

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: P1056612

Luminaire Tested: S125R3DR-H850D850-X4F0-XX-UDD-FLL-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1056612  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-10)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S125R3DR-H850D850-X4F0-XX-UDD-FLL-W  
Description: DEFINE 5, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

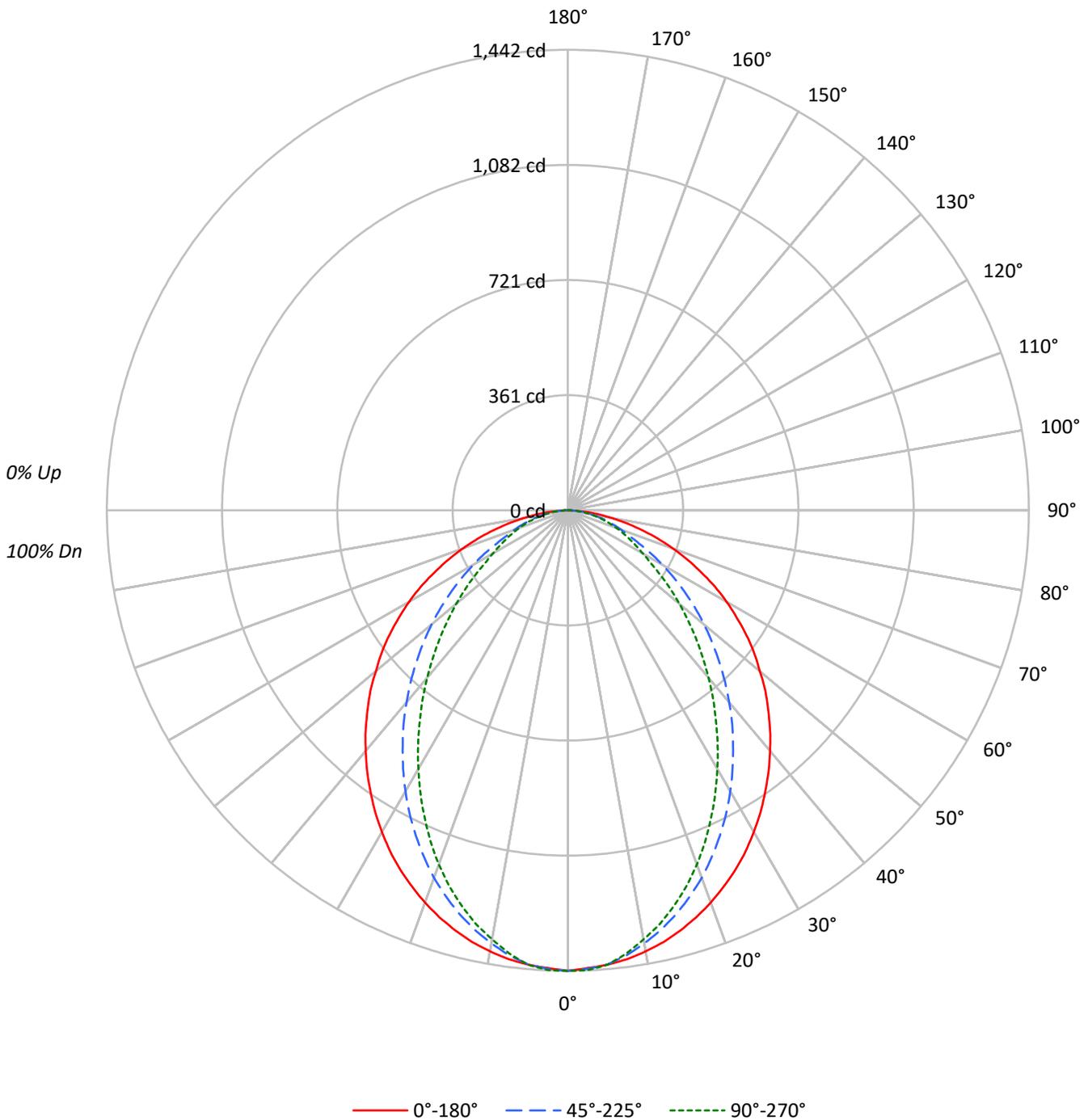
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3056.9 lumens  
Efficiency: N/A  
Efficacy: 128.4 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.01 / 1.17  
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	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	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86																												
2	101	93	87	81	98	91	85	80	88	83	79	84	80	77	81	78	75	73																												
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63																												
4	85	74	66	59	83	73	65	59	70	63	58	68	62	57	66	61	57	55																												
5	79	67	58	52	77	66	58	52	63	56	51	62	55	51	60	54	50	48																												
6	73	60	52	46	71	59	51	46	58	51	45	56	50	45	55	49	45	43																												
7	68	55	47	41	66	54	46	41	53	46	41	51	45	40	50	44	40	38																												
8	63	51	42	37	62	50	42	37	49	42	37	47	41	36	46	40	36	34																												
9	59	47	39	33	58	46	39	33	45	38	33	44	38	33	43	37	33	31																												
10	56	43	36	31	55	43	35	31	42	35	30	41	35	30	40	34	30	28																												

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	10196	10196	10196
5°	10136	10128	10136
10°	10068	9883	9791
15°	9966	9581	9385
20°	9833	9210	8879
25°	9684	8770	8276
30°	9494	8293	7636
35°	9287	7776	6970
40°	9078	7244	6313
45°	8858	6689	5659
50°	8622	6118	5007
55°	8404	5493	4354
60°	8109	4828	3826
65°	7706	4097	3556
70°	7236	3663	3330
75°	6542	3373	3138
80°	5683	3061	2931
85°	4445	2701	2701

