

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: P1056607

Luminaire Tested: S125R3DR-H850D840-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1056607  
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-H850D840-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, 80 CRI LEDS  
Ballast/Driver: -

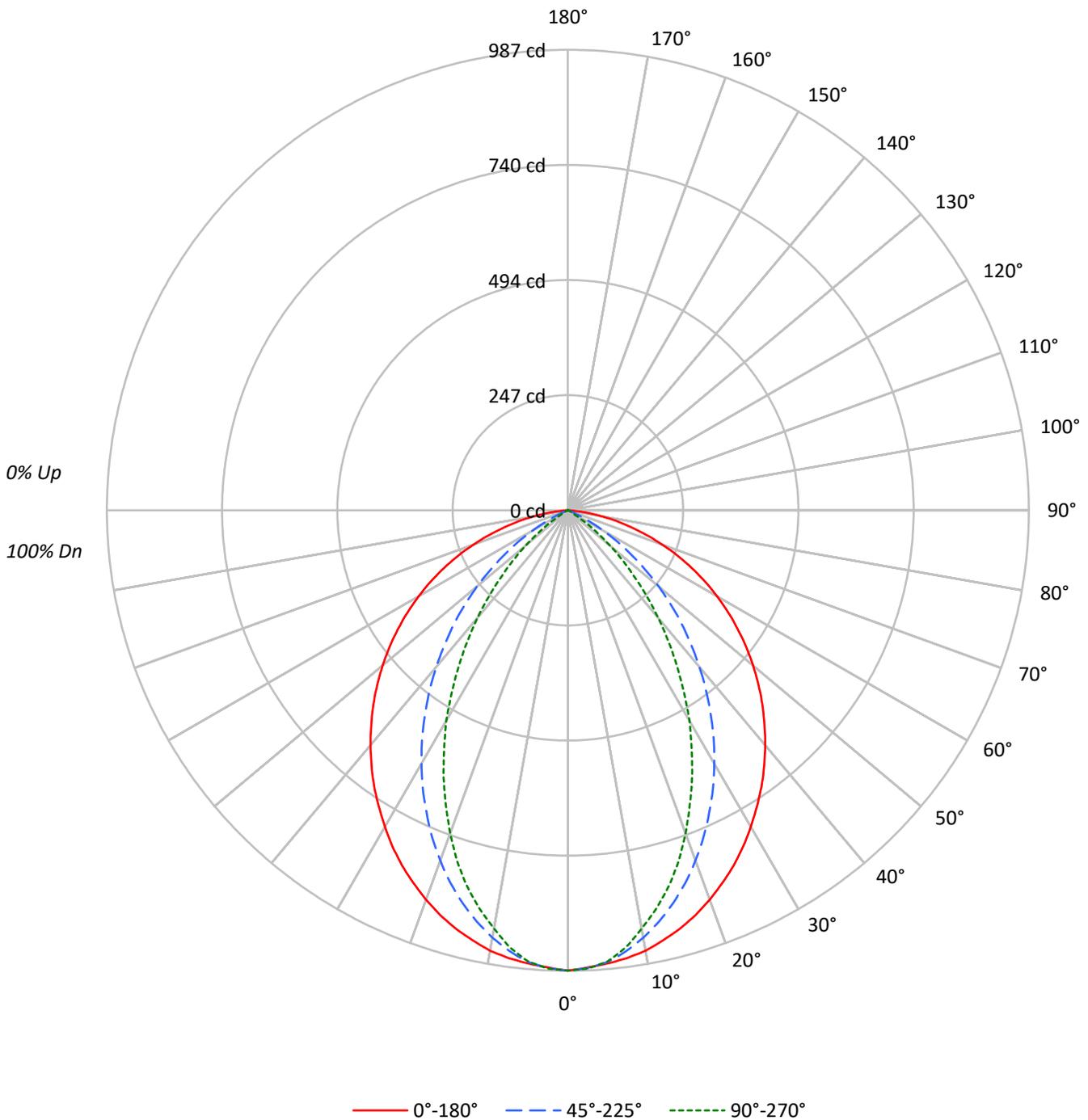
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1599.4 lumens  
Efficiency: N/A  
Efficacy: 67.2 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 (A<sub>in</sub>): 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°	6975	6975	6975
5°	6919	6898	6891
10°	6880	6676	6535
15°	6793	6377	6105
20°	6680	6011	5540
25°	6552	5583	4913
30°	6394	5117	4247
35°	6237	4600	3511
40°	6065	4043	2780
45°	5886	3451	2015
50°	5689	2786	1301
55°	5472	2037	578
60°	5213	1258	165
65°	4891	458	99
70°	4427	161	41
75°	3846	55	27
80°	2947	41	0
85°	1346	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5886 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	91.6	5.7
10°-20°	246.1	15.4
20°-30°	332.9	20.8
30°-40°	342.0	21.4
40°-50°	283.3	17.7
50°-60°	181.9	11.4
60°-70°	87.9	5.5
70°-80°	29.7	1.9
80°-90°	3.8	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°	670.7	41.9
0°-40°	1012.7	63.3
0°-60°	1477.9	92.4
0°-90°	1599.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1599.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	987	987	987	987	987	
5°	975	983	972	966	971	93
15°	928	916	871	841	834	262
25°	840	799	716	651	630	387
35°	723	653	533	440	407	452
45°	589	492	345	239	202	454
55°	444	326	165	72	47	397
65°	292	161	27	8	6	289
75°	141	30	2	1	1	149
85°	17	0	0	0	0	26
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	986.7	986.7	986.7	986.7	986.7
2.5°	980.9	988.7	981.8	980.9	982.8
5°	975.0	982.8	972.1	966.2	971.1
7.5°	968.1	972.1	953.5	943.7	945.7
10°	958.4	957.4	930.0	913.4	910.4
12.5°	943.7	938.8	902.6	879.2	874.3
15°	928.1	916.3	871.3	841.0	834.2
17.5°	909.5	890.9	837.1	798.0	788.2
20°	888.0	862.5	799.0	751.0	736.4
