

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: P1056472

Luminaire Tested: S125R3DR-S850D840-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056472
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-S850D840-X4F0-XX-UDD-F-B
Description: DEFINE 5, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

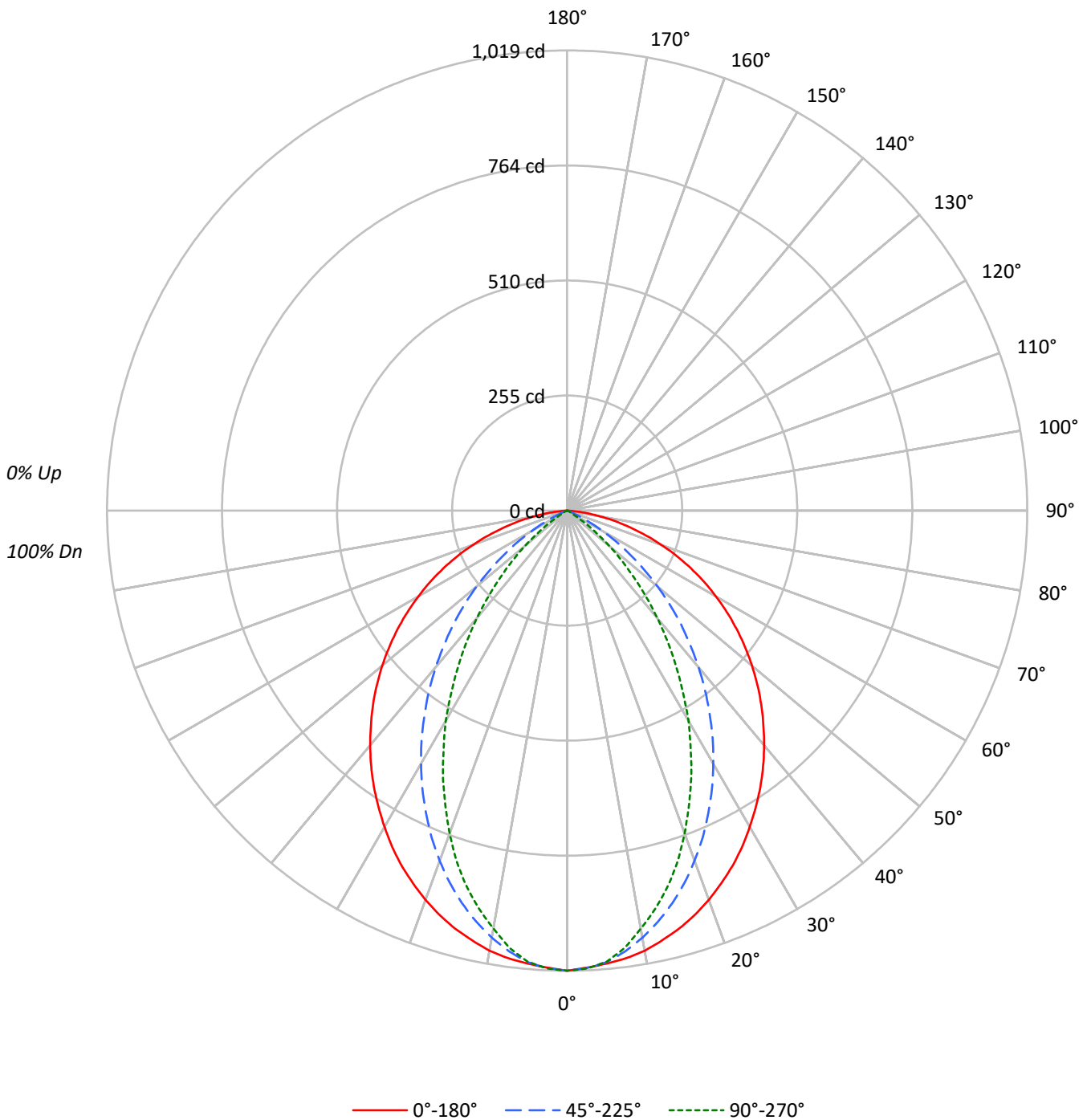
Lumens per Lamp: N/A
Luminaire Lumens: 1651.6 lumens
Efficiency: N/A
Efficacy: 62.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.89 / 1.07
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 26.4
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	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°	7204	7204	7204
5°	7145	7123	7116
10°	7104	6894	6749
15°	7014	6585	6304
20°	6899	6207	5721
25°	6767	5766	5073
30°	6603	5284	4385
35°	6441	4750	3625
40°	6262	4175	2870
45°	6078	3564	2079
50°	5875	2877	1344
55°	5651	2104	598
60°	5383	1299	171
65°	5052	473	102
70°	4572	167	41
75°	3971	55	27
80°	3041	41	0
85°	1395	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6078 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.6	5.7
10°-20°	254.1	15.4
20°-30°	343.8	20.8
30°-40°	353.2	21.4
40°-50°	292.6	17.7
50°-60°	187.9	11.4
60°-70°	90.7	5.5
70°-80°	30.7	1.9
80°-90°	3.9	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°	692.6	41.9
0°-40°	1045.8	63.3
0°-60°	1526.2	92.4
0°-90°	1651.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1651.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1019	1019	1019	1019	1019	
5°	1007	1015	1004	998	1003	96
15°	958	946	900	868	861	270
25°	868	825	739	673	650	399
35°	746	675	550	454	420	467
45°	608	508	356	246	208	469
55°	458	336	171	75	48	410
65°	302	167	28	8	6	299
75°	145	31	2	1	1	154
85°	17	0	0	0	0	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1019.0	1019.0	1019.0	1019.0	1019.0
2.5°	1012.9	1021.0	1013.9	1012.9	1014.9
5°	1006.8	1014.9	1003.8	997.7	1002.8
7.5°	999.8	1003.8	984.6	974.5	976.5
10°	989.7	988.7	960.4	943.2	940.2
12.5°	974.5	969.5	932.1	907.9	902.8
15°	958.4	946.2	899.8	868.5	861.4
17.5°	939.2	920.0	864.4	824.1	814.0