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 8858 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	134.9	4.4
10°-20°	370.5	12.1
20°-30°	523.4	17.1
30°-40°	576.2	18.8
40°-50°	537.5	17.6
50°-60°	429.1	14.0
60°-70°	288.7	9.4
70°-80°	153.8	5.0
80°-90°	42.7	1.4
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°	1028.9	33.7
0°-40°	1605.1	52.5
0°-60°	2571.6	84.1
0°-90°	3056.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3056.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1442	1442	1442	1442	1442	
5°	1428	1440	1427	1423	1428	136
15°	1362	1354	1309	1287	1282	384
25°	1242	1204	1124	1075	1061	571
35°	1076	1013	901	830	808	673
45°	886	802	669	587	566	684
55°	682	579	446	375	353	609
65°	461	360	245	217	213	457
75°	240	159	124	116	115	255
85°	55	38	33	34	33	65
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1442.3	1442.3	1442.3	1442.3	1442.3
2.5°	1434.8	1446.6	1436.9	1439.1	1441.2
5°	1428.3	1440.1	1427.2	1422.9	1428.3
7.5°	1417.6	1427.2	1405.8	1396.1	1400.4
10°	1402.5	1409.0	1376.8	1363.9	1363.9
12.5°	1384.3	1384.3	1345.6	1327.4	1327.4
15°	1361.7	1354.2	1309.1	1286.6	1282.3
17.5°	1336.0	1322.0	1268.3	1239.3	1233.9
20°	1307.0	1284.4	1224.3	1186.7	1180.2
22.5°	1274.7	1245.8	1175.9	1129.8	1122.2
25°	1241.5	1203.9	1124.4	1075.0	1061.0
27.5°	1203.9	1158.8	1071.8	1015.9	998.7
30°	1163.1	1111.5	1015.9	953.6	935.4
32.5°	1121.2	1063.2	959.0	892.4	872.0
35°	1076.1	1012.7	901.0	830.1	807.6
37.5°	1031.0	962.2	844.1	770.0	746.4
40°	983.7	908.5	785.0	708.8	684.1
42.5°	936.5	855.9	727.0	649.7	623.9
45°	886.0	802.2	669.1	587.4	566.0
47.5°	837.7	747.5	612.1	532.7	509.0
50°	784.0	690.5	556.3	476.8	455.3
52.5°	734.6	634.7	500.4	426.3	403.8
55°	681.9	578.8	445.7	374.8	353.3
57.5°	627.2	523.0	393.1	326.5	306.1
60°	573.5	467.2	341.5	280.3	270.6
62.5°	518.7	414.5	293.2	245.9	239.5
65°	460.7	359.8	244.9	216.9	212.6
67.5°	405.9	307.1	206.2	190.1	185.8
70°	350.1	254.5	177.2	163.2	161.1
72.5°	295.3	204.0	149.3	139.6	137.5
75°	239.5	158.9	123.5	116.0	114.9
77.5°	187.9	119.2	97.7	94.5	92.4
80°	139.6	89.1	75.2	73.0	72.0
82.5°	95.6	61.2	53.7	53.7	51.5
85°	54.8	37.6	33.3	34.4	33.3
87.5°	20.4	16.1	15.0	16.1	16.1
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	19.36	20.90	19.72	21.21	21.52	15.74	17.28	16.10	17.59	17.91
	3H	21.14	22.52	21.52	22.85	23.21	17.21	18.60	17.59	18.93	19.29
	4H	21.79	23.09	22.19	23.44	23.82	17.80	19.10	18.20	19.45	19.83
	6H	22.27	23.47	22.68	23.84	24.23	18.27	19.47	18.68	19.83	20.23
	8H	22.42	23.57	22.85	23.96	24.36	18.43	19.57	18.85	19.96	20.36
	12H	22.52	23.62	22.95	24.00	24.43	18.54	19.64	18.97	20.02	20.45
4H	2H	19.49	20.79	19.89	21.14	21.52	16.42	17.71	16.81	18.06	18.44
	3H	21.46	22.54	21.87	22.94	23.34	18.09	19.17	18.50	19.57	19.97
	4H	22.21	23.18	22.64	23.59	24.03	18.80	19.77	19.23	20.18	20.62
	6H	22.80	23.65	23.26	24.09	24.55	19.38	20.23	19.84	20.67	21.13
	8H	23.01	23.80	23.47	24.24	24.71	19.59	20.38	20.05	20.83	21.29
	12H	23.15	23.86	23.64	24.34	24.81	19.75	20.46	20.23	20.94	21.41
8H	4H	22.27	23.06	22.73	23.51	23.97	19.16	19.95	19.62	20.40	20.86
	6H	22.93	23.58	23.42	24.07	24.55	19.86	20.52	20.36	21.01	21.49
	8H	23.18	23.77	23.69	24.28	24.77	20.15	20.73	20.66	21.24	21.73
	12H	23.39	23.91	23.90	24.40	24.97	20.39	20.91	20.90	21.40	21.96
12H	4H	22.26	22.97	22.74	23.45	23.92	19.21	19.92	19.69	20.39	20.86
	6H	22.92	23.51	23.44	24.02	24.51	19.93	20.52	20.45	21.03	21.52
	8H	23.22	23.74	23.73	24.23	24.79	20.28	20.80	20.79	21.29	21.85