

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: P1056580

Luminaire Tested: S125R3DR-H610D840-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056580
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-11)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S125R3DR-H610D840-X4F0-XX-UDD-F-B
Description: DEFINE 5, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

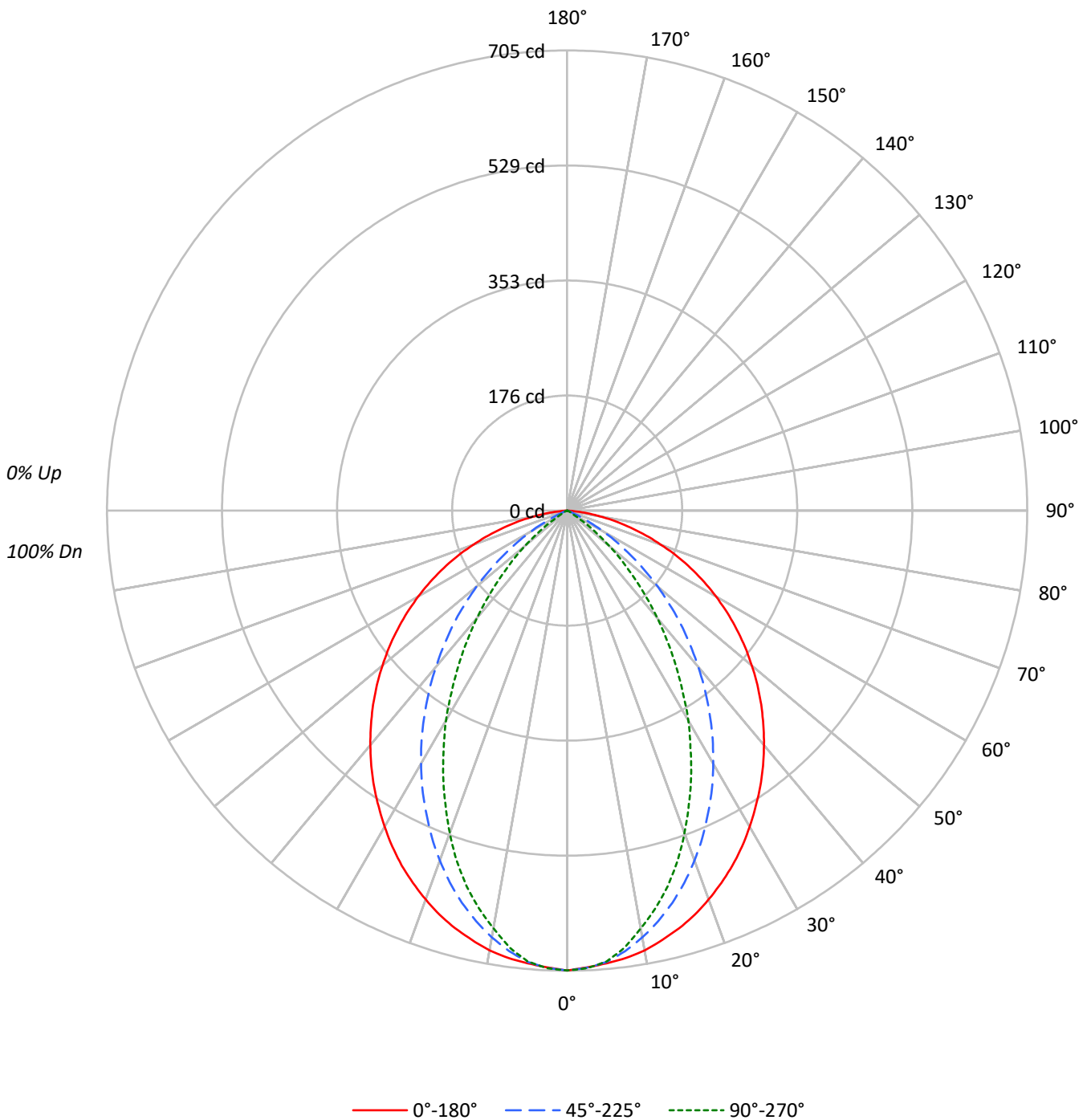
Lumens per Lamp: N/A
Luminaire Lumens: 1142.0 lumens
Efficiency: N/A
Efficacy: 66.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.89 / 1.07
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')
CIE Type: Direct

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	108	104	101	109	106	103	100	101	99	97	98	96	94	94	93	91	89
2	103	97	91	87	101	95	90	86	92	88	84	89	85	82	86	83	80	78
3	96	87	81	75	94	86	80	75	83	78	74	80	76	72	78	74	71	69
4	89	79	72	66	87	78	71	66	76	70	65	73	68	64	71	67	63	61
5	83	72	64	59	81	71	64	58	69	63	58	67	62	57	65	61	57	55
6	77	66	58	53	76	65	58	52	63	57	52	62	56	52	60	55	51	49
7	72	61	53	47	71	60	52	47	58	52	47	57	51	47	56	50	46	45
8	68	56	48	43	66	55	48	43	54	47	43	53	47	43	52	46	42	41
9	64	52	44	39	62	51	44	39	50	44	39	49	43	39	48	43	39	37
10	60	48	41	36	59	48	41	36	47	40	36	46	40	36	45	40	36	34

