

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: P1056469

Luminaire Tested: S125R3DR-S850D835-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056469
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-S850D835-X4F0-XX-UDD-F-B
Description: DEFINE 5, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

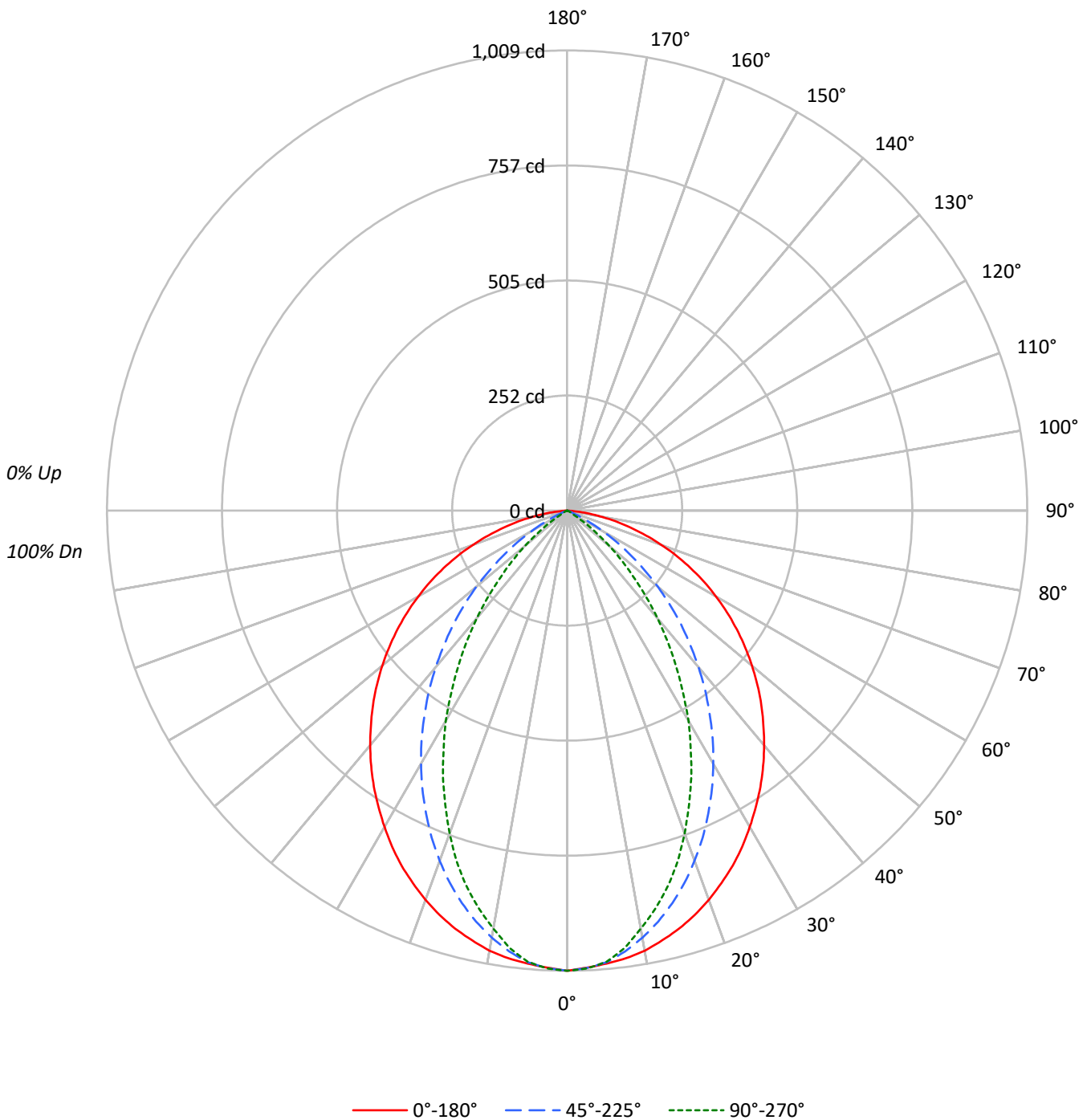
Lumens per Lamp: N/A
Luminaire Lumens: 1635.4 lumens
Efficiency: N/A
Efficacy: 61.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.89 / 1.07
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 26.4
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	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°	7133	7133	7133
5°	7075	7054	7047
10°	7035	6827	6683
15°	6945	6521	6243
20°	6831	6146	5665
25°	6700	5710	5023
30°	6539	5232	4343
35°	6378	4703	3590
40°	6201	4134	2842
45°	6019	3529	2059
50°	5818	2848	1331
55°	5596	2083	592
60°	5330	1287	170
65°	5002	468	100
70°	4527	165	41
75°	3933	55	27
80°	3013	41	0
85°	1379	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6019 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.7	5.7
10°-20°	251.6	15.4
20°-30°	340.4	20.8
30°-40°	349.7	21.4
40°-50°	289.7	17.7
50°-60°	186.0	11.4
60°-70°	89.9	5.5
70°-80°	30.4	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°	685.8	41.9
0°-40°	1035.5	63.3
0°-60°	1511.3	92.4
0°-90°	1635.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1635.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1009	1009	1009	1009	1009	
5°	997	1005	994	988	993	95
15°	949	937	891	860	853	267
25°	859	817	732	666	644	395
35°	739	668	545	450	416	462
45°	602	503	353	244	206	464
55°	454	333	169	74	48	406
65°	299	165	28	8	6	296
75°	144	31	2	1	1	153
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°	1009	1009	1009	1009	1009
2.5°	1003	1011	1004	1003	1005
5°	997	1005	994	988	993
7.5°	990	994	975	965	967
10°	980	979	951	934	931
