

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: P1060850

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060850
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-78)
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-S
Description: DEFINE 4 SILVER 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

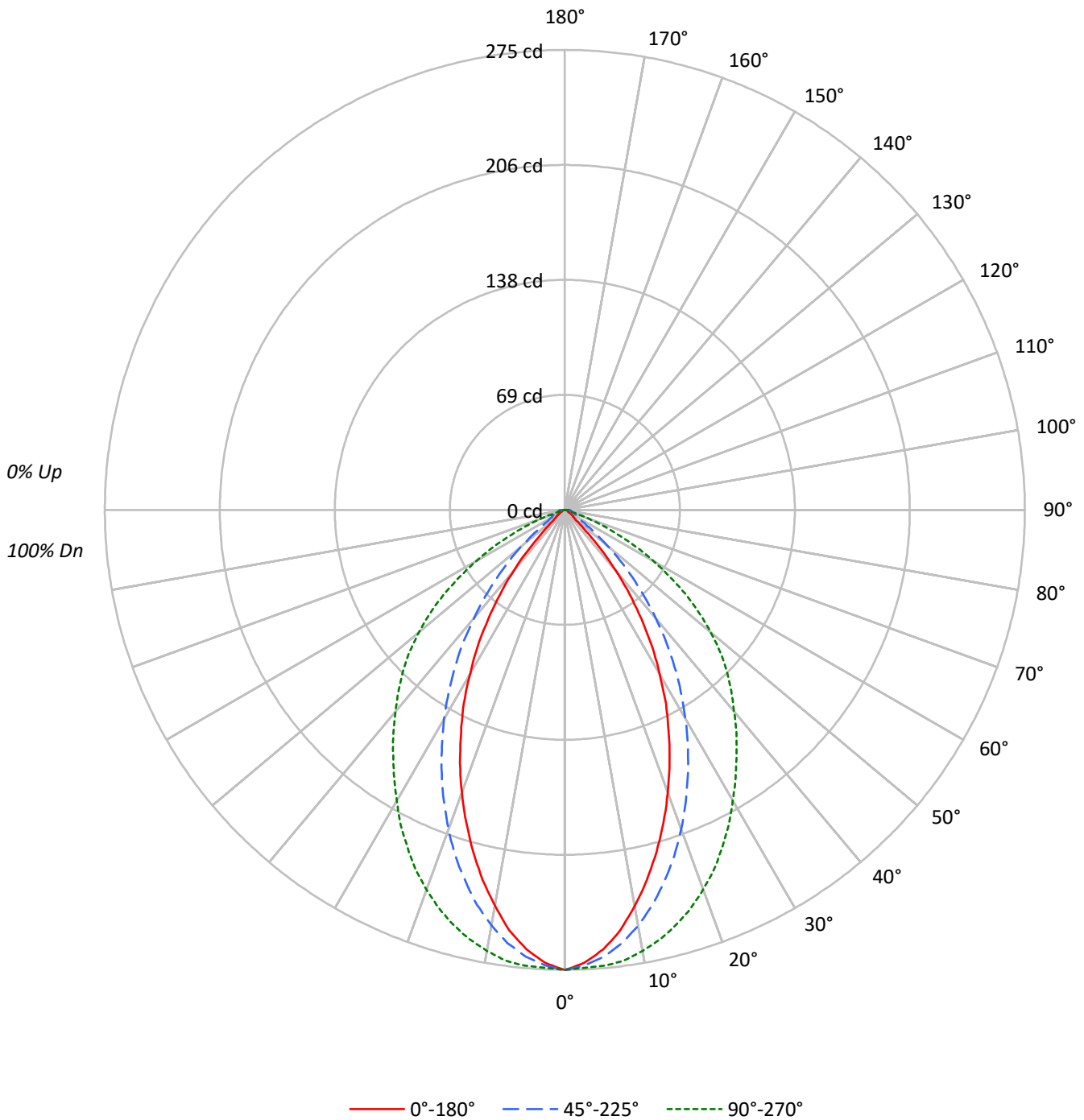
Lumens per Lamp: N/A
Luminaire Lumens: 345.3 lumens
Efficiency: N/A
Efficacy: 29.5 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.11 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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	99	94	89	102	97	92	88	93	90	86	90	87	84	87	85	83	81
3	98	90	84	79	96	88	83	78	86	81	77	83	79	76	81	77	74	73
4	92	82	75	70	90	81	75	70	79	73	69	77	72	68	75	71	67	65
5	86	76	68	63	84	75	68	63	73	67	62	71	66	62	69	65	61	59
6	80	70	62	57	79	69	62	57	67	61	57	66	60	56	64	59	56	54
7	76	64	57	52	74	64	57	52	62	56	52	61	56	51	60	55	51	50
8	71	60	53	48	70	59	53	48	58	52	48	57	51	47	56	51	47	46
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	44	42
10	64	52	46	41	62	52	45	41	51	45	41	50	45	41	49	44	41	39

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2369	2369	2369
5°	2280	2318	2366
10°	2103	2208	2342
15°	1887	2050	2290
20°	1649	1863	2214
25°	1396	1655	2115
30°	1127	1435	1997
35°	839	1199	1881
40°	533	950	1769
45°	213	697	1668
50°	92	445	1523
55°	71	230	1329
60°	50	157	1054
65°	37	157	719
70°	38	138	330
75°	50	146	133
80°	74	164	144
85°	148	287	217

