

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: P1060219

Luminaire Tested: S124RDR-S1020D830-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060219  
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-S1020D830-X4F0-XX-UDD-BVL-B  
Description: DEFINE 4 BLACK REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

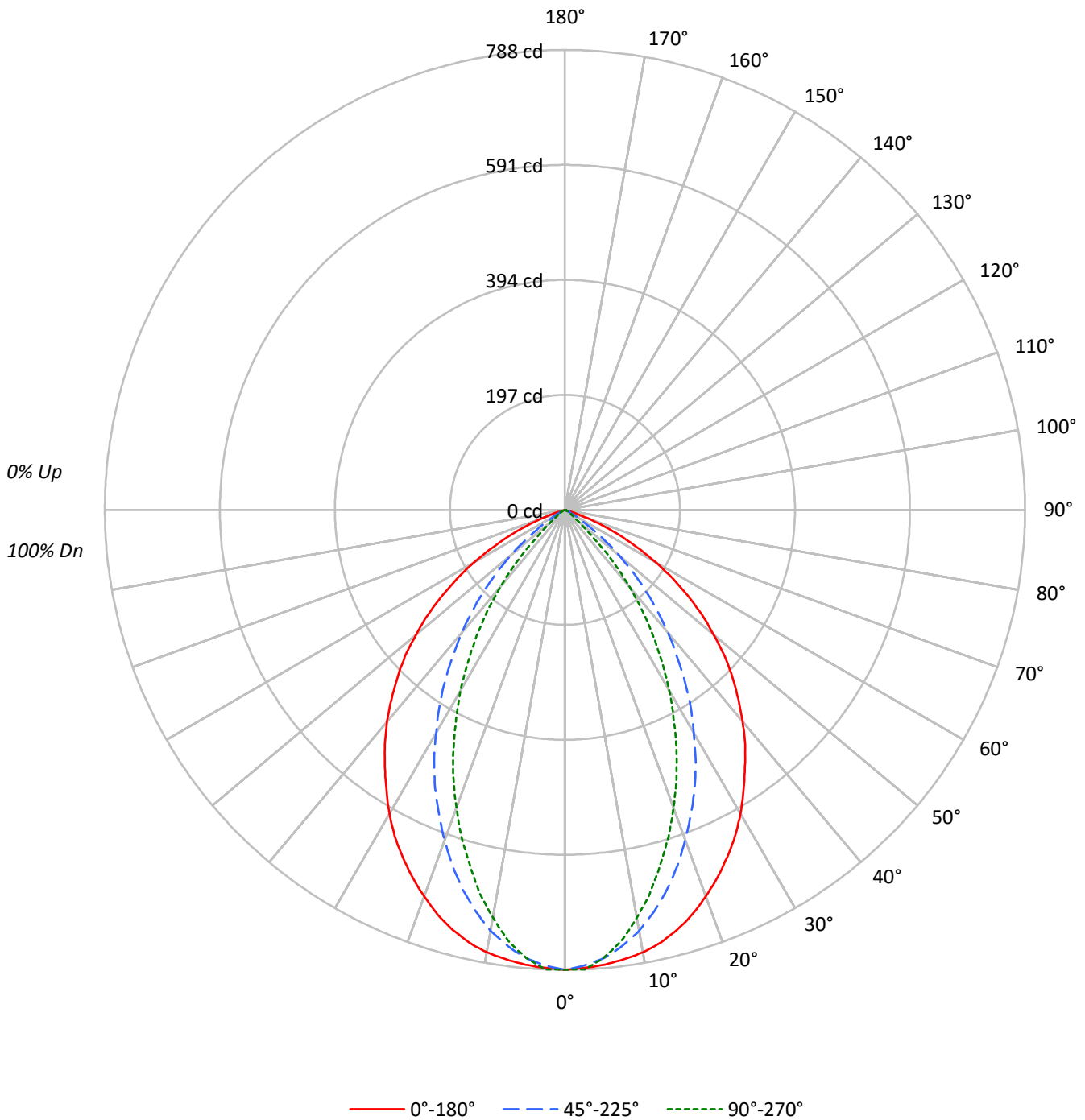
Lumens per Lamp: N/A  
Luminaire Lumens: 1028.9 lumens  
Efficiency: N/A  
Efficacy: 29.4 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 0.83 / 0.98  
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 35  
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	112	109	106	103	110	107	104	102	103	101	99	99	97	96	96	94	93	91				91
2	105	99	95	90	103	98	93	89	94	91	87	91	88	86	88	86	84	82				82
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74				74
4	92	83	76	71	90	82	76	71	79	74	70	77	73	69	75	71	68	66				66
5	86	76	69	64	84	75	69	64	73	67	63	71	66	62	70	65	62	60				60
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	56	55				55
7	76	65	58	53	74	64	57	53	63	57	52	61	56	52	60	55	52	50				50
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	47	46				46
9	67	56	49	44	66	56	49	44	54	48	44	54	48	44	53	48	44	42				42
10	64	52	46	41	63	52	45	41	51	45	41	50	45	41	49	44	41	39				39

