

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: P1056493

Luminaire Tested: S125R3DR-H1090D830-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056493
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-H1090D830-X4F0-XX-UDD-F-B
Description: DEFINE 5, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

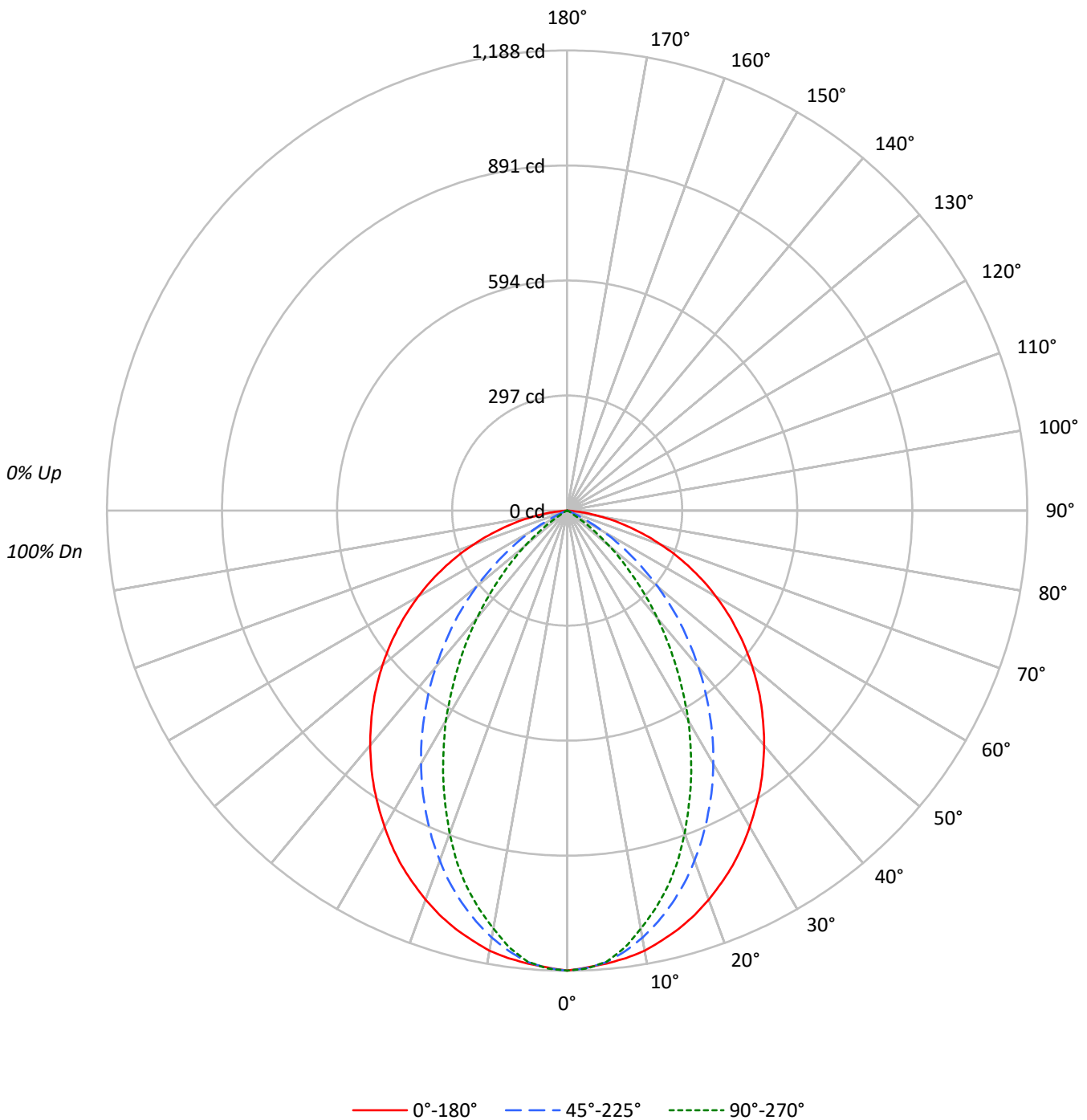
Lumens per Lamp: N/A
Luminaire Lumens: 1925.1 lumens
Efficiency: N/A
Efficacy: 62.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.89 / 1.07
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 30.9
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

TEST NUMBER: P1056493

CATALOG NUMBER: S125R3DR-H1090D830-X4F0-XX-UDD-F-B

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	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°	8396	8396	8396
5°	8328	8303	8295
10°	8281	8035	7867
15°	8176	7676	7349
20°	8041	7235	6668
25°	7887	6721	5913
30°	7697	6159	5112
35°	7507	5536	4226
40°	7300	4866	3345
45°	7084	4154	2424
50°	6848	3353	1566
55°	6586	2451	696
60°	6275	1514	199
65°	5888	552	119
70°	5329	194	50
75°	4630	66	33
80°	3546	49	0
85°	1622	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7084 cd/sqm



