

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: P1060678

Luminaire Tested: S124RDR-H1020D935-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060678
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-H1020D935-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: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

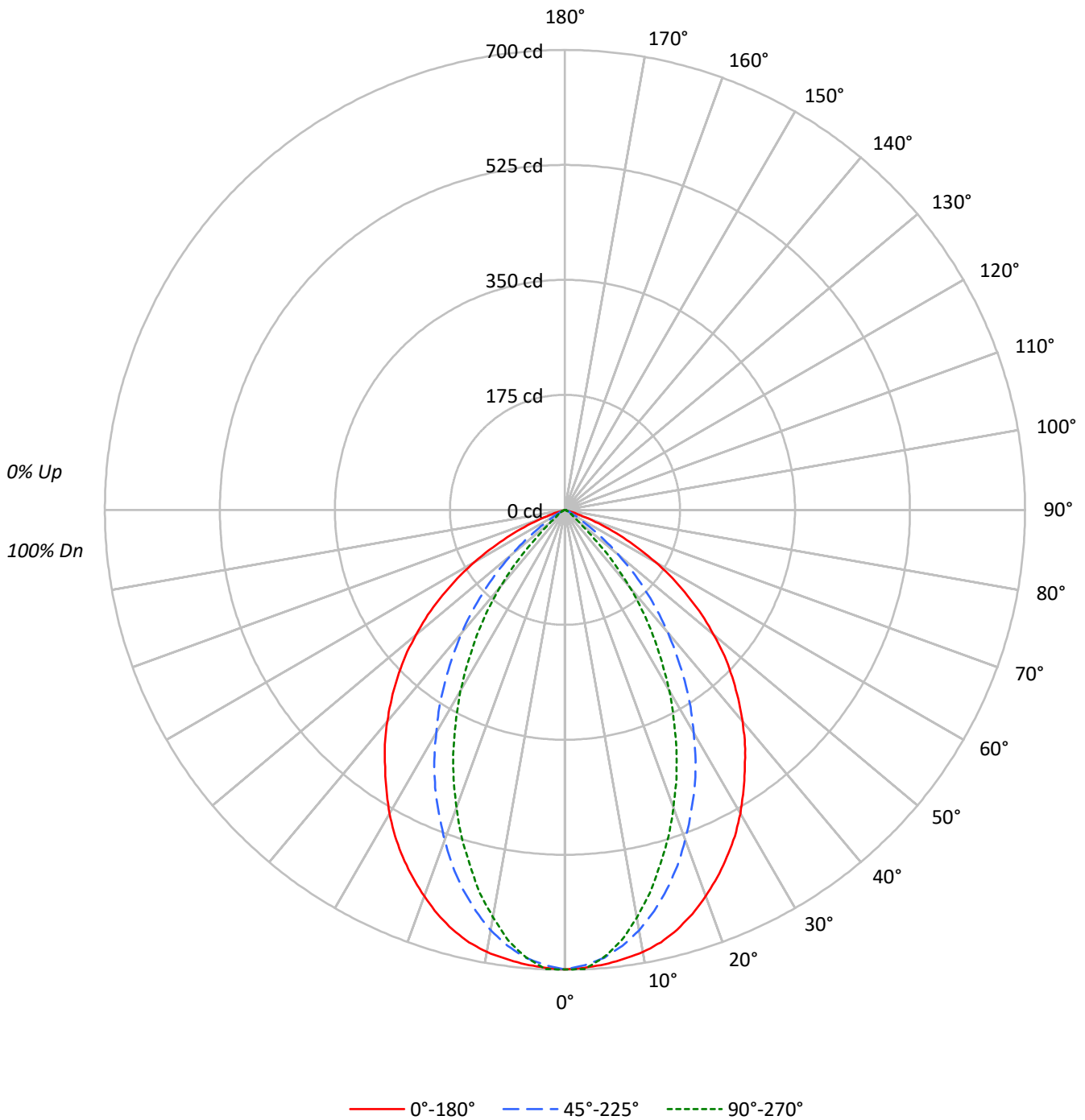
Lumens per Lamp: N/A
Luminaire Lumens: 913.4 lumens
Efficiency: N/A
Efficacy: 29.3 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 0.83 / 0.98
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 31.2
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									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	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°	6023	6023	6023
5°	6003	5916	5907
10°	5976	5684	5507
15°	5894	5336	4983
20°	5735	4901	4419
25°	5542	4437	3813
30°	5308	3890	3156
35°	5015	3337	2455
40°	4727	2738	1715
45°	4383	2106	850
50°	3955	1421	284
55°	3415	728	197
60°	2733	262	140
65°	1875	145	61
70°	841	76	50
75°	0	33	33
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4383 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.6	7.1
10°-20°	169.3	18.5
20°-30°	219.2	24.0
30°-40°	208.3	22.8
40°-50°	147.5	16.1
50°-60°	75.7	8.3
60°-70°	26.5	2.9
70°-80°	2.3	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°	453.2	49.6
0°-40°	661.5	72.4
0°-60°	884.7	96.9
0°-90°	913.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	913.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	700	700	700	700	700	
5°	694	696	684	684	683	66
15°	661	641	598	570	559	186
25°	583	538	467	418	401	268
35°	477	407	317	256	234	299
45°	360	277	173	99	70	277
55°	228	150	48	14	13	203
65°	92	44	7	4	3	92
75°	0	1	1	1	1	7
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°	699.5	699.5	699.5	699.5	699.5
2.5°	697.5	699.5	693.5	698.5	699.5
5°	694.5	695.5	684.4	684.4	683.4
7.5°	689.4	687.4	669.2	662.1	661.1
10°	683.4	676.3	650.0	634.8	629.8
12.5°	674.3	661.1	625.8	603.5	597.4
15°	661.1	640.9	598.5	570.2	559.0
