

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: P1056604

Luminaire Tested: S125R3DR-H850D835-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1056604  
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-H850D835-X4F0-XX-UDD-F-B  
Description: DEFINE 5, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

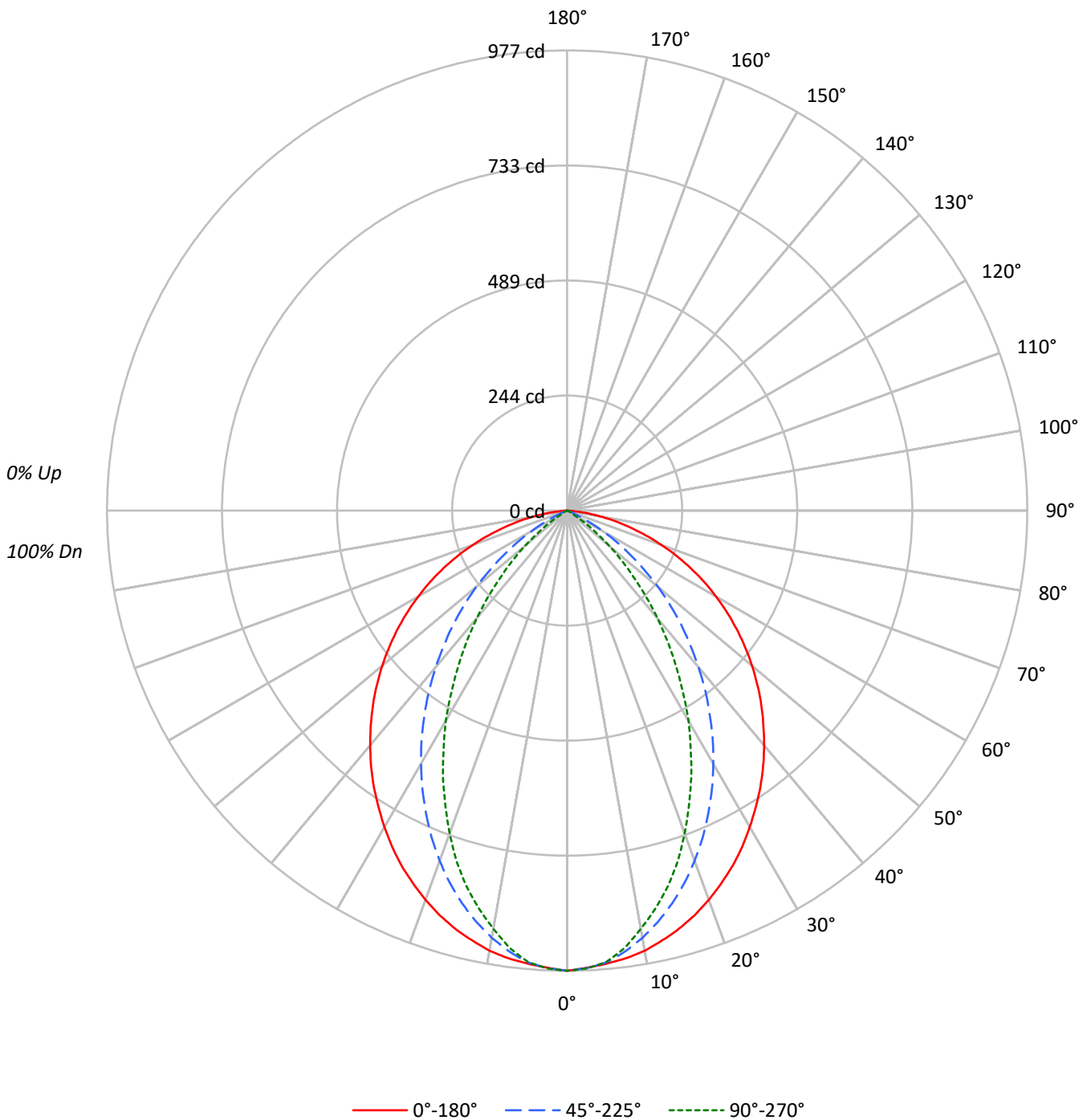
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1583.7 lumens  
Efficiency: N/A  
Efficacy: 66.5 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	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°	6907	6907	6907
5°	6852	6831	6824
10°	6812	6611	6472
15°	6726	6315	6045
20°	6615	5952	5486
25°	6488	5529	4864
30°	6332	5067	4206
35°	6176	4555	3476
40°	6005	4003	2753
45°	5829	3417	1995
50°	5634	2758	1289
55°	5418	2018	573
60°	5162	1246	164
65°	4843	453	97
70°	4384	159	39
75°	3808	52	27
80°	2919	41	0
85°	1338	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5829 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	90.8	5.7
10°-20°	243.7	15.4
20°-30°	329.7	20.8
30°-40°	338.7	21.4
40°-50°	280.6	17.7
50°-60°	180.1	11.4
60°-70°	87.0	5.5
70°-80°	29.4	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°	664.1	41.9
0°-40°	1002.8	63.3
0°-60°	1463.5	92.4
0°-90°	1583.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1583.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	977	977	977	977	977	
5°	966	973	963	957	962	92
15°	919	907	863	833	826	259
25°	832	791	709	645	624	383
35°	716	647	528	436	403	447
45°	583	487	342	236	200	450
55°	440	322	164	72	46	393
65°	290	160	27	8	6	286
75°	139	30	2	1	1	148
85°	16	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°	977.1	977.1	977.1	977.1	977.1
2.5°	971.3	979.0	972.2	971.3	973.2
5°	965.5	973.2	962.6	956.8	961.6
7.5°	958.7	962.6	944.2	934.5	936.4
10°	949.0	948.0	920.9	904.5	901.6
12.5°	934.5	929.6	893.8	870.6	865.7
15°	919.0	907.4	862.8	832.8	826.0
17.5°	900.6	882.2	828.9	790.2	780.5
20°	879.3	854.1	791.2	743.7	729.2
22.5°	856.0	824.1	751.5	695.3	675.9
