

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: P1056466

Luminaire Tested: S125R3DR-S850D830-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056466
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-S850D830-X4F0-XX-UDD-F-B
Description: DEFINE 5, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

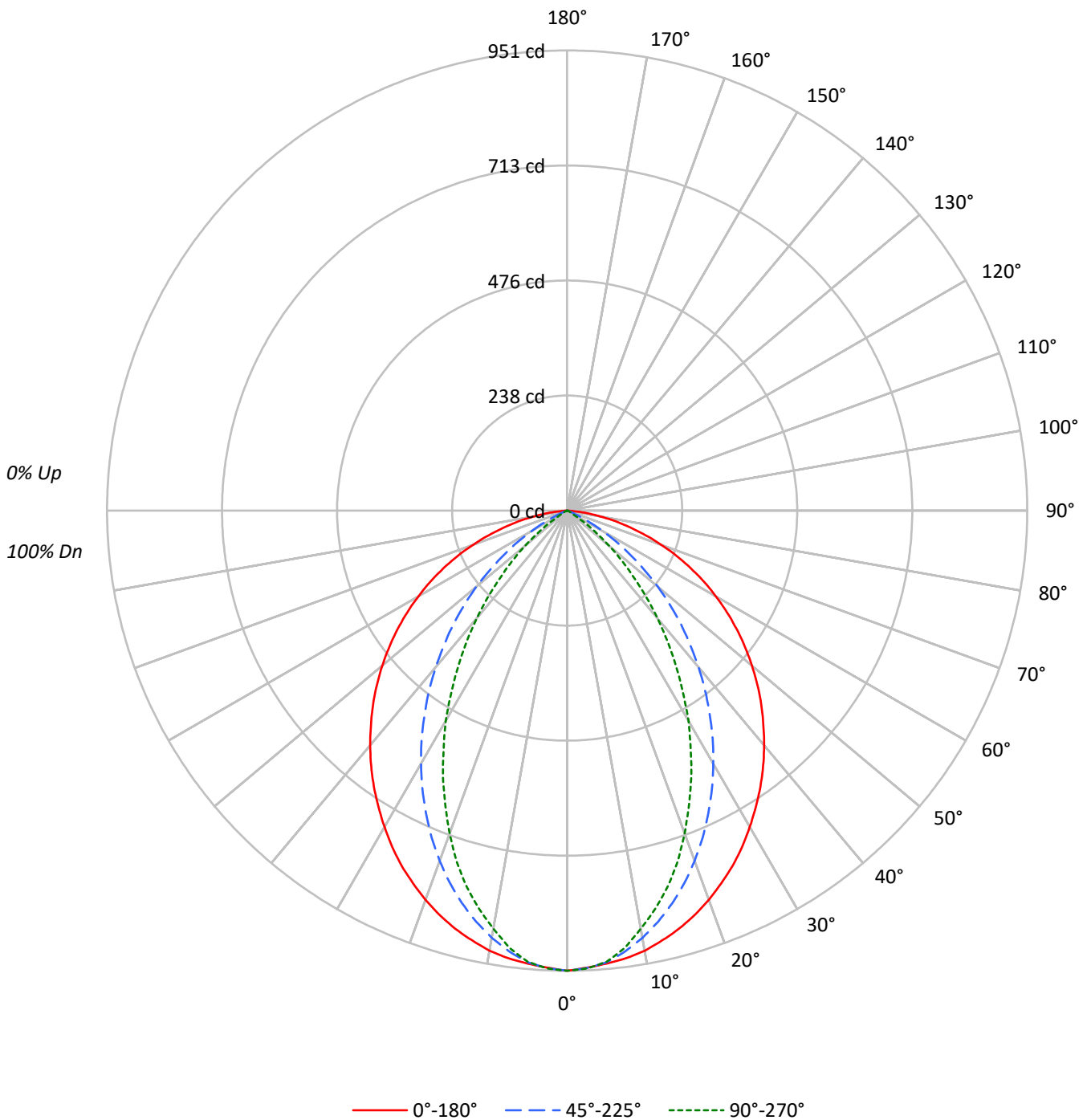
Lumens per Lamp: N/A
Luminaire Lumens: 1541.4 lumens
Efficiency: N/A
Efficacy: 58.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.89 / 1.07
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 26.4
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	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	108	104	101	109	106	103	100	101	99	97	98	96	94	94	93	91	89					89			
2	103	97	91	87	101	95	90	86	92	88	84	89	85	82	86	83	80	78					78			
3	96	87	81	75	94	86	80	75	83	78	74	80	76	72	78	74	71	69					69			
4	89	79	72	66	87	78	71	66	76	70	65	73	68	64	71	67	63	61					61			
5	83	72	64	59	81	71	64	58	69	63	58	67	62	57	65	61	57	55					55			
6	77	66	58	53	76	65	58	52	63	57	52	62	56	52	60	55	51	49					49			
7	72	61	53	47	71	60	52	47	58	52	47	57	51	47	56	50	46	45					45			
8	68	56	48	43	66	55	48	43	54	47	43	53	47	43	52	46	42	41					41			
9	64	52	44	39	62	51	44	39	50	44	39	49	43	39	48	43	39	37					37			
10	60	48	41	36	59	48	41	36	47	40	36	46	40	36	45	40	36	34					34			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6723	6723	6723
5°	6668	6649	6641
10°	6631	6435	6299
15°	6547	6146	5884
20°	6438	5793	5339
25°	6315	5381	4735
30°	6163	4932	4093
35°	6011	4433	3384
40°	5845	3897	2679
45°	5673	3326	1942
50°	5484	2685	1254
55°	5274	1963	557
60°	5023	1213	160
65°	4714	442	95
70°	4266	155	39
75°	3706	52	25
80°	2838	37	0
85°	1298	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5673 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.3	5.7
10°-20°	237.2	15.4
20°-30°	320.9	20.8
30°-40°	329.6	21.4
40°-50°	273.1	17.7
50°-60°	175.3	11.4
60°-70°	84.7	5.5
70°-80°	28.6	1.9
80°-90°	3.7	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°	646.4	41.9
0°-40°	976.0	63.3
0°-60°	1424.4	92.4
0°-90°	1541.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1541.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	951	951	951	951	951	
5°	940	947	937	931	936	89
15°	894	883	840	811	804	252
25°	810	770	690	628	607	373
35°	696	630	514	424	392	435
45°	567	474	333	230	194	438
55°	428	314	159	70	45	382
65°	282	156	26	8	6	279
75°	136	29	2	1	1	144
