

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: P1056179

Luminaire Tested: S124R3DR-H575D850-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056179
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-H575D850-X4F0-XX-UDD-F-S
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

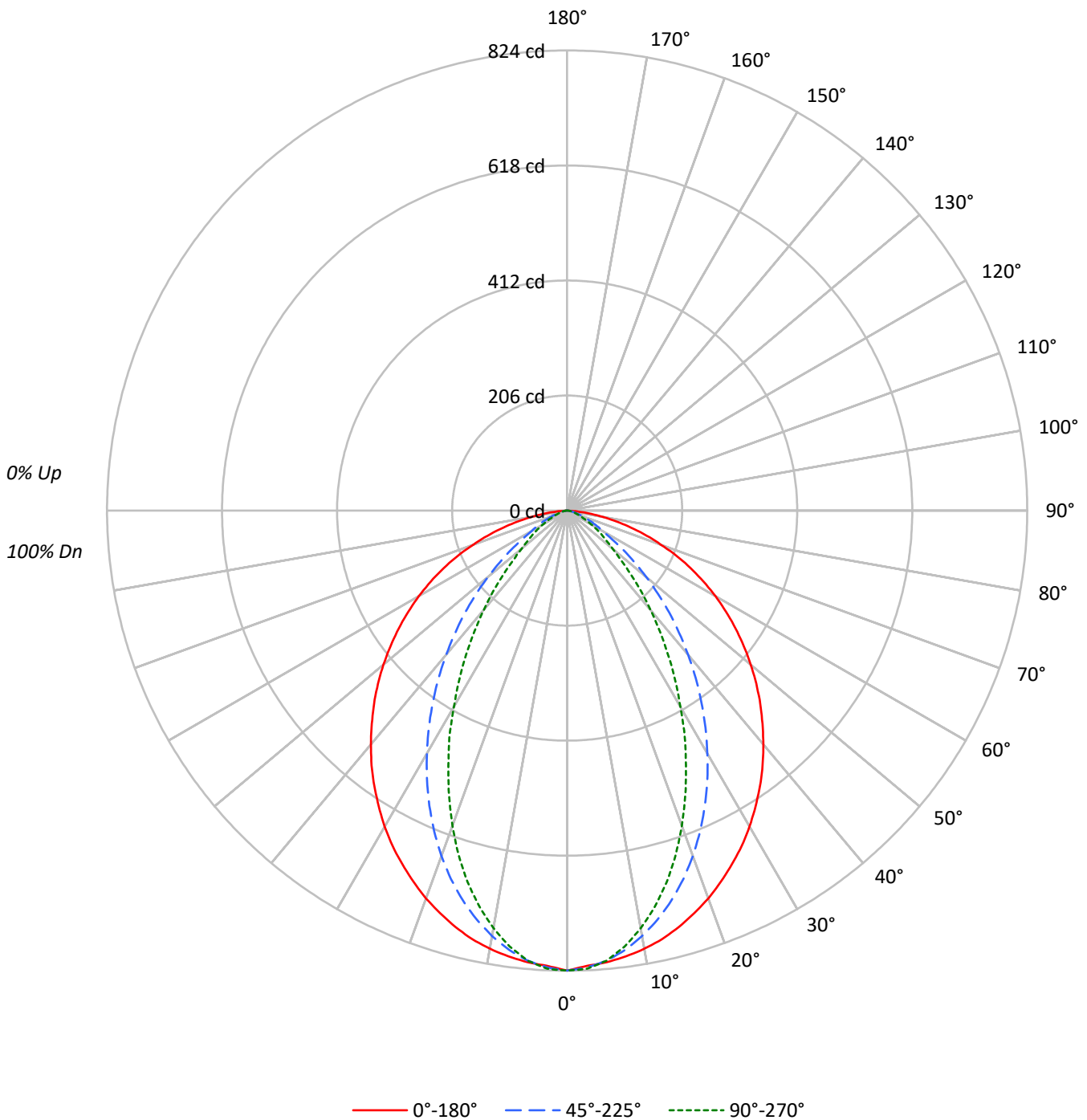
Lumens per Lamp: N/A
Luminaire Lumens: 1331.6 lumens
Efficiency: N/A
Efficacy: 77.0 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 0.87 / 1.03
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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

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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	94	92	90	89
2	103	96	91	86	101	94	89	85	91	87	83	88	84	81	85	82	79	78
3	95	87	80	74	93	85	79	74	82	77	73	80	75	71	77	73	70	68
4	89	78	71	65	86	77	70	65	75	69	64	73	67	63	71	66	62	60
5	82	71	64	58	80	70	63	58	68	62	57	66	61	56	65	60	56	54
6	77	65	57	52	75	64	57	52	63	56	51	61	55	51	60	54	50	48
7	72	60	52	47	70	59	52	47	58	51	46	56	50	46	55	50	46	44
8	67	55	48	42	66	55	47	42	53	47	42	52	46	42	51	46	42	40
9	63	51	44	39	62	51	44	39	50	43	39	49	43	38	48	42	38	37
10	60	48	41	36	59	47	40	36	46	40	36	45	40	35	45	39	35	34