20°	917.0	890.7	825.1	775.6	760.4
22.5°	892.7	859.4	783.7	725.1	704.9
25°	867.5	825.1	739.2	672.6	650.4
27.5°	839.2	789.7	694.8	619.0	591.8
30°	808.9	752.4	647.3	564.5	537.2
32.5°	777.6	715.0	599.9	510.0	476.7
35°	746.3	674.6	550.4	454.4	420.1
37.5°	713.0	634.2	501.9	401.9	364.6
40°	678.6	592.8	452.4	347.4	311.0
42.5°	643.3	550.4	402.9	295.9	258.5
45°	607.9	508.0	356.5	246.4	208.0
47.5°	571.6	464.5	308.0	197.9	164.6
50°	534.2	422.1	261.6	154.5	122.2
52.5°	496.9	378.7	214.1	112.1	82.8
55°	458.5	336.3	170.7	74.7	48.5
57.5°	420.1	292.9	130.3	41.4	18.2
60°	380.7	251.5	91.9	14.1	12.1
62.5°	342.3	207.0	57.6	11.1	9.1
65°	302.0	166.6	28.3	8.1	6.1
67.5°	262.6	128.3	12.1	5.0	3.0
70°	221.2	92.9	8.1	3.0	2.0
72.5°	182.8	59.6	5.0	2.0	1.0
75°	145.4	31.3	2.0	1.0	1.0
77.5°	109.1	13.1	1.0	1.0	1.0
80°	74.7	6.1	1.0	1.0	0.0
82.5°	44.4	2.0	1.0	1.0	0.0
85°	17.2	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	17.93	19.31	18.29	19.63	19.94	2.79	4.18	3.16	4.49	4.81
	3H	19.48	20.71	19.86	21.04	21.40	2.71	3.94	3.09	4.27	4.63
	4H	20.00	21.15	20.40	21.50	21.88	2.65	3.79	3.05	4.14	4.52
	6H	20.34	21.39	20.75	21.76	22.16	2.58	3.63	2.99	4.00	4.39
	8H	20.42	21.42	20.85	21.81	22.21	2.54	3.53	2.97	3.92	4.33
	12H	20.44	21.39	20.87	21.77	22.20	2.50	3.45	2.93	3.83	4.26
4H	2H	17.73	18.88	18.13	19.23	19.61	3.66	4.80	4.06	5.15	5.54
	3H	19.35	20.28	19.76	20.68	21.09	3.61	4.54	4.02	4.94	5.35
	4H	19.87	20.70	20.30	21.12	21.56	3.53	4.36	3.96	4.78	5.22
	6H	20.24	20.96	20.71	21.41	21.87	3.46	4.18	3.92	4.63	5.09
	8H	20.34	21.01	20.81	21.46	21.93	3.41	4.08	3.88	4.53	5.00
	12H	20.38	20.97	20.86	21.45	21.93	3.37	3.96	3.86	4.45	4.92
8H	4H	19.74	20.41	20.21	20.86	21.33	4.55	5.22	5.02	5.67	6.14
	6H	20.10	20.65	20.60	21.14	21.62	4.47	5.02	4.97	5.51	5.99
	8H	20.19	20.68	20.71	21.20	21.69	4.41	4.91	4.93	5.42	5.91
	12H	20.23	20.67	20.75	21.16	21.73	4.37	4.81	4.89	5.30	5.87
12H	4H	19.70	20.29	20.18	20.77	21.25	4.63	5.22	5.11	5.70	6.18
	6H	20.04	20.53	20.56	21.04	21.53	4.53	5.02	5.05	5.54	6.03
	8H	20.15	20.58	20.66	21.08	21.65	4.50	4.93	5.01	5.43	6.00