

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: P1060666

Luminaire Tested: S124RDR-H1020D927-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060666  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-37)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDR-H1020D927-X4F0-XX-UDD-WVL-B  
Description: DEFINE 4 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

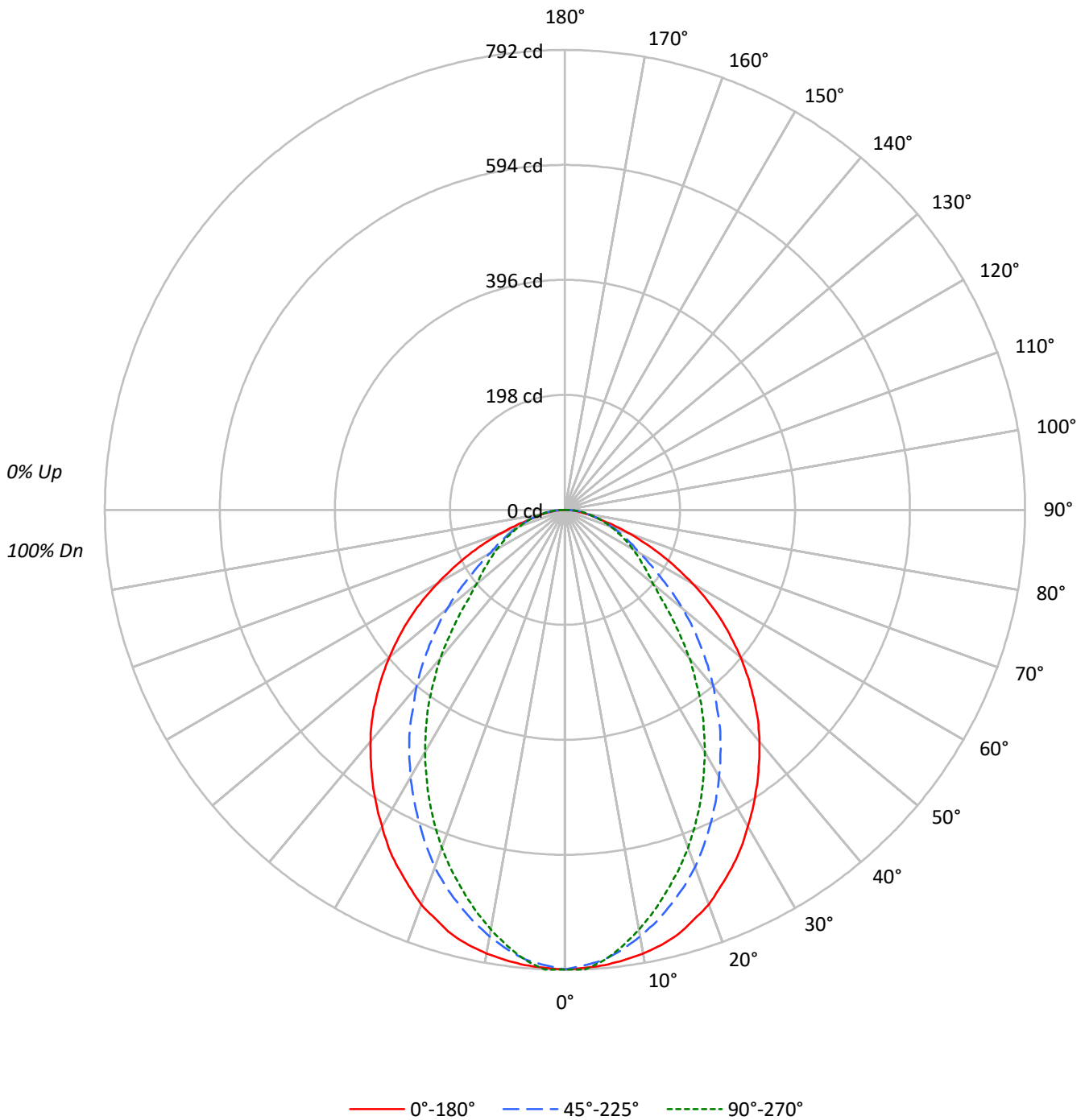
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1526.2 lumens  
Efficiency: N/A  
Efficacy: 48.9 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 0.96 / 1.12  
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	
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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88	86				86
2	101	94	88	83	99	92	86	82	89	84	80	85	82	78	82	79	76	74				74
3	93	84	76	71	91	82	75	70	79	74	69	77	72	68	74	70	66	64				64
4	86	75	67	61	84	74	67	61	72	65	60	69	64	59	67	62	58	56				56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50
6	74	62	54	48	72	61	53	47	59	52	47	58	51	47	56	51	46	44				44
7	69	57	48	43	68	56	48	43	54	47	42	53	47	42	52	46	42	40				40
8	65	52	44	39	63	51	44	39	50	43	38	49	43	38	48	42	38	36				36
9	61	48	40	35	59	48	40	35	46	40	35	45	39	35	44	39	35	33				33
10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	41	36	32	30				30

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	6816	6816	6816
5°	6802	6722	6729
10°	6783	6522	6417
15°	6741	6277	6053
20°	6631	6000	5677
25°	6460	5647	5249
30°	6261	5281	4791
35°	6062	4899	4302
40°	5855	4465	3753
45°	5596	4010	3137
50°	5284	3538	2654
55°	4915	3003	2458
60°	4357	2547	2323
65°	3714	2349	2199
70°	2903	2178	2085
75°	1980	2013	2013
80°	1706	1889	1939
85°	1472	1838	2025