TEST NUMBER: P1056493

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.3	5.7
10°-20°	296.2	15.4
20°-30°	400.7	20.8
30°-40°	411.7	21.4
40°-50°	341.1	17.7
50°-60°	219.0	11.4
60°-70°	105.8	5.5
70°-80°	35.8	1.9
80°-90°	4.6	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°	807.3	41.9
0°-40°	1218.9	63.3
0°-60°	1778.9	92.4
0°-90°	1925.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1925.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1188	1188	1188	1188	1188	
5°	1174	1183	1170	1163	1169	111
15°	1117	1103	1049	1012	1004	315
25°	1011	962	862	784	758	465
35°	870	786	642	530	490	544
45°	709	592	416	287	242	546
55°	534	392	199	87	56	478
65°	352	194	33	9	7	348
75°	170	36	2	1	1	180
85°	20	0	0	0	0	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1187.7	1187.7	1187.7	1187.7	1187.7
2.5°	1180.6	1190.0	1181.8	1180.6	1183.0
5°	1173.6	1183.0	1170.0	1163.0	1168.9
7.5°	1165.3	1170.0	1147.7	1135.9	1138.2
10°	1153.6	1152.4	1119.4	1099.4	1095.9
12.5°	1135.9	1130.0	1086.5	1058.2	1052.3
15°	1117.1	1102.9	1048.8	1012.3	1004.1
17.5°	1094.7	1072.3	1007.6	960.5	948.7
20°	1068.8	1038.2	961.7	904.0	886.4
22.5°	1040.5	1001.7	913.4	845.2	821.6
25°	1011.1	961.7	861.6	783.9	758.0
27.5°	978.2	920.5	809.8	721.6	689.8
30°	942.9	876.9	754.5	658.0	626.2
32.5°	906.4	833.4	699.2	594.4	555.6
35°	869.9	786.3	641.5	529.7	489.7
37.5°	831.0	739.2	585.0	468.5	424.9
40°	791.0	691.0	527.3	404.9	362.5
42.5°	749.8	641.5	469.7	344.9	301.3
45°	708.6	592.1	415.5	287.2	242.5
47.5°	666.2	541.5	359.0	230.7	191.9
50°	622.7	492.0	304.9	180.1	142.4
52.5°	579.1	441.4	249.5	130.7	96.5
55°	534.4	392.0	198.9	87.1	56.5
57.5°	489.7	341.4	151.8	48.3	21.2
60°	443.8	293.1	107.1	16.5	14.1
62.5°	399.0	241.3	67.1	12.9	10.6
65°	352.0	194.2	33.0	9.4	7.1
67.5°	306.0	149.5	14.1	5.9	3.5
70°	257.8	108.3	9.4	3.5	2.4
72.5°	213.1	69.4	5.9	2.4	1.2
75°	169.5	36.5	2.4	1.2	1.2
77.5°	127.1	15.3	1.2	1.2	1.2
80°	87.1	7.1	1.2	1.2	0.0
82.5°	51.8	2.4	1.2	1.2	0.0
85°	20.0	0.0	0.0	0.0	0.0
87.5°	1.2	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	18.46	19.85	18.83	20.16	20.47	3.33	4.72	3.70	5.03	5.34
	3H	20.01	21.24	20.39	21.57	21.93	3.25	4.48	3.63	4.81	5.17
	4H	20.53	21.68	20.94	22.03	22.41	3.19	4.33	3.59	4.68	5.06
	6H	20.87	21.92	21.29	22.29	22.69	3.12	4.17	3.53	4.54	4.93
	8H	20.95	21.95	21.38	22.34	22.75	3.08	4.07	3.51	4.46	4.87
	12H	20.97	21.92	21.40	22.31	22.74	3.04	3.99	3.47	4.37	4.80
4H	2H	18.26	19.41	18.67	19.76	20.14	4.20	5.34	4.60	5.69	6.07
	3H	19.88	20.81	20.29	21.22	21.62	4.14	5.08	4.56	5.48	5.88
	4H	20.40	21.23	20.84	21.65	22.09	4.07	4.90	4.50	5.32	5.76
	6H	20.78	21.49	21.24	21.94	22.41	4.00	4.72	4.46	5.17	5.63
	8H	20.87	21.55	21.34	21.99	22.46	3.95	4.62	4.42	5.07	5.54
	12H	20.91	21.50	21.40	21.99	22.46	3.91	4.50	4.39	4.99	5.46
8H	4H	20.27	20.94	20.74	21.39	21.86	5.09	5.76	5.56	6.20	6.67
	6H	20.63	21.18	21.13	21.67	22.15	5.01	5.55	5.51	6.05	6.53
	8H	20.72	21.22	21.24	21.73	22.22	4.95	5.45	5.47	5.96	6.45
	12H	20.77	21.20	21.28	21.70	22.27	4.91	5.35	5.43	5.84	6.41
12H	4H	20.23	20.82	20.72	21.31	21.78	5.17	5.76	5.65	6.24	6.71
	6H	20.57	21.06	21.09	21.58	22.07	5.07	5.56	5.59	6.08	6.57
	8H	20.68	21.12	21.20	21.61	22.18	5.04	5.47	5.55	5.97	6.54