

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: P1060888

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

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060888  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-38)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDR-H575D840-X4F0-XX-UDD-SVL-B  
Description: DEFINE 4 BLACK REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

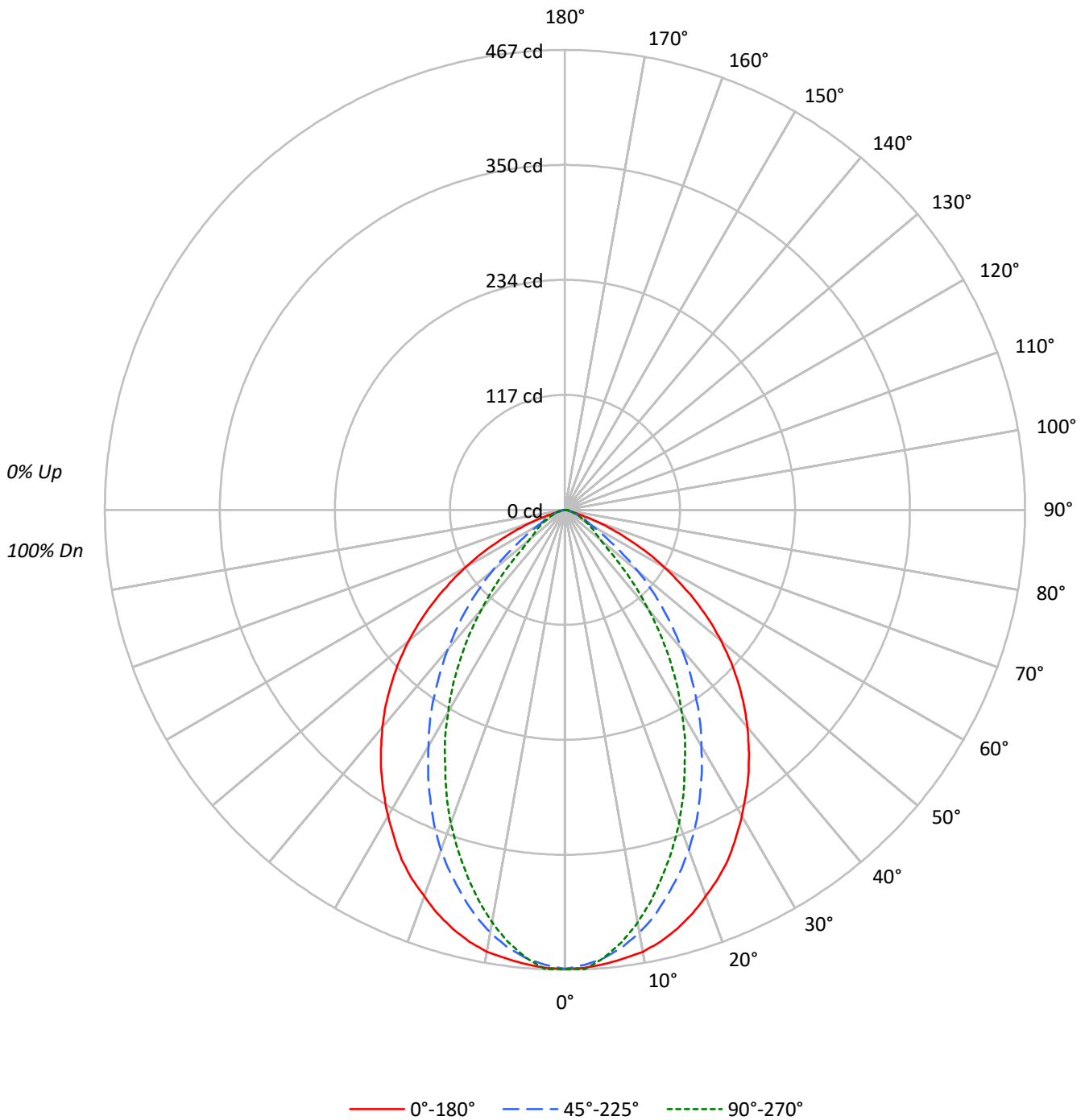
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 687.2 lumens  
Efficiency: N/A  
Efficacy: 39.5 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 0.87 / 1.02  
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	112	108	105	102	109	106	103	101	102	100	97	98	96	94	95	93	92	90				
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80				
3	97	89	82	77	95	87	81	76	84	79	75	82	78	74	79	76	73	71				
4	90	81	74	68	88	79	73	68	77	71	67	75	70	66	73	69	65	63				
5	84	74	66	61	82	73	66	60	71	65	60	69	63	59	67	62	59	57				
6	79	68	60	55	77	67	60	54	65	59	54	63	58	54	62	57	53	51				
7	74	62	55	50	72	62	54	49	60	54	49	59	53	49	58	52	48	47				
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	54	48	44	43				
9	65	53	46	41	64	53	46	41	52	46	41	51	45	41	50	45	41	39				
10	62	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36				

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

	0°	45°	90°
0°	4014	4014	4014
5°	4000	3949	3944
10°	3984	3811	3720
15°	3927	3605	3423
20°	3826	3369	3104
25°	3724	3075	2732
30°	3571	2754	2357
35°	3416	2436	1946
40°	3240	2074	1476
45°	3030	1695	991
50°	2770	1283	616
55°	2435	848	522
60°	2013	520	429
65°	1459	401	348
70°	793	297	264
75°	176	220	240
80°	129	164	193
85°	128	128	198

