

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: P1056187

Luminaire Tested: S124R3DR-H575D935-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056187
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-8)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124R3DR-H575D935-X4F0-XX-UDD-F-B
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

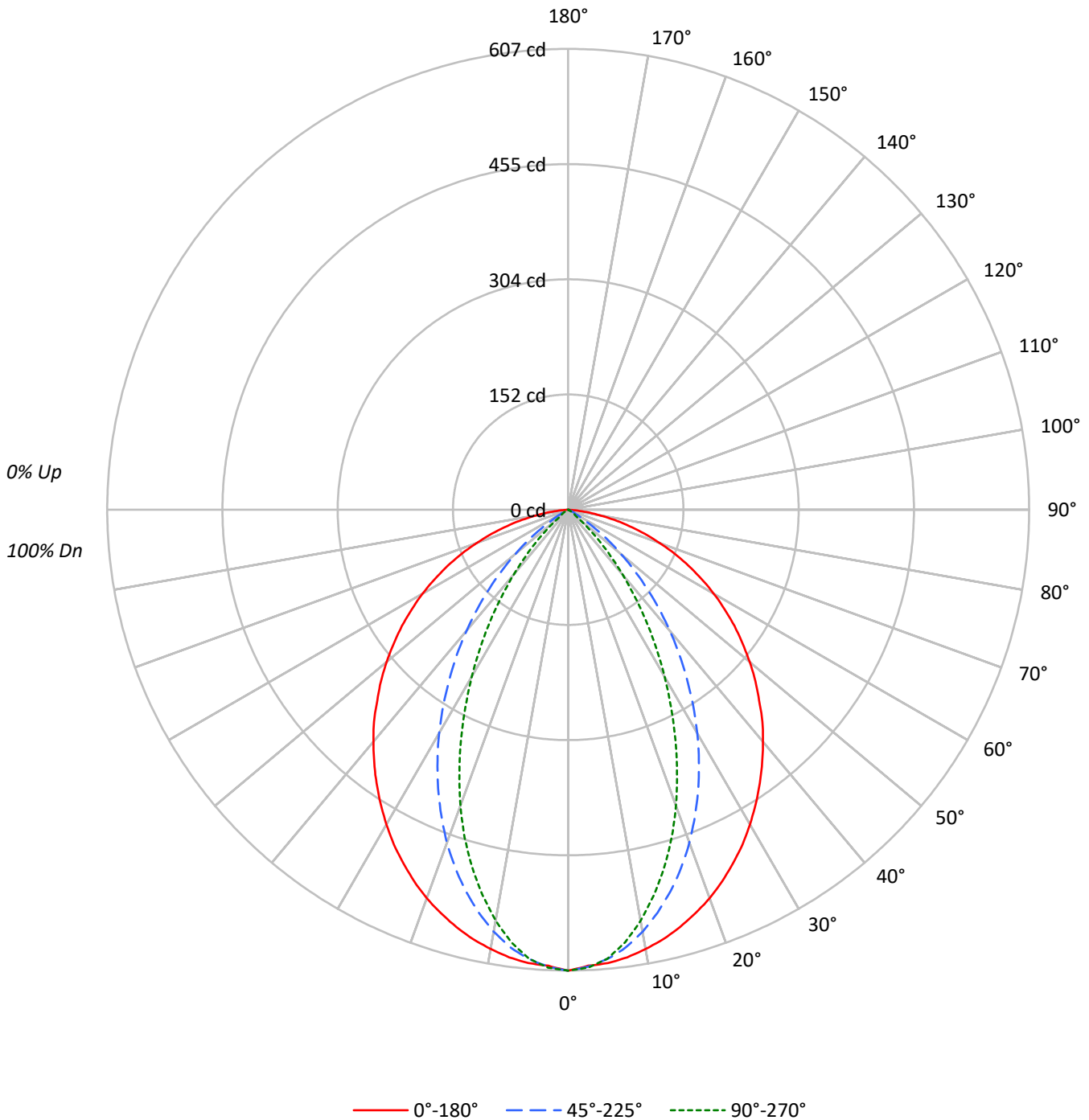
Lumens per Lamp: N/A
Luminaire Lumens: 848.7 lumens
Efficiency: N/A
Efficacy: 49.1 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 0.81 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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: P1056187

CATALOG NUMBER: S124R3DR-H575D935-X4F0-XX-UDD-F-B

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	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	100	102	99	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	77	84	79	75	82	78	74	79	76	73	71
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	65	64
5	84	74	66	61	83	73	66	61	71	65	60	69	64	60	67	63	59	57
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	54	52
7	74	63	55	50	73	62	55	50	60	54	50	59	53	49	58	53	49	47
8	70	58	51	46	68	57	50	46	56	50	45	55	49	45	54	49	45	43
9	66	54	47	42	64	53	47	42	52	46	42	51	46	42	50	45	41	40
10	62	50	43	39	61	50	43	39	49	43	39	48	42	39	47	42	38	37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5368	5368	5368
5°	5321	5273	5268
10°	5275	5067	4933
15°	5209	4762	4469
20°	5125	4391	3905
25°	5012	3955	3258
30°	4887	3470	2589
35°	4749	2943	1928
40°	4604	2398	1285
45°	4444	1832	708
50°	4291	1253	197
55°	4120	680	128
60°	3917	210	74
65°	3661	136	38
70°	3309	62	16
75°	2846	20	0
80°	2154	0	0
85°	903	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4444 cd/sqm