22.5°	864.5	832.2	758.9	702.2	682.6
25°	840.0	799.0	715.8	651.3	629.8
27.5°	812.7	764.7	672.8	599.5	573.1
30°	783.3	728.6	626.9	546.7	520.3
32.5°	753.0	692.4	580.9	493.9	461.6
35°	722.7	653.3	533.0	440.1	406.8
37.5°	690.4	614.1	486.0	389.2	353.0
40°	657.2	574.0	438.1	336.4	301.2
42.5°	622.9	533.0	390.2	286.5	250.3
45°	588.7	491.9	345.2	238.6	201.5
47.5°	553.5	449.8	298.3	191.7	159.4
50°	517.3	408.8	253.3	149.6	118.3
52.5°	481.1	366.7	207.3	108.5	80.2
55°	444.0	325.6	165.3	72.4	46.9
57.5°	406.8	283.6	126.2	40.1	17.6
60°	368.7	243.5	89.0	13.7	11.7
62.5°	331.5	200.5	55.7	10.8	8.8
65°	292.4	161.4	27.4	7.8	5.9
67.5°	254.3	124.2	11.7	4.9	2.9
70°	214.2	90.0	7.8	2.9	2.0
72.5°	177.0	57.7	4.9	2.0	1.0
75°	140.8	30.3	2.0	1.0	1.0
77.5°	105.6	12.7	1.0	1.0	1.0
80°	72.4	5.9	1.0	1.0	0.0
82.5°	43.0	2.0	1.0	1.0	0.0
85°	16.6	0.0	0.0	0.0	0.0
87.5°	1.0	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	17.82	19.20	18.18	19.51	19.83	2.68	4.07	3.05	4.38	4.70
	3H	19.37	20.60	19.75	20.92	21.29	2.60	3.83	2.98	4.16	4.53
	4H	19.89	21.03	20.29	21.38	21.77	2.54	3.68	2.94	4.03	4.41
	6H	20.23	21.28	20.64	21.65	22.04	2.47	3.52	2.88	3.89	4.28
	8H	20.31	21.31	20.74	21.70	22.10	2.43	3.42	2.86	3.82	4.22
	12H	20.33	21.28	20.76	21.66	22.09	2.39	3.34	2.82	3.72	4.15
4H	2H	17.62	18.76	18.02	19.11	19.50	3.55	4.69	3.95	5.04	5.42
	3H	19.23	20.17	19.65	20.57	20.97	3.50	4.43	3.91	4.83	5.24
	4H	19.76	20.59	20.19	21.01	21.45	3.42	4.25	3.85	4.67	5.11
	6H	20.13	20.85	20.59	21.30	21.76	3.35	4.07	3.82	4.52	4.98
	8H	20.23	20.90	20.70	21.35	21.82	3.30	3.97	3.77	4.42	4.89
	12H	20.27	20.86	20.75	21.34	21.81	3.26	3.85	3.75	4.34	4.81
8H	4H	19.63	20.30	20.10	20.75	21.22	4.44	5.11	4.91	5.56	6.03
	6H	19.98	20.53	20.49	21.03	21.51	4.36	4.91	4.86	5.40	5.88
	8H	20.08	20.57	20.60	21.09	21.58	4.31	4.80	4.83	5.31	5.80
	12H	20.12	20.56	20.64	21.05	21.62	4.27	4.70	4.78	5.19	5.76
12H	4H	19.59	20.18	20.07	20.66	21.14	4.52	5.11	5.00	5.59	6.07
	6H	19.92	20.42	20.44	20.93	21.42	4.42	4.91	4.94	5.43	5.92
	8H	20.04	20.47	20.55	20.97	21.54	4.39	4.82	4.90	5.32	5.89