

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: P1060891

Luminaire Tested: S124RDR-H575D840-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060891  
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-H575D840-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, 80 CRI LEDS  
Ballast/Driver: -

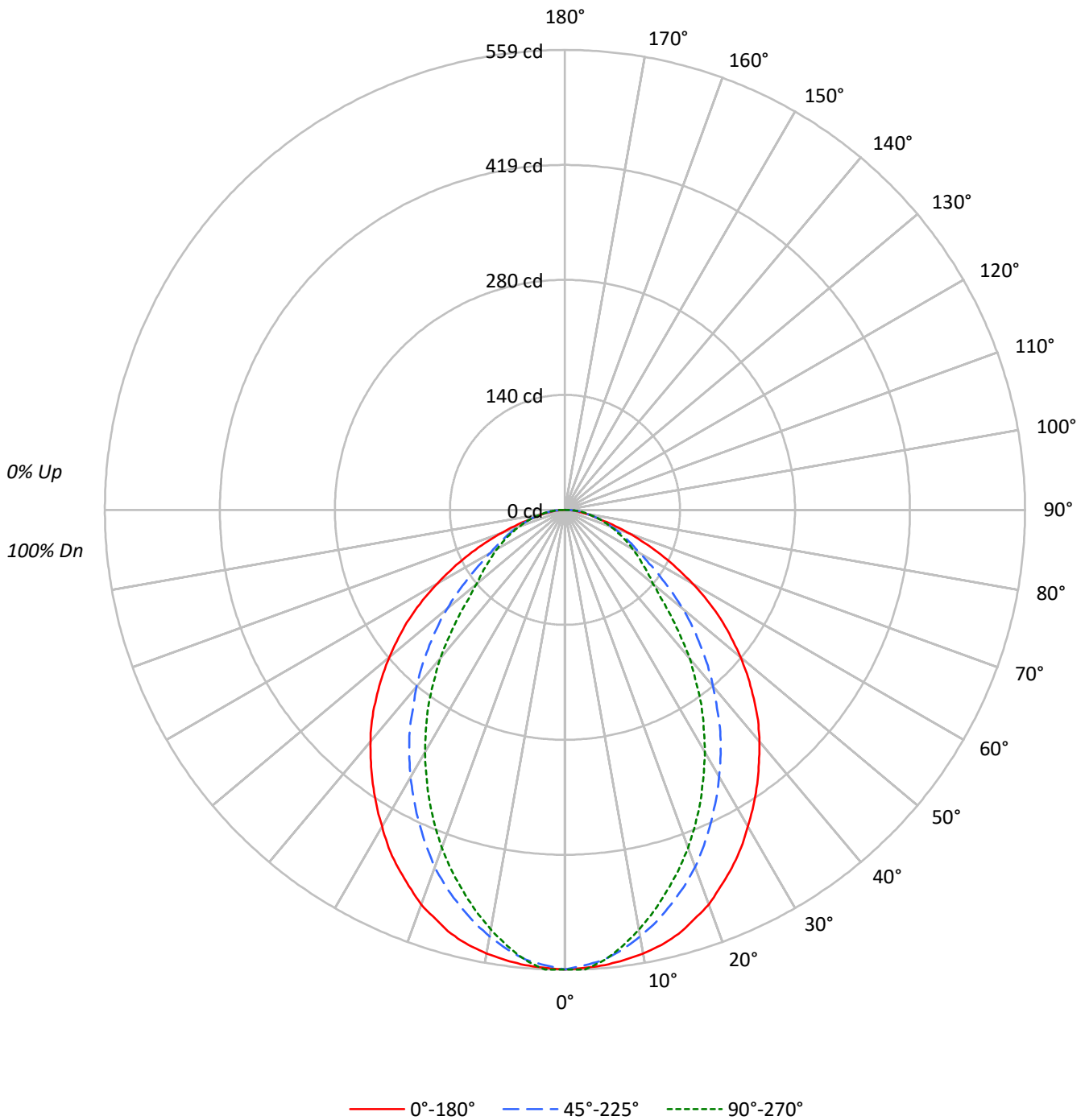
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1077.2 lumens  
Efficiency: N/A  
Efficacy: 61.9 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): 17.4  
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				
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°	4811	4811	4811
5°	4801	4744	4750
10°	4787	4604	4529
15°	4758	4431	4272
20°	4680	4235	4006
25°	4560	3986	3706
30°	4419	3728	3382
35°	4278	3457	3037
40°	4132	3151	2650
45°	3949	2830	2214
50°	3728	2497	1873
55°	3470	2118	1734
60°	3076	1798	1640
65°	2622	1659	1553
70°	2049	1538	1470
75°	1397	1421	1421
80°	1205	1334	1369
85°	1037	1294	1423

