

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: P1056514

Luminaire Tested: S125R3DR-H1090D940-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056514
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-H1090D940-X4F0-XX-UDD-F-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

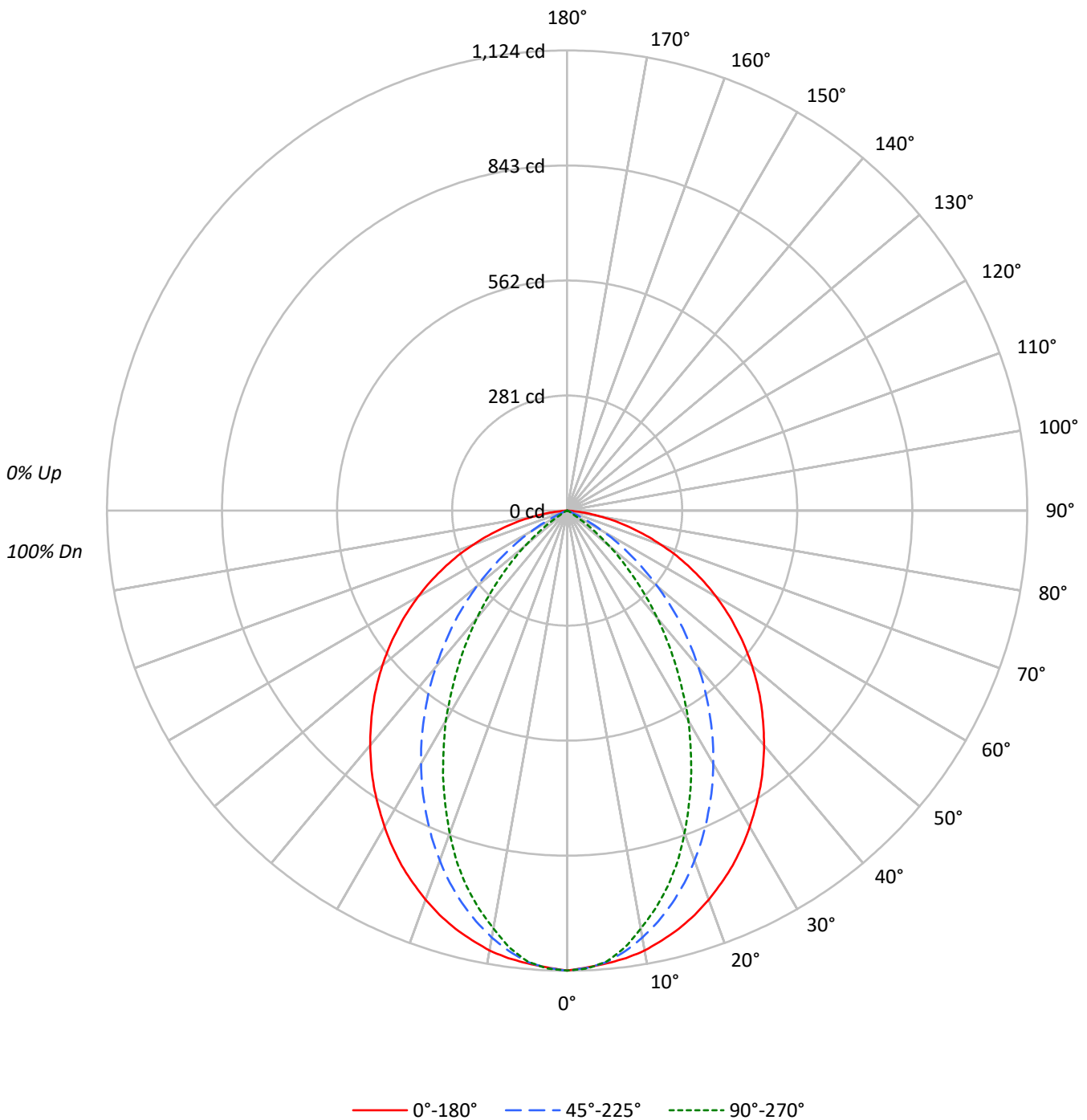
Lumens per Lamp: N/A
Luminaire Lumens: 1821.2 lumens
Efficiency: N/A
Efficacy: 58.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.89 / 1.07
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')
CIE Type: Direct