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3030 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.2	6.3
10°-20°	114.7	16.7
20°-30°	151.9	22.1
30°-40°	150.8	21.9
40°-50°	116.1	16.9
50°-60°	69.2	10.1
60°-70°	31.5	4.6
70°-80°	8.1	1.2
80°-90°	1.8	0.3
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°	309.8	45.1
0°-40°	460.6	67.0
0°-60°	645.8	94.0
0°-90°	687.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	687.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	466	466	466	466	466	
5°	463	464	457	457	456	44
15°	440	429	404	391	384	124
25°	392	364	324	297	288	180
35°	325	284	232	196	185	203
45°	249	200	139	97	81	192
55°	162	116	56	35	35	144
65°	72	43	20	17	17	72
75°	5	7	7	7	7	11
85°	1	1	1	2	2	1
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	466.1	466.1	466.1	466.1	466.1
2.5°	465.4	466.1	462.2	465.4	466.8
5°	462.8	463.5	456.9	456.9	456.3
7.5°	459.5	458.2	447.7	443.8	442.5
10°	455.6	451.0	435.9	428.0	425.4
12.5°	449.0	441.8	421.5	410.3	405.7
15°	440.5	429.3	404.4	390.6	384.0
17.5°	430.0	416.2	386.7	368.9	361.7
20°	417.5	399.1	367.6	345.3	338.7
22.5°	405.7	382.7	346.6	321.0	313.8
25°	391.9	363.7	323.6	296.7	287.5
27.5°	375.5	345.3	300.7	273.1	263.9
30°	359.1	325.6	277.0	248.1	237.0
32.5°	342.0	305.3	255.4	222.5	212.0
35°	325.0	284.3	231.7	196.3	185.1
37.5°	306.6	263.2	208.1	171.3	158.9
40°	288.2	242.9	184.5	147.1	131.3
42.5°	269.2	221.9	161.5	122.1	106.3
45°	248.8	200.2	139.2	97.2	81.4
47.5°	228.5	179.9	116.9	72.9	58.4
50°	206.8	158.2	95.8	53.2	46.0
52.5°	185.1	137.2	74.8	41.4	39.4
55°	162.2	115.5	56.5	35.4	34.8
57.5°	138.5	95.8	40.7	30.9	29.5
60°	116.9	77.5	30.2	26.3	24.9
62.5°	94.5	58.4	24.9	21.7	20.4
65°	71.6	42.7	19.7	17.1	17.1
67.5°	51.9	28.9	15.8	13.8	13.1
70°	31.5	17.7	11.8	11.2	10.5
72.5°	15.8	10.5	9.2	8.5	8.5
75°	5.3	6.6	6.6	7.2	7.2
77.5°	3.9	4.6	4.6	5.3	5.3
80°	2.6	3.3	3.3	3.9	3.9
82.5°	2.0	2.0	2.6	2.6	3.3
85°	1.3	1.3	1.3	2.0	2.0
87.5°	0.7	0.7	0.7	1.3	1.3
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	13.94	15.28	14.31	15.59	15.91	5.50	6.84	5.87	7.15	7.47
	3H	14.45	15.63	14.83	15.96	16.33	6.32	7.50	6.70	7.83	8.19
	4H	14.42	15.52	14.82	15.87	16.25	6.60	7.70	7.00	8.05	8.43
	6H	14.36	15.36	14.77	15.73	16.13	6.77	7.78	7.19	8.15	8.54
	8H	14.32	15.27	14.75	15.66	16.07	6.84	7.79	7.27	8.18	8.59
	12H	14.28	15.19	14.71	15.57	16.00	6.88	7.79	7.31	8.18	8.61
4H	2H	13.79	14.89	14.19	15.24	15.62	5.94	7.04	6.35	7.39	7.78
	3H	14.34	15.24	14.75	15.64	16.04	6.91	7.80	7.32	8.20	8.61
	4H	14.31	15.11	14.75	15.53	15.97	7.27	8.06	7.70	8.48	8.93
	6H	14.26	14.94	14.72	15.39	15.86	7.52	8.21	7.98	8.65	9.12
	8H	14.21	14.85	14.68	15.30	15.77	7.61	8.25	8.08	8.69	9.17
	12H	14.17	14.74	14.66	15.22	15.70	7.69	8.25	8.17	8.73	9.21
8H	4H	14.20	14.84	14.67	15.29	15.76	7.36	8.00	7.83	8.44	8.91
	6H	14.14	14.66	14.64	15.16	15.64	7.67	8.19	8.17	8.69	9.17
	8H	14.09	14.56	14.61	15.08	15.57	7.80	8.27	8.32	8.78	9.27
	12H	14.06	14.47	14.58	14.97	15.54	7.94	8.35	8.45	8.85	9.42
12H	4H	14.16	14.72	14.64	15.21	15.68	7.33	7.90	7.82	8.38	8.85
	6H	14.08	14.55	14.61	15.07	15.56	7.65	8.12	8.17	8.63	9.12
	8H	14.06	14.47	14.57	14.97	15.54	7.82	8.23	8.33	8.72	9.30