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3949 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	52.0	4.8
10°-20°	141.2	13.1
20°-30°	196.0	18.2
30°-40°	210.1	19.5
40°-50°	186.1	17.3
50°-60°	140.2	13.0
60°-70°	90.8	8.4
70°-80°	46.6	4.3
80°-90°	14.3	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°	389.1	36.1
0°-40°	599.2	55.6
0°-60°	925.5	85.9
0°-90°	1077.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1077.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	559	559	559	559	559	
5°	555	556	549	550	550	53
15°	534	522	497	484	479	150
25°	480	454	420	397	390	221
35°	407	370	329	299	289	254
45°	324	282	232	196	182	250
55°	231	192	141	119	116	205
65°	129	104	81	77	76	128
75°	42	44	43	43	43	50
85°	10	11	13	14	14	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	558.7	558.7	558.7	558.7	558.7
2.5°	557.4	559.3	554.1	558.0	559.3
5°	555.4	556.0	548.8	549.5	549.5
7.5°	552.1	550.8	539.0	535.7	535.0
10°	547.5	543.6	526.5	519.9	518.0
12.5°	541.6	534.4	512.7	503.5	499.6
15°	533.7	521.9	497.0	484.5	479.2
17.5°	521.9	506.8	480.5	464.8	458.9
20°	510.7	490.4	462.2	442.5	437.2
22.5°	495.0	473.3	441.2	420.1	413.6
25°	479.9	454.3	419.5	397.2	390.0
27.5°	463.5	434.6	397.2	373.5	364.3
30°	444.4	413.6	374.9	349.9	340.1
32.5°	426.1	393.2	351.9	324.3	313.8
35°	407.0	370.3	328.9	299.4	288.9
37.5°	387.3	348.6	303.3	274.4	260.6
40°	367.6	326.9	280.3	247.5	235.7
42.5°	347.3	304.6	256.7	222.5	207.4
45°	324.3	282.3	232.4	196.3	181.8
47.5°	302.0	260.6	210.1	170.7	157.6
50°	278.3	237.6	186.4	148.4	139.8
52.5°	254.7	214.0	163.5	131.3	127.4
55°	231.1	192.3	141.1	118.8	115.5
57.5°	204.8	170.0	121.4	107.7	105.0
60°	178.6	145.7	104.4	97.2	95.2
62.5°	153.0	124.7	92.6	86.7	85.3
65°	128.7	103.7	81.4	76.8	76.2
67.5°	105.0	85.3	70.9	68.3	67.0
70°	81.4	68.3	61.1	59.7	58.4
72.5°	60.4	55.1	51.9	51.2	50.5
75°	42.0	44.0	42.7	42.7	42.7
77.5°	33.5	34.1	34.8	35.5	34.8
80°	24.3	26.3	26.9	28.2	27.6
82.5°	17.1	18.4	20.4	21.0	21.7
85°	10.5	11.2	13.1	14.4	14.4
87.5°	4.6	5.3	6.6	7.9	8.5
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	15.90	17.39	16.26	17.71	18.02	12.46	13.96	12.83	14.27	14.59
	3H	17.10	18.44	17.48	18.77	19.13	14.16	15.50	14.54	15.83	16.19
	4H	17.41	18.67	17.81	19.02	19.39	14.84	16.10	15.24	16.44	16.82
	6H	17.61	18.77	18.02	19.14	19.53	15.38	16.55	15.80	16.91	17.31
	8H	17.67	18.78	18.10	19.17	19.57	15.60	16.71	16.03	17.10	17.50
	12H	17.70	18.76	18.13	19.14	19.57	15.78	16.84	16.21	17.22	17.65
4H	2H	16.04	17.30	16.44	17.65	18.02	13.12	14.38	13.52	14.73	15.11
	3H	17.44	18.48	17.85	18.88	19.29	15.03	16.08	15.44	16.48	16.88
	4H	17.87	18.81	18.30	19.22	19.66	15.83	16.77	16.27	17.19	17.63
	6H	18.19	19.01	18.65	19.45	19.91	16.52	17.34	16.98	17.78	18.24
	8H	18.29	19.05	18.75	19.50	19.97	16.80	17.56	17.26	18.01	18.47
	12H	18.36	19.04	18.84	19.52	19.99	17.03	17.71	17.51	18.19	18.66
8H	4H	17.99	18.76	18.46	19.20	19.67	16.15	16.92	16.62	17.36	17.83
	6H	18.42	19.05	18.91	19.54	20.02	16.98	17.61	17.48	18.10	18.58
	8H	18.57	19.14	19.09	19.65	20.14	17.35	17.91	17.86	18.42	18.91
	12H	18.70	19.20	19.21	19.70	20.26	17.68	18.18	18.19	18.67	19.24
12H	4H	18.00	18.68	18.48	19.16	19.63	16.18	16.86	16.66	17.34	17.81
	6H	18.44	19.01	18.95	19.52	20.01	17.04	17.61	17.55	18.12	18.61
	8H	18.65	19.15	19.16	19.64	20.21	17.47	17.97	17.98	18.47	19.03