85°	16	0	0	0	0	25
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	951.0	951.0	951.0	951.0	951.0
2.5°	945.4	952.9	946.3	945.4	947.3
5°	939.7	947.3	936.9	931.2	935.9
7.5°	933.1	936.9	919.0	909.6	911.4
10°	923.7	922.8	896.4	880.3	877.5
12.5°	909.6	904.8	870.0	847.3	842.6
15°	894.5	883.2	839.8	810.6	804.0
17.5°	876.6	858.7	806.8	769.1	759.7
20°	855.8	831.3	770.1	723.9	709.7
22.5°	833.2	802.1	731.4	676.7	657.9
25°	809.6	770.1	689.9	627.7	607.0
27.5°	783.3	737.1	648.5	577.8	552.3
30°	755.0	702.2	604.2	526.9	501.4
32.5°	725.8	667.3	559.9	476.0	444.9
35°	696.5	629.6	513.7	424.1	392.1
37.5°	665.4	591.9	468.4	375.1	340.3
40°	633.4	553.3	422.3	324.2	290.3
42.5°	600.4	513.7	376.1	276.2	241.3
45°	567.4	474.1	332.7	230.0	194.2
47.5°	533.5	433.6	287.5	184.7	153.6
50°	498.6	394.0	244.1	144.2	114.0
52.5°	463.7	353.5	199.8	104.6	77.3
55°	427.9	313.9	159.3	69.7	45.2
57.5°	392.1	273.3	121.6	38.6	17.0
60°	355.3	234.7	85.8	13.2	11.3
62.5°	319.5	193.2	53.7	10.4	8.5
65°	281.8	155.5	26.4	7.5	5.7
67.5°	245.1	119.7	11.3	4.7	2.8
70°	206.4	86.7	7.5	2.8	1.9
72.5°	170.6	55.6	4.7	1.9	0.9
75°	135.7	29.2	1.9	0.9	0.9
77.5°	101.8	12.3	0.9	0.9	0.9
80°	69.7	5.7	0.9	0.9	0.0
82.5°	41.5	1.9	0.9	0.9	0.0
85°	16.0	0.0	0.0	0.0	0.0
87.5°	0.9	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	17.69	19.07	18.05	19.39	19.70	2.55	3.93	2.91	4.25	4.56
	3H	19.24	20.47	19.62	20.80	21.16	2.47	3.70	2.85	4.03	4.39
	4H	19.76	20.91	20.16	21.26	21.64	2.40	3.55	2.80	3.90	4.28
	6H	20.10	21.15	20.51	21.52	21.91	2.33	3.38	2.75	3.75	4.15
	8H	20.18	21.18	20.61	21.57	21.97	2.29	3.29	2.72	3.68	4.08
	12H	20.20	21.15	20.63	21.53	21.96	2.25	3.20	2.68	3.59	4.02
4H	2H	17.49	18.64	17.89	18.99	19.37	3.41	4.56	3.82	4.91	5.29
	3H	19.11	20.04	19.52	20.44	20.85	3.36	4.30	3.77	4.70	5.10
	4H	19.63	20.46	20.06	20.88	21.32	3.28	4.12	3.72	4.54	4.98
	6H	20.00	20.72	20.46	21.17	21.63	3.22	3.94	3.68	4.38	4.85
	8H	20.10	20.77	20.57	21.22	21.69	3.17	3.84	3.63	4.28	4.75
	12H	20.14	20.73	20.62	21.21	21.69	3.12	3.72	3.61	4.20	4.67
8H	4H	19.50	20.17	19.97	20.62	21.09	4.31	4.98	4.77	5.42	5.89
	6H	19.86	20.40	20.36	20.90	21.38	4.22	4.77	4.72	5.27	5.75
	8H	19.95	20.44	20.47	20.96	21.45	4.17	4.66	4.69	5.18	5.67
	12H	19.99	20.43	20.51	20.92	21.49	4.13	4.56	4.64	5.06	5.63
12H	4H	19.46	20.05	19.94	20.53	21.01	4.39	4.98	4.87	5.46	5.93
	6H	19.80	20.29	20.32	20.80	21.29	4.29	4.78	4.81	5.29	5.78
	8H	19.91	20.34	20.42	20.84	21.41	4.25	4.69	4.77	5.18	5.75