

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1056622

Luminaire Tested: S125R3DR-H850D940-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1056622  
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-H850D940-X4F0-XX-UDD-FLL-B  
Description: DEFINE 5, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

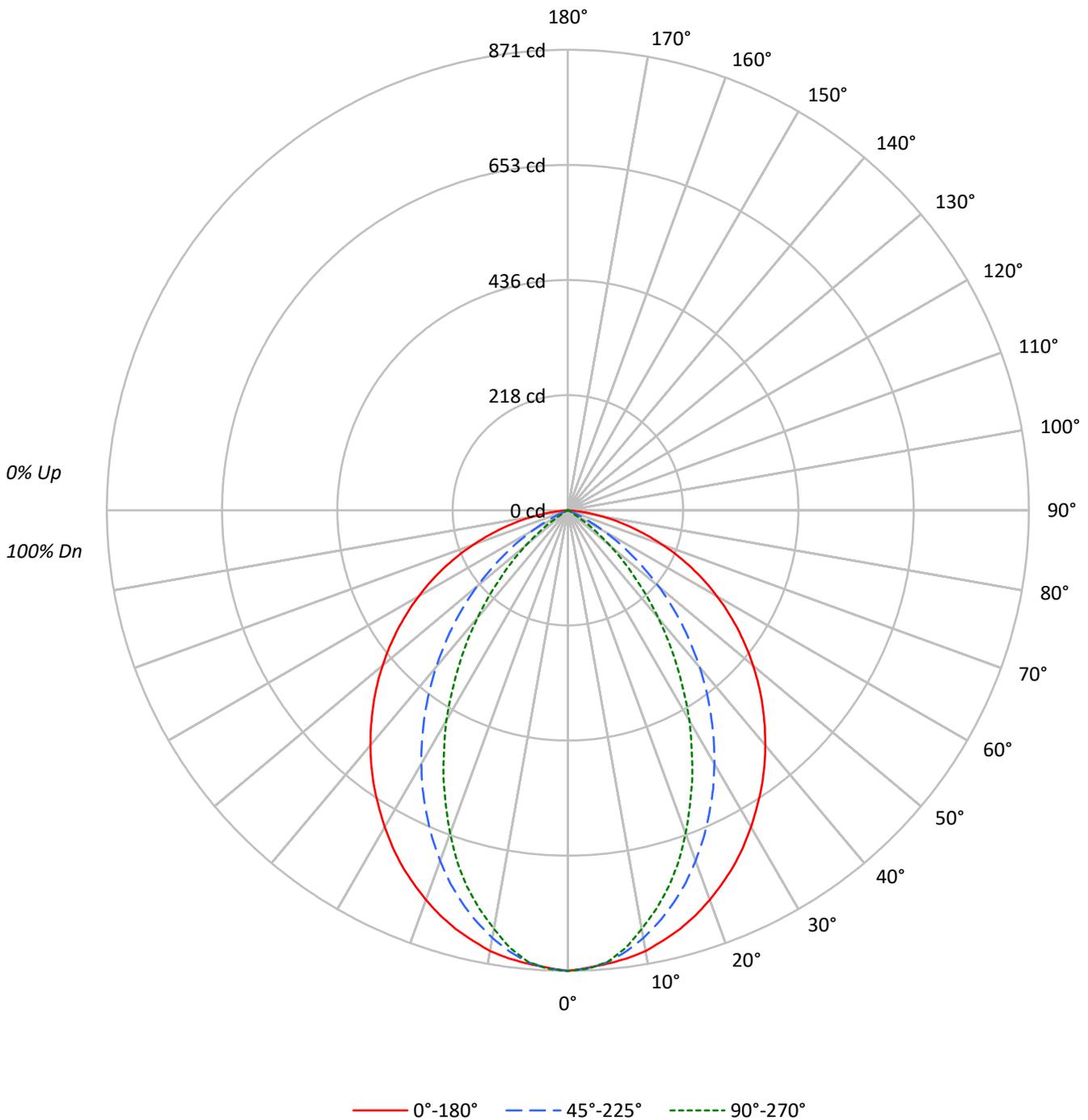
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1412.2 lumens  
Efficiency: N/A  
Efficacy: 59.3 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): 23.8  
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	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°	6160	6160	6160
5°	6109	6091	6085
10°	6074	5895	5771
15°	5998	5631	5391
20°	5899	5307	4891
25°	5786	4930	4338
30°	5646	4518	3750
35°	5507	4061	3100
40°	5355	3570	2455
45°	5197	3047	1779
50°	5024	2459	1149
55°	4831	1798	510
60°	4602	1111	147
65°	4319	405	87
70°	3909	143	35
75°	3395	46	25
80°	2601	37	0
85°	1192	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5197 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	80.9	5.7
10°-20°	217.3	15.4
20°-30°	294.0	20.8
30°-40°	302.0	21.4
40°-50°	250.2	17.7
50°-60°	160.6	11.4
60°-70°	77.6	5.5
70°-80°	26.3	1.9
80°-90°	3.4	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°	592.2	41.9
0°-40°	894.2	63.3
0°-60°	1305.0	92.4
0°-90°	1412.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1412.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	871	871	871	871	871	
5°	861	868	858	853	858	82
15°	820	809	769	743	737	231
25°	742	706	632	575	556	341
35°	638	577	471	389	359	399
45°	520	434	305	211	178	401
55°	392	288	146	64	41	350
65°	258	142	24	7	5	255
75°	124	27	2	1	1	132
85°	15	0	0	0	0	23
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	871.3	871.3	871.3	871.3	871.3
2.5°	866.1	873.0	867.0	866.1	867.8
5°	860.9	867.8	858.3	853.1	857.5
7.5°	854.9	858.3	841.9	833.3	835.0
10°	846.2	845.4	821.2	806.5	803.9
12.5°	833.3	829.0	797.0	776.3	772.0
15°	819.5	809.1	769.4	742.6	736.6
17.5°	803.1	786.7	739.2	704.6	696.0
