

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1056176

Luminaire Tested: S124R3DR-H575D840-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056176
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-9)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124R3DR-H575D840-X4F0-XX-UDD-F-S
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

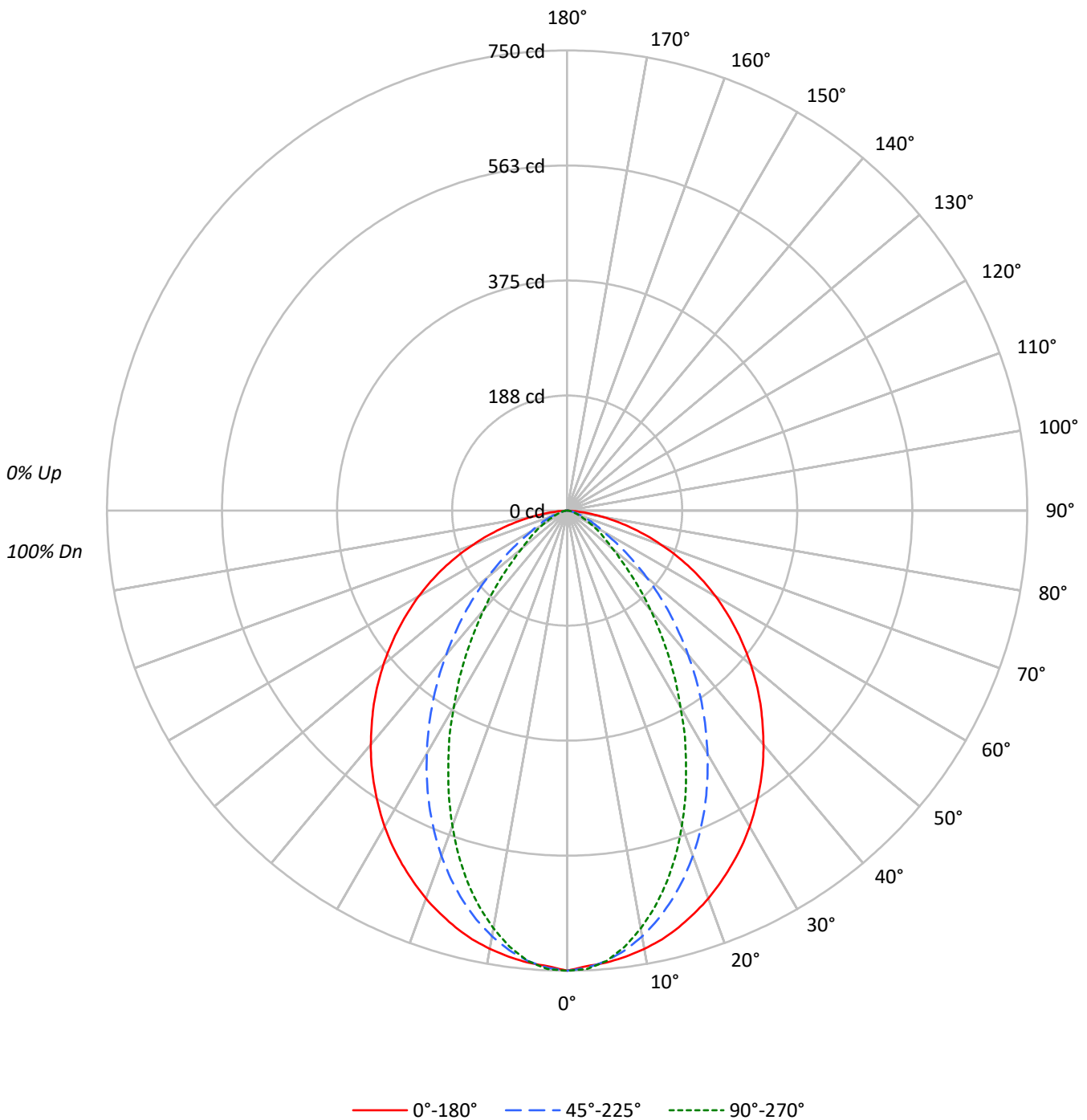
Lumens per Lamp: N/A
Luminaire Lumens: 1212.6 lumens
Efficiency: N/A
Efficacy: 70.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.87 / 1.03
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 17.3
Input Voltage (V): 120
Input Current (A_{in}): 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

TEST NUMBER: P1056176

CATALOG NUMBER: S124R3DR-H575D840-X4F0-XX-UDD-F-S

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	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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	94	92	90	89					89			
2	103	96	91	86	101	94	89	85	91	87	83	88	84	81	85	82	79	78					78			
3	95	87	80	74	93	85	79	74	82	77	73	80	75	71	77	73	70	68					68			
4	89	78	71	65	86	77	70	65	75	69	64	73	67	63	71	66	62	60					60			
5	82	71	64	58	80	70	63	58	68	62	57	66	61	56	65	60	56	54					54			
6	77	65	57	52	75	64	57	52	63	56	51	61	55	51	60	54	50	48					48			
7	72	60	52	47	70	59	52	47	58	51	46	56	50	46	55	50	46	44					44			
8	67	55	48	42	66	55	47	42	53	47	42	52	46	42	51	46	42	40					40			
9	63	51	44	39	62	51	44	39	50	43	39	49	43	38	48	42	38	37					37			
10	60	48	41	36	59	47	40	36	46	40	36	45	40	35	45	39	35	34					34			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6630	6630	6630
5°	6563	6538	6538
10°	6513	6326	6206
15°	6437	6021	5739
20°	6333	5637	5144
25°	6205	5184	4469
30°	6073	4670	3764
35°	5916	4123	3098
40°	5747	3537	2442
45°	5570	2942	1824
50°	5378	2315	1336
55°	5167	1711	1065
60°	4939	1185	815
65°	4646	921	598
70°	4206	649	470
75°	3672	454	359
80°	2953	356	321
85°	1633	284	284