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5596 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	73.6	4.8
10°-20°	200.0	13.1
20°-30°	277.6	18.2
30°-40°	297.6	19.5
40°-50°	263.7	17.3
50°-60°	198.7	13.0
60°-70°	128.7	8.4
70°-80°	66.0	4.3
80°-90°	20.3	1.3
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°	551.3	36.1
0°-40°	848.9	55.6
0°-60°	1311.3	85.9
0°-90°	1526.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1526.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	792	792	792	792	792	
5°	787	788	778	778	778	75
15°	756	739	704	686	679	213
25°	680	644	594	563	552	313
35°	577	525	466	424	409	361
45°	460	400	329	278	258	354
55°	327	272	200	168	164	291
65°	182	147	115	109	108	181
75°	60	62	60	60	60	70
85°	15	16	19	20	20	17
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	791.5	791.5	791.5	791.5	791.5
2.5°	789.7	792.4	785.0	790.6	792.4
5°	786.9	787.8	777.6	778.5	778.5
7.5°	782.2	780.4	763.6	759.0	758.0
10°	775.7	770.1	745.9	736.6	733.9
12.5°	767.3	757.1	726.4	713.4	707.8
15°	756.2	739.4	704.1	686.4	679.0
17.5°	739.4	718.0	680.8	658.5	650.1
20°	723.6	694.8	654.8	626.9	619.5
22.5°	701.3	670.6	625.0	595.3	586.0
25°	679.9	643.6	594.3	562.7	552.5
27.5°	656.7	615.7	562.7	529.2	516.2
30°	629.7	586.0	531.1	495.7	481.8
32.5°	603.6	557.1	498.5	459.5	444.6
35°	576.7	524.6	466.0	424.1	409.2
37.5°	548.8	493.9	429.7	388.8	369.3
40°	520.9	463.2	397.2	350.6	333.9
42.5°	492.0	431.6	363.7	315.3	293.9
45°	459.5	399.9	329.3	278.1	257.6
47.5°	427.8	369.3	297.6	241.8	223.2
50°	394.4	336.7	264.1	210.2	198.1
52.5°	360.9	303.2	231.6	186.0	180.4
55°	327.4	272.5	200.0	168.3	163.7
57.5°	290.2	240.9	172.1	152.5	148.8
60°	253.0	206.5	147.9	137.7	134.9
62.5°	216.7	176.7	131.1	122.8	120.9
65°	182.3	147.0	115.3	108.8	107.9
67.5°	148.8	120.9	100.5	96.7	94.9
70°	115.3	96.7	86.5	84.6	82.8
72.5°	85.6	78.1	73.5	72.5	71.6
75°	59.5	62.3	60.5	60.5	60.5
77.5°	47.4	48.4	49.3	50.2	49.3
80°	34.4	37.2	38.1	40.0	39.1
82.5°	24.2	26.0	28.8	29.8	30.7
85°	14.9	15.8	18.6	20.5	20.5
87.5°	6.5	7.4	9.3	11.2	12.1
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	17.11	18.61	17.47	18.92	19.23	13.67	15.17	14.04	15.48	15.80
	3H	18.31	19.66	18.69	19.98	20.35	15.37	16.71	15.74	17.04	17.40
	4H	18.62	19.88	19.02	20.23	20.61	16.05	17.30	16.45	17.65	18.03
	6H	18.82	19.98	19.23	20.35	20.74	16.59	17.76	17.01	18.12	18.52
	8H	18.88	19.99	19.31	20.38	20.78	16.81	17.92	17.24	18.31	18.71
	12H	18.91	19.97	19.34	20.35	20.78	16.99	18.04	17.42	18.43	18.86
4H	2H	17.25	18.51	17.65	18.86	19.24	14.33	15.59	14.73	15.94	16.32
	3H	18.65	19.70	19.06	20.10	20.50	16.24	17.29	16.65	17.69	18.09
	4H	19.08	20.02	19.51	20.43	20.87	17.04	17.98	17.48	18.40	18.84
	6H	19.40	20.22	19.86	20.66	21.12	17.73	18.55	18.19	18.99	19.45
	8H	19.50	20.26	19.96	20.71	21.18	18.01	18.77	18.47	19.21	19.68
	12H	19.57	20.25	20.05	20.73	21.20	18.24	18.92	18.72	19.40	19.87
8H	4H	19.20	19.97	19.67	20.41	20.88	17.36	18.12	17.82	18.57	19.04
	6H	19.63	20.26	20.12	20.75	21.23	18.19	18.82	18.69	19.31	19.79
	8H	19.78	20.35	20.30	20.86	21.35	18.56	19.12	19.07	19.63	20.12
	12H	19.91	20.41	20.42	20.91	21.47	18.89	19.39	19.40	19.88	20.45
12H	4H	19.21	19.89	19.69	20.37	20.84	17.39	18.07	17.87	18.55	19.02
	6H	19.65	20.22	20.16	20.73	21.22	18.25	18.82	18.76	19.33	19.82
	8H	19.86	20.36	20.37	20.85	21.42	18.68	19.18	19.19	19.68	20.24