

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: P1060855

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

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060855  
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-H350D940-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: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

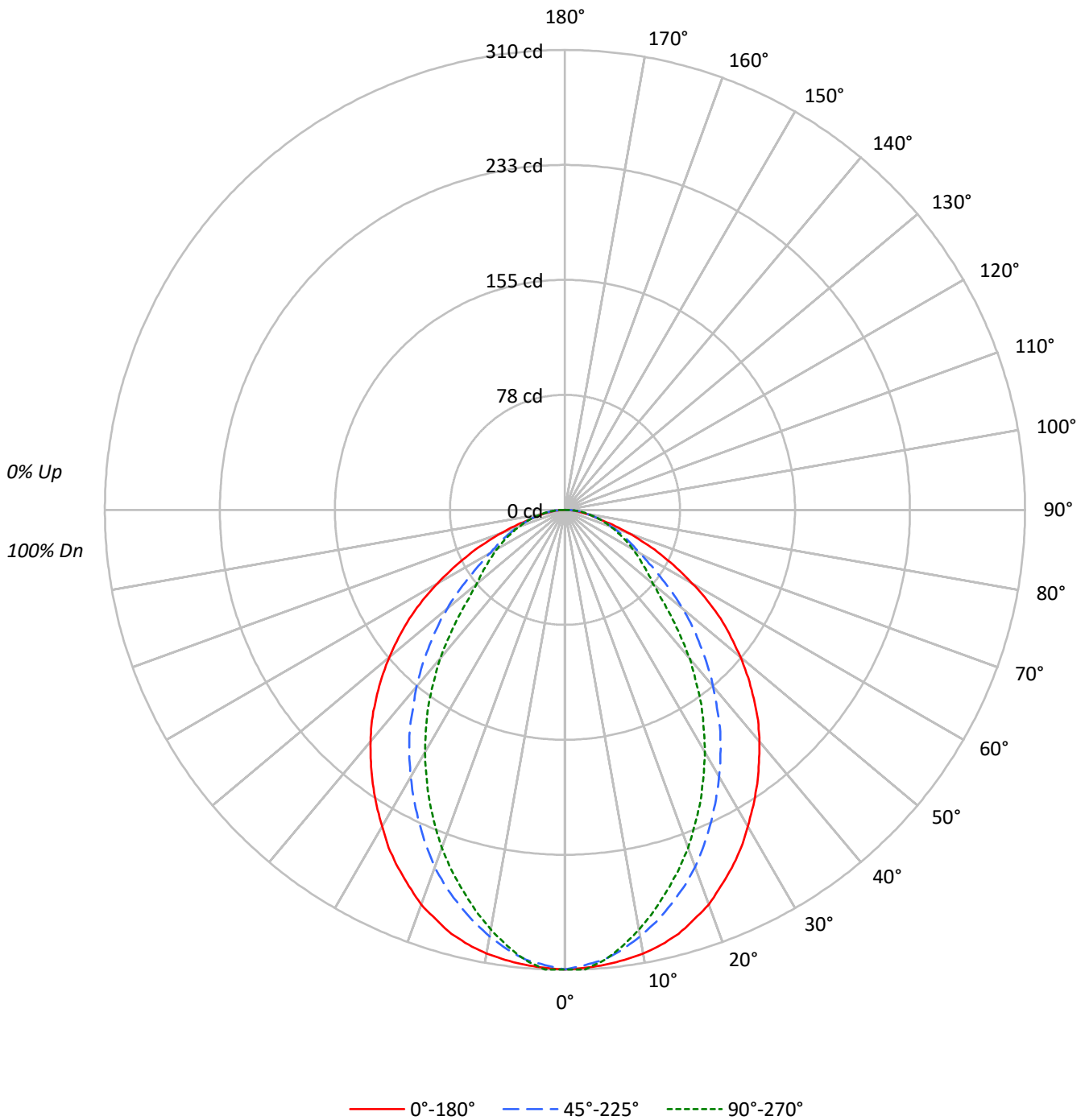
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 597.3 lumens  
Efficiency: N/A  
Efficacy: 51.1 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): 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										
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																				
1	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88	86																				
2	101	94	88	83	99	92	86	82	89	84	80	85	82	78	82	79	76	74																				
3	93	84	76	71	91	82	75	70	79	74	69	77	72	68	74	70	66	64																				
4	86	75	67	61	84	74	67	61	72	65	60	69	64	59	67	62	58	56																				
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																				
6	74	62	54	48	72	61	53	47	59	52	47	58	51	47	56	51	46	44																				
7	69	57	48	43	68	56	48	43	54	47	42	53	47	42	52	46	42	40																				
8	65	52	44	39	63	51	44	39	50	43	38	49	43	38	48	42	38	36																				
9	61	48	40	35	59	48	40	35	46	40	35	45	39	35	44	39	35	33																				
10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	41	36	32	30																				

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

	0°	45°	90°
0°	2668	2668	2668
5°	2661	2630	2634
10°	2655	2552	2511
15°	2638	2457	2369
20°	2595	2349	2221
25°	2528	2210	2054
30°	2450	2066	1875
35°	2373	1917	1684
40°	2291	1747	1469
45°	2190	1570	1228
50°	2067	1385	1038
55°	1923	1176	962
60°	1705	997	909
65°	1453	919	860
70°	1135	854	816
75°	775	789	789
80°	669	739	759
85°	573	721	790