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5570 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.6	5.7
10°-20°	185.9	15.3
20°-30°	247.9	20.4
30°-40°	249.6	20.6
40°-50°	204.7	16.9
50°-60°	139.9	11.5
60°-70°	78.2	6.4
70°-80°	31.0	2.6
80°-90°	5.9	0.5
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°	503.3	41.5
0°-40°	752.9	62.1
0°-60°	1097.5	90.5
0°-90°	1212.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1212.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	750	750	750	750	750	
5°	740	748	737	733	737	70
15°	703	696	658	635	627	198
25°	636	605	531	478	458	293
35°	548	490	382	309	287	343
45°	446	364	235	166	146	343
55°	335	235	111	74	69	300
65°	222	112	44	31	29	219
75°	108	29	13	11	10	115
85°	16	3	3	3	3	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	749.9	749.9	749.9	749.9	749.9
2.5°	743.0	752.0	745.8	746.5	747.8
5°	739.5	747.8	736.7	733.2	736.7
7.5°	733.2	739.5	722.7	715.7	717.1
10°	725.5	727.6	704.6	692.7	691.3
12.5°	715.7	712.9	682.9	665.5	661.3
15°	703.2	695.5	657.8	634.7	627.0
17.5°	688.5	675.2	629.8	599.8	588.6
20°	673.1	653.6	599.1	560.7	546.7
22.5°	655.0	630.5	566.3	519.5	503.5
25°	636.1	604.7	531.4	477.6	458.1
27.5°	616.6	578.2	495.1	435.0	415.5
30°	594.9	549.5	457.4	392.4	368.7
32.5°	571.9	520.2	419.7	350.5	328.2
35°	548.1	490.2	382.0	309.3	287.0
37.5°	523.7	459.5	344.2	270.2	247.9
40°	497.9	428.0	306.5	233.2	211.6
42.5°	471.3	395.9	270.2	198.3	178.1
45°	445.5	363.8	235.3	165.5	145.9
47.5°	418.3	331.7	201.1	134.8	118.0
50°	391.0	299.6	168.3	108.2	97.1
52.5°	363.1	267.4	138.3	88.7	81.0
55°	335.2	235.3	111.0	74.0	69.1
57.5°	307.2	203.2	85.9	62.8	57.3
60°	279.3	171.8	67.0	51.0	46.1
62.5°	250.7	140.4	55.2	40.5	36.3
65°	222.1	111.7	44.0	31.4	28.6
67.5°	193.4	85.2	33.5	24.4	22.3
70°	162.7	60.7	25.1	18.9	18.2
72.5°	136.2	41.2	18.2	14.7	14.0
75°	107.5	29.3	13.3	11.2	10.5
77.5°	83.1	18.9	9.8	9.1	8.4
80°	58.0	10.5	7.0	6.3	6.3
82.5°	35.6	5.6	4.9	4.2	4.2
85°	16.1	2.8	2.8	2.8	2.8
87.5°	2.8	1.4	1.4	1.4	1.4
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	17.30	18.70	17.66	19.02	19.33	8.38	9.79	8.75	10.10	10.42
	3H	18.88	20.13	19.26	20.46	20.83	8.98	10.23	9.35	10.56	10.92
	4H	19.48	20.65	19.88	21.00	21.38	9.13	10.30	9.54	10.65	11.03
	6H	19.91	20.98	20.32	21.35	21.75	9.24	10.32	9.66	10.69	11.08
	8H	20.02	21.04	20.45	21.43	21.84	9.26	10.28	9.69	10.67	11.08
	12H	20.06	21.04	20.50	21.42	21.85	9.27	10.25	9.70	10.63	11.06
4H	2H	17.15	18.32	17.55	18.67	19.05	8.97	10.14	9.37	10.49	10.87
	3H	18.80	19.76	19.21	20.16	20.56	9.68	10.64	10.09	11.04	11.44
	4H	19.40	20.26	19.84	20.68	21.12	9.89	10.74	10.32	11.16	11.60
	6H	19.90	20.64	20.36	21.08	21.55	10.05	10.80	10.52	11.24	11.70
	8H	20.04	20.73	20.51	21.18	21.65	10.09	10.78	10.55	11.22	11.69
	12H	20.11	20.73	20.60	21.21	21.68	10.11	10.73	10.60	11.21	11.68
8H	4H	19.30	19.99	19.76	20.43	20.90	10.16	10.85	10.63	11.30	11.77
	6H	19.78	20.34	20.28	20.84	21.32	10.36	10.93	10.86	11.42	11.90
	8H	19.92	20.43	20.44	20.94	21.44	10.42	10.93	10.94	11.44	11.93
	12H	20.01	20.46	20.53	20.96	21.53	10.48	10.93	10.99	11.42	11.99
12H	4H	19.26	19.87	19.74	20.35	20.83	10.19	10.80	10.67	11.28	11.75
	6H	19.72	20.23	20.24	20.75	21.24	10.39	10.90	10.91	11.41	11.91
	8H	19.89	20.34	20.40	20.83	21.40	10.49	10.93	11.00	11.43	12.00