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7282	7282	7282
5°	7208	7180	7180
10°	7153	6946	6816
15°	7068	6611	6303
20°	6955	6190	5649
25°	6815	5692	4907
30°	6670	5128	4134
35°	6498	4527	3402
40°	6310	3885	2681
45°	6117	3231	2004
50°	5906	2542	1466
55°	5674	1879	1170
60°	5423	1301	895
65°	5100	1010	657
70°	4619	713	514
75°	4034	499	393
80°	3238	392	351
85°	1785	314	314

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6117 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.4	5.7
10°-20°	204.1	15.3
20°-30°	272.2	20.4
30°-40°	274.1	20.6
40°-50°	224.8	16.9
50°-60°	153.7	11.5
60°-70°	85.9	6.4
70°-80°	34.0	2.6
80°-90°	6.5	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°	552.7	41.5
0°-40°	826.9	62.1
0°-60°	1205.3	90.5
0°-90°	1331.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1331.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	824	824	824	824	824	
5°	812	821	809	805	809	77
15°	772	764	722	697	689	218
25°	699	664	584	524	503	322
35°	602	538	419	340	315	376
45°	489	400	258	182	160	377
55°	368	258	122	81	76	329
65°	244	123	48	34	31	241
75°	118	32	15	12	12	127
85°	18	3	3	3	3	25
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	823.6	823.6	823.6	823.6	823.6
2.5°	815.9	825.9	819.0	819.7	821.3
5°	812.1	821.3	809.0	805.2	809.0
7.5°	805.2	812.1	793.7	786.0	787.5
10°	796.7	799.0	773.7	760.7	759.2
12.5°	786.0	782.9	749.9	730.8	726.2
15°	772.2	763.8	722.3	697.0	688.6
17.5°	756.1	741.5	691.7	658.7	646.4
20°	739.2	717.7	657.9	615.8	600.4
22.5°	719.3	692.4	621.9	570.5	552.9
25°	698.6	664.1	583.5	524.5	503.0
27.5°	677.1	634.9	543.7	477.7	456.3
30°	653.3	603.5	502.3	431.0	404.9
32.5°	628.0	571.3	460.9	384.9	360.4
35°	602.0	538.3	419.4	339.7	315.2
37.5°	575.1	504.6	378.0	296.8	272.2
40°	546.7	470.1	336.6	256.1	232.3
42.5°	517.6	434.8	296.8	217.8	195.5
45°	489.2	399.5	258.4	181.7	160.3
47.5°	459.3	364.2	220.8	148.0	129.6
50°	429.4	329.0	184.8	118.9	106.6
52.5°	398.7	293.7	151.8	97.4	89.0
55°	368.1	258.4	121.9	81.3	75.9
57.5°	337.4	223.1	94.3	69.0	62.9
60°	306.7	188.6	73.6	56.0	50.6
62.5°	275.3	154.1	60.6	44.5	39.9
65°	243.8	122.7	48.3	34.5	31.4
67.5°	212.4	93.6	36.8	26.8	24.5
70°	178.7	66.7	27.6	20.7	19.9
72.5°	149.5	45.2	19.9	16.1	15.3
75°	118.1	32.2	14.6	12.3	11.5
77.5°	91.3	20.7	10.7	10.0	9.2
80°	63.6	11.5	7.7	6.9	6.9
82.5°	39.1	6.1	5.4	4.6	4.6
85°	17.6	3.1	3.1	3.1	3.1
87.5°	3.1	1.5	1.5	1.5	1.5
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	17.62	19.03	17.99	19.34	19.66	8.71	10.12	9.08	10.43	10.75
	3H	19.21	20.46	19.59	20.79	21.15	9.30	10.55	9.68	10.88	11.25
	4H	19.80	20.97	20.20	21.32	21.70	9.46	10.63	9.86	10.98	11.36
	6H	20.23	21.31	20.65	21.68	22.07	9.57	10.64	9.98	11.01	11.40
	8H	20.35	21.37	20.78	21.76	22.16	9.59	10.61	10.01	11.00	11.40
	12H	20.39	21.37	20.82	21.75	22.18	9.59	10.57	10.03	10.95	11.38
4H	2H	17.47	18.64	17.88	18.99	19.37	9.29	10.46	9.70	10.81	11.19
	3H	19.12	20.08	19.53	20.48	20.89	10.01	10.96	10.42	11.37	11.77
	4H	19.73	20.59	20.16	21.00	21.45	10.21	11.07	10.64	11.49	11.93
	6H	20.22	20.96	20.68	21.41	21.87	10.38	11.12	10.84	11.56	12.03
	8H	20.36	21.06	20.83	21.50	21.97	10.41	11.10	10.88	11.55	12.02
	12H	20.44	21.05	20.92	21.53	22.00	10.44	11.05	10.92	11.53	12.00
8H	4H	19.62	20.31	20.09	20.76	21.23	10.48	11.17	10.95	11.62	12.09
	6H	20.10	20.67	20.60	21.16	21.64	10.69	11.25	11.19	11.75	12.23
	8H	20.25	20.76	20.77	21.27	21.76	10.74	11.25	11.26	11.76	12.26
	12H	20.34	20.79	20.85	21.28	21.85	10.80	11.25	11.32	11.75	12.32
12H	4H	19.58	20.20	20.07	20.68	21.15	10.51	11.12	10.99	11.60	12.08
	6H	20.05	20.56	20.57	21.07	21.56	10.71	11.22	11.23	11.74	12.23
	8H	20.21	20.66	20.73	21.15	21.72	10.81	11.26	11.32	11.75	12.32