25°	831.8	791.2	708.8	644.9	623.6
27.5°	804.7	757.3	666.2	593.6	567.5
30°	775.7	721.4	620.7	541.3	515.2
32.5°	745.6	685.6	575.2	489.0	457.1
35°	715.6	646.9	527.8	435.8	402.8
37.5°	683.7	608.1	481.3	385.4	349.6
40°	650.7	568.4	433.8	333.1	298.3
42.5°	616.9	527.8	386.4	283.7	247.9
45°	583.0	487.1	341.8	236.3	199.5
47.5°	548.1	445.5	295.4	189.8	157.8
50°	512.3	404.8	250.8	148.2	117.2
52.5°	476.4	363.1	205.3	107.5	79.4
55°	439.6	322.5	163.7	71.7	46.5
57.5°	402.8	280.8	124.9	39.7	17.4
60°	365.1	241.1	88.1	13.6	11.6
62.5°	328.3	198.5	55.2	10.7	8.7
65°	289.5	159.8	27.1	7.7	5.8
67.5°	251.8	123.0	11.6	4.8	2.9
70°	212.1	89.1	7.7	2.9	1.9
72.5°	175.3	57.1	4.8	1.9	1.0
75°	139.4	30.0	1.9	1.0	1.0
77.5°	104.6	12.6	1.0	1.0	1.0
80°	71.7	5.8	1.0	1.0	0.0
82.5°	42.6	1.9	1.0	1.0	0.0
85°	16.5	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	17.78	19.17	18.15	19.48	19.79	2.65	4.03	3.01	4.34	4.66
	3H	19.33	20.56	19.71	20.89	21.25	2.57	3.80	2.95	4.12	4.49
	4H	19.86	21.00	20.26	21.35	21.73	2.50	3.65	2.90	4.00	4.38
	6H	20.19	21.25	20.61	21.62	22.01	2.43	3.48	2.85	3.85	4.25
	8H	20.28	21.27	20.71	21.66	22.07	2.39	3.39	2.82	3.78	4.18
	12H	20.29	21.25	20.73	21.63	22.06	2.35	3.30	2.78	3.69	4.12
4H	2H	17.59	18.73	17.99	19.08	19.46	3.51	4.65	3.91	5.00	5.39
	3H	19.20	20.13	19.61	20.54	20.94	3.46	4.39	3.87	4.79	5.20
	4H	19.72	20.56	20.16	20.97	21.42	3.38	4.21	3.82	4.63	5.08
	6H	20.10	20.82	20.56	21.26	21.73	3.32	4.04	3.78	4.48	4.95
	8H	20.20	20.87	20.66	21.31	21.78	3.27	3.94	3.73	4.38	4.85
	12H	20.23	20.83	20.72	21.31	21.78	3.22	3.82	3.71	4.30	4.77
8H	4H	19.59	20.27	20.06	20.71	21.18	4.40	5.07	4.87	5.52	5.99
	6H	19.95	20.50	20.45	20.99	21.47	4.32	4.87	4.82	5.36	5.84
	8H	20.04	20.54	20.57	21.05	21.54	4.27	4.76	4.79	5.27	5.77
	12H	20.09	20.52	20.60	21.02	21.59	4.23	4.66	4.74	5.16	5.73
12H	4H	19.55	20.15	20.04	20.63	21.10	4.48	5.07	4.97	5.56	6.03
	6H	19.89	20.38	20.41	20.90	21.39	4.38	4.88	4.90	5.39	5.88
	8H	20.00	20.44	20.52	20.93	21.50	4.35	4.79	4.87	5.28	5.85