26	0.00	0.00	0.00	0.00	0.00
12H	4H	10.99	11.50	11.48	11.99	12.46	0.00	0.00	0.00	0.00	0.00
	6H	10.86	11.29	11.39	11.81	12.30	0.00	0.00	0.00	0.00	0.00
	8H	10.81	11.19	11.33	11.69	12.26	0.00	0.00	0.00	0.00	0.00