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

	0°	45°	90°
0°	6786	6786	6786
5°	6762	6664	6654
10°	6731	6402	6203
15°	6639	6010	5614
20°	6460	5520	4978
25°	6243	4999	4296
30°	5979	4382	3556
35°	5650	3759	2765
40°	5325	3085	1933
45°	4937	2371	957
50°	4454	1602	320
55°	3846	821	222
60°	3079	295	157
65°	2111	163	69
70°	947	86	58
75°	0	37	37
80°	0	0	0
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4937 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.8	7.1
10°-20°	190.7	18.5
20°-30°	246.9	24.0
30°-40°	234.6	22.8
40°-50°	166.2	16.1
50°-60°	85.3	8.3
60°-70°	29.8	2.9
70°-80°	2.6	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°	510.5	49.6
0°-40°	745.1	72.4
0°-60°	996.5	96.8
0°-90°	1028.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1028.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	788	788	788	788	788	
5°	782	784	771	771	770	74
15°	745	722	674	642	630	209
25°	657	606	526	470	452	302
35°	538	459	358	288	263	336
45°	405	312	195	112	79	312
55°	256	168	55	16	15	229
65°	104	50	8	5	3	103
75°	0	1	1	1	1	8
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°	788.0	788.0	788.0	788.0	788.0
2.5°	785.7	788.0	781.2	786.9	788.0
5°	782.3	783.5	770.9	770.9	769.8
7.5°	776.6	774.3	753.8	745.9	744.7
10°	769.8	761.8	732.2	715.1	709.4
12.5°	759.5	744.7	704.9	679.8	673.0
15°	744.7	722.0	674.1	642.3	629.7
17.5°	726.5	696.9	640.0	601.3	588.7
20°	704.9	667.3	602.4	559.1	543.2
22.5°	682.1	638.8	563.7	514.7	498.8
25°	657.1	605.8	526.1	470.3	452.1
27.5°	630.9	570.5	485.1	427.0	403.1
30°	601.3	535.2	440.7	380.3	357.6
32.5°	569.4	496.5	400.8	335.9	308.6
35°	537.5	458.9	357.6	288.1	263.0
37.5°	506.7	423.6	314.3	241.4	217.5
40°	473.7	384.9	274.4	199.3	172.0
42.5°	439.6	347.3	233.4	156.0	126.4
45°	405.4	312.0	194.7	111.6	78.6
47.5°	371.2	274.4	157.1	70.6	42.1
50°	332.5	238.0	119.6	37.6	23.9
52.5°	296.1	203.8	85.4	21.6	18.2
55°	256.2	168.5	54.7	15.9	14.8
57.5°	218.6	134.4	30.7	12.5	11.4
60°	178.8	103.6	17.1	10.2	9.1
62.5°	138.9	75.2	11.4	6.8	5.7
65°	103.6	50.1	8.0	4.6	3.4
67.5°	68.3	28.5	5.7	2.3	2.3
70°	37.6	13.7	3.4	2.3	2.3
72.5°	13.7	4.6	2.3	1.1	1.1
75°	0.0	1.1	1.1	1.1	1.1
77.5°	0.0	0.0	0.0	0.0	1.1
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

(END OF REPORT)