12.5°	965	960	923	899	894
15°	949	937	891	860	853
17.5°	930	911	856	816	806
20°	908	882	817	768	753
22.5°	884	851	776	718	698
25°	859	817	732	666	644
27.5°	831	782	688	613	586
30°	801	745	641	559	532
32.5°	770	708	594	505	472
35°	739	668	545	450	416
37.5°	706	628	497	398	361
40°	672	587	448	344	308
42.5°	637	545	399	293	256
45°	602	503	353	244	206
47.5°	566	460	305	196	163
50°	529	418	259	153	121
52.5°	492	375	212	111	82
55°	454	333	169	74	48
57.5°	416	290	129	41	18
60°	377	249	91	14	12
62.5°	339	205	57	11	9
65°	299	165	28	8	6
67.5°	260	127	12	5	3
70°	219	92	8	3	2
72.5°	181	59	5	2	1
75°	144	31	2	1	1
77.5°	108	13	1	1	1
80°	74	6	1	1	0
82.5°	44	2	1	1	0
85°	17	0	0	0	0
87.5°	1	0	0	0	0
90°	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	17.89	19.28	18.26	19.59	19.91	2.76	4.14	3.12	4.46	4.77
	3H	19.44	20.67	19.82	21.00	21.37	2.68	3.91	3.06	4.24	4.60
	4H	19.97	21.11	20.37	21.46	21.84	2.62	3.76	3.02	4.11	4.49
	6H	20.31	21.36	20.72	21.73	22.12	2.55	3.60	2.96	3.97	4.36
	8H	20.39	21.38	20.82	21.78	22.18	2.50	3.50	2.93	3.89	4.30
	12H	20.40	21.36	20.84	21.74	22.17	2.46	3.42	2.90	3.80	4.23
4H	2H	17.70	18.84	18.10	19.19	19.57	3.62	4.77	4.03	5.12	5.50
	3H	19.31	20.25	19.72	20.65	21.05	3.57	4.51	3.98	4.91	5.31
	4H	19.83	20.67	20.27	21.09	21.53	3.49	4.33	3.93	4.75	5.19
	6H	20.21	20.93	20.67	21.37	21.84	3.43	4.15	3.89	4.59	5.06
	8H	20.31	20.98	20.78	21.43	21.90	3.38	4.05	3.85	4.50	4.97
	12H	20.34	20.94	20.83	21.42	21.89	3.34	3.93	3.82	4.41	4.89
8H	4H	19.71	20.38	20.17	20.82	21.29	4.52	5.19	4.98	5.63	6.10
	6H	20.06	20.61	20.56	21.11	21.59	4.43	4.98	4.93	5.48	5.96
	8H	20.16	20.65	20.68	21.16	21.65	4.38	4.87	4.90	5.39	5.88
	12H	20.20	20.63	20.71	21.13	21.70	4.34	4.78	4.85	5.27	5.84
12H	4H	19.66	20.26	20.15	20.74	21.21	4.59	5.19	5.08	5.67	6.14
	6H	20.00	20.49	20.52	21.01	21.50	4.50	4.99	5.02	5.50	6.00
	8H	20.11	20.55	20.63	21.04	21.61	4.46	4.90	4.98	5.39	5.96