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2190 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	28.8	4.8
10°-20°	78.3	13.1
20°-30°	108.7	18.2
30°-40°	116.5	19.5
40°-50°	103.2	17.3
50°-60°	77.8	13.0
60°-70°	50.3	8.4
70°-80°	25.9	4.3
80°-90°	7.9	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°	215.7	36.1
0°-40°	332.2	55.6
0°-60°	513.2	85.9
0°-90°	597.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	597.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	310	310	310	310	310	
5°	308	308	304	305	305	29
15°	296	289	276	269	266	83
25°	266	252	233	220	216	122
35°	226	205	182	166	160	141
45°	180	156	129	109	101	139
55°	128	107	78	66	64	114
65°	71	58	45	43	42	71
75°	23	24	24	24	24	28
85°	6	6	7	8	8	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	309.8	309.8	309.8	309.8	309.8
2.5°	309.0	310.1	307.2	309.4	310.1
5°	307.9	308.3	304.3	304.7	304.7
7.5°	306.1	305.4	298.8	297.0	296.7
10°	303.6	301.4	291.9	288.3	287.2
12.5°	300.3	296.3	284.3	279.2	277.0
15°	295.9	289.4	275.6	268.6	265.7
17.5°	289.4	281.0	266.5	257.7	254.4
20°	283.2	271.9	256.3	245.3	242.4
22.5°	274.5	262.4	244.6	233.0	229.3
25°	266.1	251.9	232.6	220.2	216.2
27.5°	257.0	241.0	220.2	207.1	202.0
30°	246.4	229.3	207.8	194.0	188.6
32.5°	236.2	218.0	195.1	179.8	174.0
35°	225.7	205.3	182.4	166.0	160.2
37.5°	214.8	193.3	168.2	152.2	144.5
40°	203.8	181.3	155.4	137.2	130.7
42.5°	192.6	168.9	142.3	123.4	115.0
45°	179.8	156.5	128.9	108.8	100.8
47.5°	167.4	144.5	116.5	94.6	87.4
50°	154.3	131.8	103.4	82.3	77.5
52.5°	141.2	118.7	90.6	72.8	70.6
55°	128.1	106.7	78.3	65.9	64.1
57.5°	113.6	94.3	67.3	59.7	58.2
60°	99.0	80.8	57.9	53.9	52.8
62.5°	84.8	69.2	51.3	48.0	47.3
65°	71.3	57.5	45.1	42.6	42.2
67.5°	58.2	47.3	39.3	37.9	37.1
70°	45.1	37.9	33.9	33.1	32.4
72.5°	33.5	30.6	28.8	28.4	28.0
75°	23.3	24.4	23.7	23.7	23.7
77.5°	18.6	18.9	19.3	19.7	19.3
80°	13.5	14.6	14.9	15.7	15.3
82.5°	9.5	10.2	11.3	11.6	12.0
85°	5.8	6.2	7.3	8.0	8.0
87.5°	2.5	2.9	3.6	4.4	4.7
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	13.85	15.35	14.21	15.66	15.98	10.41	11.91	10.78	12.22	12.54
	3H	15.05	16.40	15.43	16.72	17.09	12.11	13.45	12.49	13.78	14.14
	4H	15.36	16.62	15.76	16.97	17.35	12.79	14.05	13.19	14.40	14.77
	6H	15.56	16.73	15.98	17.09	17.49	13.34	14.50	13.75	14.87	15.26
	8H	15.62	16.73	16.05	17.12	17.52	13.55	14.66	13.98	15.05	15.45
	12H	15.66	16.72	16.09	17.10	17.53	13.73	14.79	14.16	15.17	15.60
4H	2H	13.99	15.25	14.39	15.60	15.98	11.07	12.33	11.47	12.68	13.06
	3H	15.39	16.44	15.80	16.84	17.24	12.98	14.03	13.39	14.43	14.83
	4H	15.82	16.76	16.25	17.18	17.61	13.79	14.73	14.22	15.14	15.58
	6H	16.14	16.96	16.60	17.40	17.87	14.48	15.29	14.93	15.74	16.20
	8H	16.24	17.01	16.71	17.45	17.92	14.75	15.51	15.21	15.96	16.42
	12H	16.31	17.00	16.80	17.47	17.95	14.98	15.66	15.46	16.14	16.61
8H	4H	15.95	16.71	16.41	17.15	17.62	14.10	14.87	14.57	15.31	15.78
	6H	16.37	17.00	16.87	17.49	17.97	14.93	15.57	15.43	16.06	16.53
	8H	16.53	17.09	17.04	17.60	18.09	15.30	15.86	15.81	16.37	16.86
	12H	16.65	17.16	17.16	17.65	18.21	15.63	16.13	16.14	16.62	17.19
12H	4H	15.95	16.63	16.43	17.11	17.58	14.13	14.81	14.61	15.29	15.76
	6H	16.39	16.96	16.91	17.47	17.96	14.99	15.56	15.51	16.07	16.56
	8H	16.60	17.10	17.11	17.60	18.16	15.42	15.93	15.93	16.42	16.98