

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: P1056186

Luminaire Tested: S124R3DR-H575D930-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056186
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-7)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124R3DR-H575D930-X4F0-XX-UDD-F-W
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

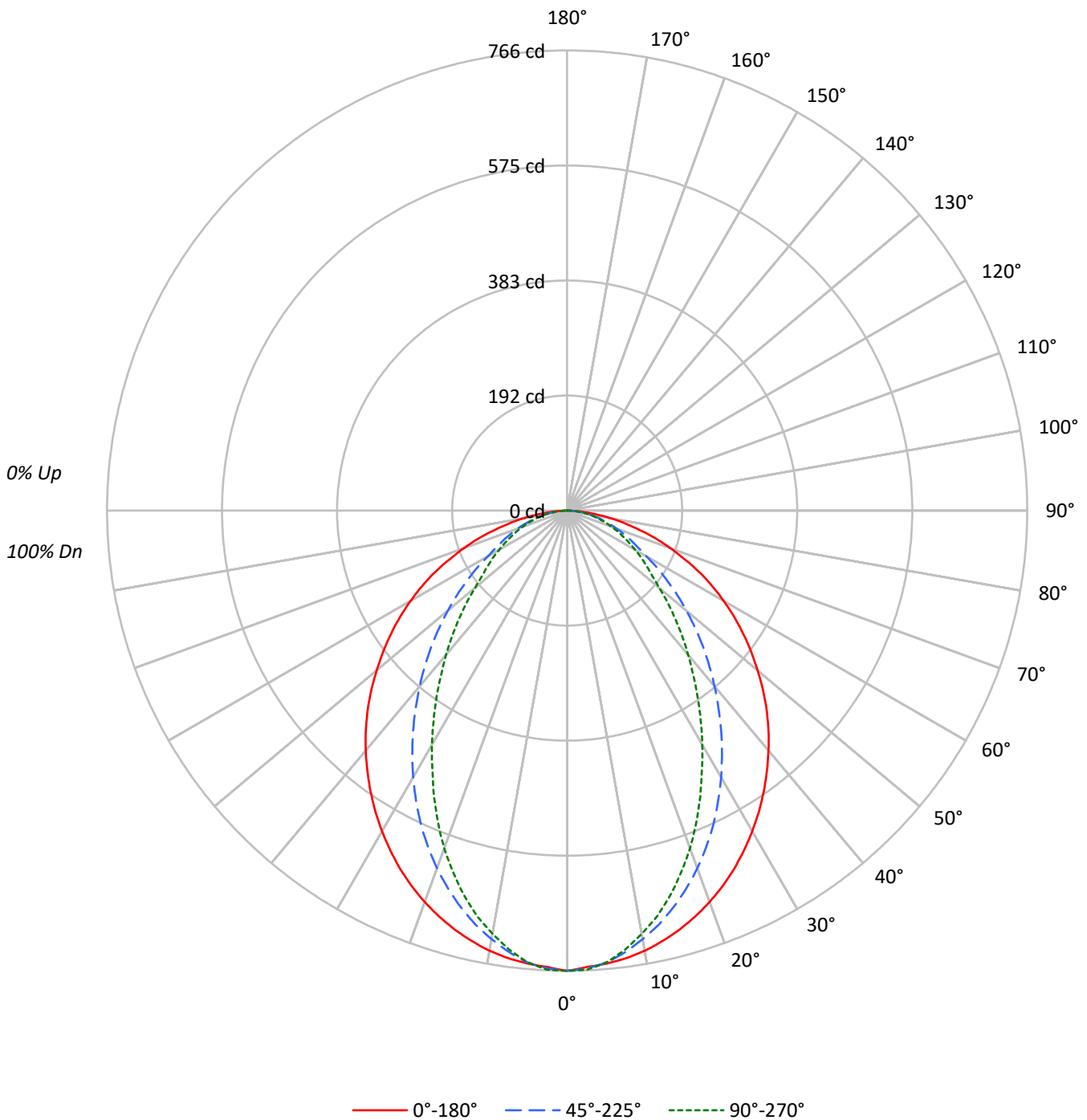
Lumens per Lamp: N/A
Luminaire Lumens: 1525.9 lumens
Efficiency: N/A
Efficacy: 88.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 17.3
Input Voltage (V): 120
Input Current (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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	102	98	107	103	100	97	99	96	93	95	93	91	92	90	88	86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	76	73
3	93	83	75	69	90	81	74	69	79	73	68	76	71	67	73	69	65	63
4	85	74	66	60	83	73	65	60	71	64	59	68	63	58	66	61	57	55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49
6	73	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	39
8	64	51	43	38	62	51	43	38	49	42	37	48	42	37	47	41	37	35
9	60	47	39	34	59	47	39	34	46	39	34	45	38	34	44	38	34	32
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6773	6773	6773
5°	6719	6704	6699
10°	6680	6503	6423
15°	6610	6259	6069
20°	6524	5961	5627
25°	6418	5620	5115
30°	6291	5231	4593
35°	6158	4825	4089
40°	6019	4405	3617
45°	5872	3996	3178
50°	5692	3567	2745
55°	5518	3137	2494
60°	5323	2691	2313
65°	5084	2441	2159
70°	4723	2259	2040
75°	4277	2080	1927
80°	3732	1925	1807
85°	2861	1775	1654