20°	784.1	761.6	705.5	663.2	650.2
22.5°	763.3	734.8	670.1	620.0	602.7
25°	741.8	705.5	632.1	575.1	556.1
27.5°	717.6	675.3	594.1	529.3	506.0
30°	691.7	643.3	553.5	482.7	459.4
32.5°	664.9	611.4	512.9	436.1	407.6
35°	638.1	576.8	470.6	388.6	359.2
37.5°	609.6	542.3	429.2	343.7	311.7
40°	580.3	506.9	386.9	297.0	266.0
42.5°	550.1	470.6	344.5	253.0	221.1
45°	519.8	434.3	304.8	210.7	177.9
47.5°	488.7	397.2	263.4	169.2	140.8
50°	456.8	360.9	223.6	132.1	104.5
52.5°	424.8	323.8	183.1	95.8	70.8
55°	392.0	287.5	145.9	63.9	41.4
57.5°	359.2	250.4	111.4	35.4	15.5
60°	325.5	215.0	78.6	12.1	10.4
62.5°	292.7	177.0	49.2	9.5	7.8
65°	258.2	142.5	24.2	6.9	5.2
67.5°	224.5	109.7	10.4	4.3	2.6
70°	189.1	79.4	6.9	2.6	1.7
72.5°	156.3	50.9	4.3	1.7	0.9
75°	124.3	26.8	1.7	0.9	0.9
77.5°	93.3	11.2	0.9	0.9	0.9
80°	63.9	5.2	0.9	0.9	0.0
82.5°	38.0	1.7	0.9	0.9	0.0
85°	14.7	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	17.38	18.77	17.75	19.08	19.40	2.25	3.63	2.61	3.95	4.26
	3H	18.93	20.16	19.31	20.49	20.86	2.17	3.40	2.55	3.73	4.09
	4H	19.46	20.60	19.86	20.95	21.33	2.10	3.25	2.51	3.60	3.98
	6H	19.80	20.85	20.21	21.22	21.61	2.03	3.09	2.45	3.46	3.85
	8H	19.88	20.87	20.31	21.27	21.67	1.99	2.99	2.42	3.38	3.78
	12H	19.89	20.85	20.33	21.23	21.66	1.95	2.91	2.39	3.29	3.72
4H	2H	17.19	18.33	17.59	18.68	19.06	3.11	4.26	3.51	4.61	4.99
	3H	18.80	19.74	19.21	20.14	20.54	3.06	4.00	3.47	4.40	4.80
	4H	19.32	20.16	19.76	20.58	21.02	2.98	3.82	3.42	4.24	4.68
	6H	19.70	20.42	20.16	20.86	21.33	2.92	3.64	3.38	4.08	4.55
	8H	19.80	20.47	20.27	20.91	21.39	2.87	3.54	3.34	3.99	4.46
	12H	19.83	20.43	20.32	20.91	21.38	2.83	3.42	3.31	3.90	4.38
8H	4H	19.20	19.87	19.66	20.31	20.78	4.01	4.68	4.47	5.12	5.59
	6H	19.55	20.10	20.05	20.60	21.08	3.92	4.47	4.43	4.97	5.45
	8H	19.65	20.14	20.17	20.65	21.14	3.87	4.36	4.39	4.88	5.37
	12H	19.69	20.12	20.20	20.62	21.19	3.83	4.27	4.35	4.76	5.33
12H	4H	19.15	19.75	19.64	20.23	20.70	4.08	4.68	4.57	5.16	5.63
	6H	19.49	19.98	20.01	20.50	20.99	3.99	4.48	4.51	4.99	5.49
	8H	19.60	20.04	20.12	20.53	21.10	3.96	4.39	4.47	4.89	5.46