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

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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°	7943	7943	7943
5°	7879	7855	7847
10°	7834	7602	7443
15°	7734	7262	6952
20°	7607	6844	6308
25°	7462	6359	5594
30°	7281	5827	4836
35°	7103	5238	3998
40°	6906	4604	3165
45°	6702	3930	2293
50°	6479	3172	1481
55°	6232	2320	659
60°	5935	1432	189
65°	5570	522	112
70°	5041	184	45
75°	4381	60	30
80°	3355	45	0
85°	1533	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6702 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.4	5.7
10°-20°	280.2	15.4
20°-30°	379.1	20.8
30°-40°	389.5	21.4
40°-50°	322.7	17.7
50°-60°	207.1	11.4
60°-70°	100.1	5.5
70°-80°	33.8	1.9
80°-90°	4.3	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°	763.7	41.9
0°-40°	1153.2	63.3
0°-60°	1683.0	92.4
0°-90°	1821.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1821.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1124	1124	1124	1124	1124	
5°	1110	1119	1107	1100	1106	105
15°	1057	1044	992	958	950	298
25°	957	910	815	742	717	440
35°	823	744	607	501	463	514
45°	670	560	393	272	229	517
55°	506	371	188	82	54	452
65°	333	184	31	9	7	329
75°	160	34	2	1	1	170
85°	19	0	0	0	0	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1123.6	1123.6	1123.6	1123.6	1123.6
2.5°	1117.0	1125.9	1118.1	1117.0	1119.2
5°	1110.3	1119.2	1106.9	1100.2	1105.8
7.5°	1102.5	1106.9	1085.8	1074.6	1076.9
10°	1091.3	1090.2	1059.0	1040.1	1036.8
12.5°	1074.6	1069.1	1027.9	1001.1	995.6
15°	1056.8	1043.5	992.2	957.7	949.9
17.5°	1035.7	1014.5	953.3	908.7	897.6
20°	1011.2	982.2	909.8	855.3	838.5
22.5°	984.4	947.7	864.2	799.6	777.3
25°	956.6	909.8	815.2	741.7	717.2
27.5°	925.4	870.8	766.2	682.6	652.6
30°	892.0	829.6	713.8	622.5	592.4
32.5°	857.5	788.4	661.5	562.4	525.6
35°	823.0	743.9	606.9	501.1	463.3
37.5°	786.2	699.3	553.5	443.2	402.0
40°	748.3	653.7	498.9	383.1	343.0
42.5°	709.4	606.9	444.3	326.3	285.1
45°	670.4	560.1	393.1	271.7	229.4
47.5°	630.3	512.3	339.7	218.3	181.5
50°	589.1	465.5	288.4	170.4	134.7
52.5°	547.9	417.6	236.1	123.6	91.3
55°	505.6	370.8	188.2	82.4	53.5
57.5°	463.3	322.9	143.7	45.7	20.0
60°	419.8	277.3	101.3	15.6	13.4
62.5°	377.5	228.3	63.5	12.2	10.0
65°	333.0	183.7	31.2	8.9	6.7
67.5°	289.5	141.4	13.4	5.6	3.3
70°	243.9	102.5	8.9	3.3	2.2
72.5°	201.6	65.7	5.6	2.2	1.1
75°	160.4	34.5	2.2	1.1	1.1
77.5°	120.3	14.5	1.1	1.1	1.1
80°	82.4	6.7	1.1	1.1	0.0
82.5°	49.0	2.2	1.1	1.1	0.0
85°	18.9	0.0	0.0	0.0	0.0
87.5°	1.1	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	18.27	19.65	18.63	19.97	20.28	3.14	4.52	3.50	4.84	5.15
	3H	19.82	21.05	20.20	21.38	21.74	3.06	4.29	3.44	4.62	4.98
	4H	20.34	21.49	20.74	21.84	22.22	2.99	4.14	3.39	4.49	4.87
	6H	20.68	21.73	21.09	22.10	22.49	2.92	3.97	3.34	4.34	4.74
	8H	20.76	21.76	21.19	22.15	22.55	2.88	3.88	3.31	4.27	4.67
	12H	20.78	21.73	21.21	22.11	22.54	2.84	3.79	3.27	4.18	4.61
4H	2H	18.07	19.22	18.47	19.57	19.95	4.00	5.15	4.40	5.50	5.88
	3H	19.69	20.62	20.10	21.02	21.43	3.95	4.88	4.36	5.29	5.69
	4H	20.21	21.04	20.64	21.46	21.90	3.87	4.71	4.31	5.12	5.57
	6H	20.58	21.30	21.04	21.75	22.21	3.81	4.53	4.27	4.97	5.44
	8H	20.68	21.35	21.15	21.80	22.27	3.76	4.43	4.22	4.87	5.34
	12H	20.72	21.31	21.20	21.79	22.27	3.71	4.31	4.20	4.79	5.26
8H	4H	20.08	20.75	20.55	21.20	21.67	4.89	5.56	5.36	6.01	6.48
	6H	20.44	20.98	20.94	21.48	21.96	4.81	5.36	5.31	5.85	6.33
	8H	20.53	21.02	21.05	21.54	22.03	4.76	5.25	5.28	5.76	6.25
	12H	20.57	21.01	21.09	21.50	22.07	4.72	5.15	5.23	5.65	6.22
12H	4H	20.04	20.63	20.52	21.11	21.59	4.97	5.56	5.46	6.05	6.52
	6H	20.38	20.87	20.90	21.38	21.87	4.87	5.37	5.39	5.88	6.37
	8H	20.49	20.92	21.00	21.42	21.99	4.84	5.28	5.35	5.77	6.34