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4981	4981	4981
5°	4940	4926	4921
10°	4912	4767	4667
15°	4850	4554	4359
20°	4770	4292	3956
25°	4679	3987	3508
30°	4566	3654	3033
35°	4453	3285	2507
40°	4330	2887	1985
45°	4203	2464	1438
50°	4063	1990	929
55°	3907	1454	413
60°	3721	898	119
65°	3493	328	70
70°	3160	116	29
75°	2748	38	19
80°	2105	28	0
85°	965	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4203 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.4	5.7
10°-20°	175.7	15.4
20°-30°	237.7	20.8
30°-40°	244.2	21.4
40°-50°	202.3	17.7
50°-60°	129.9	11.4
60°-70°	62.7	5.5
70°-80°	21.2	1.9
80°-90°	2.7	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°	478.9	41.9
0°-40°	723.1	63.3
0°-60°	1055.3	92.4
0°-90°	1142.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1142.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	705	705	705	705	705	
5°	696	702	694	690	693	66
15°	663	654	622	600	596	187
25°	600	570	511	465	450	276
35°	516	466	381	314	290	323
45°	420	351	246	170	144	324
55°	317	232	118	52	34	283
65°	209	115	20	6	4	207
75°	101	22	1	1	1	107
85°	12	0	0	0	0	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	704.6	704.6	704.6	704.6	704.6
2.5°	700.4	706.0	701.1	700.4	701.8
5°	696.2	701.8	694.1	689.9	693.4
7.5°	691.3	694.1	680.8	673.8	675.2
10°	684.3	683.6	664.1	652.2	650.1
12.5°	673.8	670.3	644.5	627.7	624.3
15°	662.7	654.3	622.2	600.5	595.6
17.5°	649.4	636.1	597.7	569.8	562.8
20°	634.0	615.9	570.5	536.3	525.8
22.5°	617.3	594.2	541.9	501.4	487.4
25°	599.8	570.5	511.1	465.1	449.7
27.5°	580.3	546.1	480.4	428.0	409.2
30°	559.3	520.2	447.6	390.3	371.5
32.5°	537.7	494.4	414.8	352.6	329.6
35°	516.0	466.4	380.6	314.2	290.5
37.5°	493.0	438.5	347.0	277.9	252.1
40°	469.2	409.9	312.8	240.2	215.1
42.5°	444.8	380.6	278.6	204.6	178.8
45°	420.4	351.2	246.5	170.4	143.8
47.5°	395.2	321.2	213.0	136.9	113.8
50°	369.4	291.9	180.9	106.8	84.5
52.5°	343.6	261.9	148.0	77.5	57.3
55°	317.0	232.5	118.0	51.7	33.5
57.5°	290.5	202.5	90.1	28.6	12.6
60°	263.2	173.9	63.5	9.8	8.4
62.5°	236.7	143.1	39.8	7.7	6.3
65°	208.8	115.2	19.6	5.6	4.2
67.5°	181.6	88.7	8.4	3.5	2.1
70°	152.9	64.2	5.6	2.1	1.4
72.5°	126.4	41.2	3.5	1.4	0.7
75°	100.6	21.6	1.4	0.7	0.7
77.5°	75.4	9.1	0.7	0.7	0.7
80°	51.7	4.2	0.7	0.7	0.0
82.5°	30.7	1.4	0.7	0.7	0.0
85°	11.9	0.0	0.0	0.0	0.0
87.5°	0.7	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	16.65	18.03	17.01	18.34	18.66	1.51	2.89	1.87	3.21	3.52
	3H	18.20	19.42	18.58	19.75	20.12	1.43	2.66	1.81	2.99	3.35
	4H	18.72	19.86	19.12	20.21	20.60	1.36	2.51	1.77	2.86	3.24
	6H	19.06	20.11	19.47	20.48	20.87	1.29	2.35	1.71	2.71	3.11
	8H	19.14	20.14	19.57	20.53	20.93	1.25	2.25	1.68	2.64	3.04
	12H	19.16	20.11	19.59	20.49	20.92	1.21	2.17	1.64	2.55	2.98
4H	2H	16.45	17.59	16.85	17.94	18.33	2.38	3.52	2.78	3.87	4.25
	3H	18.06	19.00	18.48	19.40	19.80	2.33	3.26	2.74	3.66	4.07
	4H	18.59	19.42	19.02	19.84	20.28	2.25	3.08	2.68	3.50	3.94
	6H	18.96	19.68	19.42	20.13	20.59	2.18	2.90	2.64	3.35	3.81
	8H	19.06	19.73	19.53	20.18	20.65	2.13	2.80	2.60	3.25	3.72
	12H	19.10	19.69	19.58	20.17	20.64	2.09	2.68	2.57	3.17	3.64
8H	4H	18.46	19.13	18.93	19.58	20.05	3.27	3.94	3.74	4.39	4.86
	6H	18.81	19.36	19.32	19.86	20.34	3.19	3.73	3.69	4.23	4.71
	8H	18.91	19.40	19.43	19.92	20.41	3.13	3.63	3.65	4.14	4.63
	12H	18.95	19.39	19.47	19.88	20.45	3.09	3.53	3.61	4.02	4.59
12H	4H	18.42	19.01	18.90	19.49	19.97	3.35	3.94	3.83	4.42	4.90
	6H	18.75	19.25	19.27	19.76	20.25	3.25	3.74	3.77	4.26	4.75
	8H	18.87	19.30	19.38	19.80	20.37	3.22	3.65	3.73	4.15	4.72