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 1668 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	25.2	7.3
10°-20°	65.0	18.8
20°-30°	82.0	23.8
30°-40°	75.4	21.8
40°-50°	51.4	14.9
50°-60°	27.9	8.1
60°-70°	11.8	3.4
70°-80°	4.1	1.2
80°-90°	2.6	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°	172.2	49.9
0°-40°	247.5	71.7
0°-60°	326.8	94.6
0°-90°	345.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	345.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	275	275	275	275	275	
5°	264	268	268	270	274	24
15°	212	219	230	246	257	59
25°	147	156	174	201	223	67
35°	80	90	114	150	179	50
45°	18	28	57	101	137	16
55°	5	5	15	56	88	4
65°	2	2	8	18	35	2
75°	2	4	4	4	4	2
85°	2	3	3	3	2	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	275.1	275.1	275.1	275.1	275.1
2.5°	271.1	274.4	272.6	273.3	274.0
5°	263.8	267.8	268.2	270.4	273.7
7.5°	253.6	258.4	261.3	266.7	271.8
10°	240.5	246.3	252.5	261.3	267.8
12.5°	226.7	232.9	242.0	254.4	263.1
15°	211.7	218.6	229.9	246.3	256.9
17.5°	196.0	203.7	217.2	236.5	250.0
20°	180.0	188.4	203.3	225.2	241.6
22.5°	163.6	172.4	188.8	213.5	232.9
25°	146.9	156.3	174.2	201.2	222.6
27.5°	130.8	139.6	159.2	188.8	212.4
30°	113.3	123.2	144.3	176.0	200.8
32.5°	97.3	106.8	129.0	162.9	189.9
35°	79.8	90.4	114.1	149.8	178.9
37.5°	63.4	73.6	99.5	137.4	168.4
40°	47.4	57.9	84.5	125.0	157.4
42.5°	31.7	43.0	70.3	112.2	147.2
45°	17.5	28.1	57.2	101.3	137.0
47.5°	9.1	15.3	44.8	90.4	126.1
50°	6.9	8.4	33.2	78.3	113.7
52.5°	5.8	6.2	22.6	66.3	101.3
55°	4.7	5.1	15.3	55.8	88.5
57.5°	3.6	4.0	10.9	45.6	74.3
60°	2.9	3.3	9.1	35.0	61.2
62.5°	2.2	2.6	8.7	25.9	48.1
65°	1.8	2.2	7.7	17.5	35.3
67.5°	1.5	2.2	6.6	11.3	23.7
70°	1.5	2.9	5.5	7.3	13.1
72.5°	1.5	3.3	4.7	4.7	4.7
75°	1.5	4.0	4.4	4.0	4.0
77.5°	1.5	3.6	3.6	3.6	3.6
80°	1.5	3.3	3.3	3.3	2.9
82.5°	1.5	2.9	3.3	3.3	2.6
85°	1.5	2.9	2.9	2.9	2.2
87.5°	1.1	2.9	2.9	2.9	1.5
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	11.44	12.72	11.81	13.03	13.35
	3H	0.00	0.00	0.00	0.00	0.00	11.80	12.93	12.18	13.26	13.62
	4H	0.00	0.00	0.00	0.00	0.00	11.76	12.81	12.17	13.16	13.55
	6H	0.00	0.00	0.00	0.00	0.00	11.74	12.70	12.15	13.07	13.47
	8H	0.00	0.00	0.00	0.00	0.16	11.73	12.64	12.16	13.03	13.44
	12H	0.00	0.14	0.00	0.53	0.96	11.73	12.60	12.16	12.98	13.41
4H	2H	0.00	0.00	0.00	0.00	0.00	11.25	12.30	11.65	12.65	13.03
	3H	0.00	0.00	0.00	0.00	0.24	11.64	12.50	12.05	12.90	13.30
	4H	0.02	0.79	0.46	1.21	1.65	11.62	12.38	12.06	12.80	13.25
	6H	1.28	1.94	1.74	2.38	2.85	11.64	12.30	12.10	12.74	13.21
	8H	1.86	2.47	2.33	2.92	3.39	11.65	12.26	12.12	12.71	13.18
	12H	2.54	3.09	3.03	3.57	4.04	11.69	12.23	12.17	12.71	13.19
8H	4H	1.09	1.70	1.56	2.15	2.62	11.52	12.13	11.99	12.58	13.05
	6H	2.71	3.21	3.21	3.71	4.19	11.57	12.07	12.07	12.57	13.05
	8H	3.54	4.00	4.07	4.51	5.01	11.63	12.08	12.15	12.60	13.09
	12H	4.52	4.92	5.03	5.41	5.98	11.75	12.15	12.26	12.64	13.21
12H	4H	1.28	1.82	1.76	2.30	2.78	11.48	12.02	11.97	12.51	12.98
	6H	3.06	3.51	3.58	4.02	4.52	11.54	11.99	12.06	12.51	13.00
	8H	4.08	4.48	4.59	4.97	5.54	11.64	12.04	12.16	12.54	13.11