17.5°	645.0	618.7	568.1	533.8	522.6
20°	625.8	592.4	534.8	496.4	482.2
22.5°	605.5	567.1	500.4	456.9	442.8
25°	583.3	537.8	467.0	417.5	401.3
27.5°	560.0	506.5	430.6	379.1	357.9
30°	533.8	475.1	391.2	337.6	317.4
32.5°	505.5	440.8	355.8	298.2	274.0
35°	477.1	407.4	317.4	255.8	233.5
37.5°	449.9	376.1	279.0	214.3	193.1
40°	420.5	341.7	243.6	176.9	152.6
42.5°	390.2	308.3	207.2	138.5	112.2
45°	359.9	277.0	172.9	99.1	69.8
47.5°	329.6	243.6	139.5	62.7	37.4
50°	295.2	211.3	106.1	33.4	21.2
52.5°	262.8	181.0	75.8	19.2	16.2
55°	227.5	149.6	48.5	14.2	13.1
57.5°	194.1	119.3	27.3	11.1	10.1
60°	158.7	92.0	15.2	9.1	8.1
62.5°	123.3	66.7	10.1	6.1	5.1
65°	92.0	44.5	7.1	4.0	3.0
67.5°	60.7	25.3	5.1	2.0	2.0
70°	33.4	12.1	3.0	2.0	2.0
72.5°	12.1	4.0	2.0	1.0	1.0
75°	0.0	1.0	1.0	1.0	1.0
77.5°	0.0	0.0	0.0	0.0	1.0
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	14.77	16.02	15.13	16.34	16.65	0.00	0.00	0.00	0.00	0.00
	3H	15.05	16.15	15.43	16.48	16.85	0.00	0.00	0.00	0.00	0.00
	4H	14.97	15.99	15.37	16.35	16.73	0.00	0.00	0.00	0.00	0.00
	6H	14.88	15.82	15.30	16.19	16.59	0.00	0.00	0.00	0.00	0.00
	8H	14.84	15.72	15.27	16.11	16.52	0.00	0.00	0.00	0.00	0.00
	12H	14.79	15.64	15.22	16.02	16.45	0.00	0.00	0.00	0.00	0.00
4H	2H	14.54	15.57	14.95	15.92	16.30	0.00	0.00	0.00	0.00	0.00
	3H	14.83	15.65	15.24	16.06	16.46	0.00	0.00	0.00	0.00	0.00
	4H	14.73	15.47	15.17	15.89	16.33	0.00	0.00	0.00	0.00	0.00
	6H	14.64	15.28	15.11	15.72	16.19	0.00	0.00	0.00	0.00	0.00
	8H	14.58	15.17	15.06	15.62	16.09	0.00	0.00	0.00	0.00	0.00
	12H	14.53	15.05	15.02	15.53	16.01	0.00	0.00	0.00	0.00	0.00
8H	4H	14.58	15.17	15.06	15.62	16.09	0.00	0.00	0.00	0.00	0.00
	6H	14.48	14.95	14.98	15.45	15.93	0.00	0.00	0.00	0.00	0.00
	8H	14.41	14.84	14.93	15.35	15.85	0.00	0.00	0.00	0.00	0.00
	12H	14.36	14.74	14.88	15.23	15.81	0.00	0.00	0.00	0.00	0.00
12H	4H	14.53	15.05	15.02	15.53	16.01	0.00	0.00	0.00	0.00	0.00
	6H	14.41	14.84	14.93	15.35	15.85	0.00	0.00	0.00	0.00	0.00
	8H	14.36	14.74	14.88	15.23	15.81	0.00	0.00	0.00	0.00	0.00