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5872 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.3	4.7
10°-20°	193.5	12.7
20°-30°	267.9	17.6
30°-40°	287.5	18.8
40°-50°	261.5	17.1
50°-60°	205.9	13.5
60°-70°	140.9	9.2
70°-80°	75.9	5.0
80°-90°	21.5	1.4
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°	532.7	34.9
0°-40°	820.2	53.8
0°-60°	1287.6	84.4
0°-90°	1525.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1525.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	766	766	766	766	766	
5°	757	766	755	752	755	72
15°	722	714	684	665	663	204
25°	658	631	576	534	524	303
35°	570	526	447	393	379	357
45°	470	410	320	264	254	362
55°	358	290	204	164	162	320
65°	243	174	117	104	103	240
75°	125	76	61	56	56	134
85°	28	19	18	16	16	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	766.1	766.1	766.1	766.1	766.1
2.5°	760.5	769.5	762.7	763.9	765.0
5°	757.1	765.6	755.4	751.5	754.8
7.5°	751.5	757.1	741.3	734.0	737.4
10°	744.1	745.3	724.4	713.7	715.4
12.5°	734.0	731.2	705.8	690.6	691.7
15°	722.2	714.3	683.8	665.2	663.0
17.5°	708.6	695.7	659.6	635.9	631.4
20°	693.4	675.9	633.6	603.2	598.1
22.5°	676.5	653.9	605.5	569.4	562.0
25°	657.9	630.8	576.1	534.4	524.3
27.5°	637.6	606.0	544.6	498.9	485.9
30°	616.2	580.1	512.4	463.4	449.9
32.5°	594.2	553.6	479.7	427.9	413.8
35°	570.5	526.0	447.0	392.9	378.8
37.5°	546.3	497.2	413.8	359.1	344.4
40°	521.5	468.5	381.7	325.3	313.4
42.5°	496.1	439.2	350.1	293.7	283.0
45°	469.6	409.8	319.6	264.4	254.2
47.5°	442.5	380.0	288.6	236.8	227.2
50°	413.8	350.1	259.3	209.7	199.6
52.5°	386.2	319.6	231.1	183.2	178.1
55°	358.0	289.8	203.5	164.0	161.8
57.5°	329.8	259.9	178.1	148.8	146.6
60°	301.0	230.6	152.2	133.0	130.8
62.5°	272.3	201.8	133.0	117.8	116.7
65°	243.0	173.6	116.7	103.7	103.2
67.5°	212.0	146.6	102.0	91.3	90.8
70°	182.7	119.5	87.4	78.9	78.9
72.5°	155.0	94.7	73.8	67.1	67.1
75°	125.2	76.1	60.9	55.8	56.4
77.5°	98.7	59.8	49.0	45.7	45.7
80°	73.3	44.5	37.8	35.0	35.5
82.5°	49.6	31.0	27.1	25.4	25.4
85°	28.2	19.2	17.5	16.3	16.3
87.5°	10.1	9.0	8.5	7.3	7.9
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	17.79	19.31	18.15	19.63	19.94	13.56	15.09	13.93	15.40	15.72
	3H	19.56	20.93	19.94	21.26	21.62	15.18	16.55	15.55	16.87	17.24
	4H	20.24	21.52	20.64	21.87	22.25	15.81	17.09	16.21	17.44	17.82
	6H	20.75	21.93	21.16	22.30	22.69	16.31	17.50	16.72	17.86	18.25
	8H	20.91	22.04	21.33	22.43	22.83	16.48	17.61	16.91	18.00	18.40
	12H	21.01	22.09	21.44	22.47	22.90	16.60	17.68	17.03	18.07	18.50
4H	2H	17.88	19.17	18.28	19.52	19.90	14.28	15.57	14.68	15.92	16.30
	3H	19.83	20.90	20.24	21.30	21.70	16.09	17.16	16.50	17.56	17.96
	4H	20.58	21.55	21.02	21.96	22.40	16.83	17.79	17.26	18.21	18.65
	6H	21.22	22.06	21.68	22.50	22.96	17.45	18.28	17.90	18.73	19.19
	8H	21.44	22.22	21.90	22.67	23.13	17.66	18.45	18.12	18.89	19.36
	12H	21.59	22.30	22.08	22.77	23.24	17.83	18.53	18.31	19.01	19.48
8H	4H	20.64	21.43	21.10	21.87	22.34	17.22	18.00	17.68	18.45	18.91
	6H	21.34	21.99	21.84	22.48	22.96	17.95	18.60	18.45	19.09	19.57
	8H	21.61	22.19	22.12	22.70	23.19	18.24	18.82	18.75	19.33	19.82
	12H	21.83	22.34	22.34	22.83	23.40	18.48	19.00	18.99	19.49	20.05
12H	4H	20.63	21.33	21.12	21.81	22.28	17.27	17.97	17.75	18.45	18.92
	6H	21.33	21.92	21.85	22.43	22.91	18.03	18.62	18.55	19.13	19.61
	8H	21.64	22.16	22.15	22.65	23.21	18.38	18.90	18.89	19.39	19.95