TEST NUMBER: P1056187

CATALOG NUMBER: S124R3DR-H575D935-X4F0-XX-UDD-F-B

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.0	6.6
10°-20°	147.1	17.3
20°-30°	190.0	22.4
30°-40°	181.6	21.4
40°-50°	135.9	16.0
50°-60°	80.8	9.5
60°-70°	41.0	4.8
70°-80°	14.3	1.7
80°-90°	2.0	0.2
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°	393.1	46.3
0°-40°	574.8	67.7
0°-60°	791.5	93.3
0°-90°	848.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	848.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	607	607	607	607	607	
5°	600	604	594	591	594	57
15°	569	557	520	496	488	160
25°	514	478	405	352	334	237
35°	440	379	273	203	179	275
45°	355	273	146	78	57	275
55°	267	166	44	10	8	239
65°	175	67	6	2	2	173
75°	83	9	1	1	0	88
85°	9	0	0	0	0	15
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	607.2	607.2	607.2	607.2	607.2
2.5°	601.3	608.4	602.5	603.1	603.7
5°	599.5	604.3	594.1	591.2	593.6
7.5°	594.7	596.5	581.6	573.9	574.5
10°	587.6	585.8	564.4	551.3	549.5
12.5°	579.3	573.3	543.5	524.5	520.3
15°	569.1	557.2	520.3	495.9	488.2
17.5°	557.2	540.0	494.7	462.6	453.1
20°	544.7	520.9	466.7	426.9	415.0
22.5°	529.9	499.5	436.4	389.4	374.5
25°	513.8	478.1	405.4	351.8	334.0
27.5°	497.1	454.8	372.7	313.7	292.9
30°	478.7	430.4	339.9	275.0	253.6
32.5°	459.6	405.4	306.0	239.3	215.5
35°	440.0	379.2	272.7	203.0	178.6
37.5°	419.7	353.0	240.5	168.5	143.5
40°	398.9	326.2	207.8	135.7	111.3
42.5°	378.6	299.5	176.8	104.8	82.2
45°	355.4	272.7	146.5	78.0	56.6
47.5°	334.6	246.5	117.3	53.0	33.3
50°	312.0	218.5	91.1	31.0	14.3
52.5°	289.3	192.3	66.7	13.7	10.7
55°	267.3	166.1	44.1	10.1	8.3
57.5°	244.1	139.9	23.8	7.7	6.0
60°	221.5	114.3	11.9	6.0	4.2
62.5°	198.2	89.9	9.5	3.6	2.4
65°	175.0	67.3	6.5	2.4	1.8
67.5°	151.8	45.8	4.2	1.2	0.6
70°	128.0	28.0	2.4	0.6	0.6
72.5°	105.4	14.3	1.2	0.6	0.6
75°	83.3	8.9	0.6	0.6	0.0
77.5°	61.9	4.8	0.6	0.6	0.0
80°	42.3	1.8	0.0	0.0	0.0
82.5°	24.4	0.6	0.0	0.0	0.0
85°	8.9	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



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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	16.29	17.62	16.66	17.94	18.25	0.00	0.00	0.00	0.00	0.00
	3H	17.84	19.01	18.22	19.34	19.71	0.00	0.00	0.00	0.00	0.00
	4H	18.43	19.53	18.83	19.88	20.26	0.00	0.00	0.00	0.00	0.00
	6H	18.85	19.85	19.26	20.22	20.62	0.00	0.00	0.00	0.00	0.00
	8H	18.95	19.90	19.38	20.29	20.69	0.00	0.00	0.00	0.00	0.00
	12H	18.97	19.88	19.40	20.26	20.69	0.00	0.00	0.00	0.00	0.00
4H	2H	16.07	17.17	16.47	17.52	17.90	0.00	0.00	0.00	0.00	0.00
	3H	17.63	18.53	18.05	18.93	19.34	0.00	0.00	0.00	0.00	0.00
	4H	18.22	19.02	18.65	19.43	19.88	0.00	0.00	0.00	0.00	0.00
	6H	18.68	19.37	19.14	19.81	20.28	0.00	0.00	0.00	0.00	0.00
	8H	18.80	19.44	19.27	19.89	20.36	0.00	0.00	0.00	0.00	0.00
	12H	18.84	19.40	19.32	19.89	20.36	0.00	0.00	0.00	0.00	0.00
8H	4H	18.08	18.72	18.55	19.17	19.64	0.00	0.00	0.00	0.00	0.00
	6H	18.52	19.04	19.03	19.54	20.02	0.00	0.00	0.00	0.00	0.00
	8H	18.64	19.11	19.16	19.62	20.12	0.00	0.00	0.00	0.00	0.00
	12H	18.69	19.10	19.20	19.60	20.17	0.00	0.00	0.00	0.00	0.00
12H	4H	18.04	18.60	18.52	19.08	19.56	0.00	0.00	0.00	0.00	0.00
	6H	18.46	18.93	18.98	19.44	19.94	0.00	0.00	0.00	0.00	0.00
	8H	18.60	19.01	19.11	19.50	20.08	0.00	0.00	0.00	0.00	0.00