

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: P1055659

Luminaire Tested: S123R3DR-S775D835-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055659
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123R3DR-S775D835-X4F0-XX-UDD-F-B
Description: DEFINE 3, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

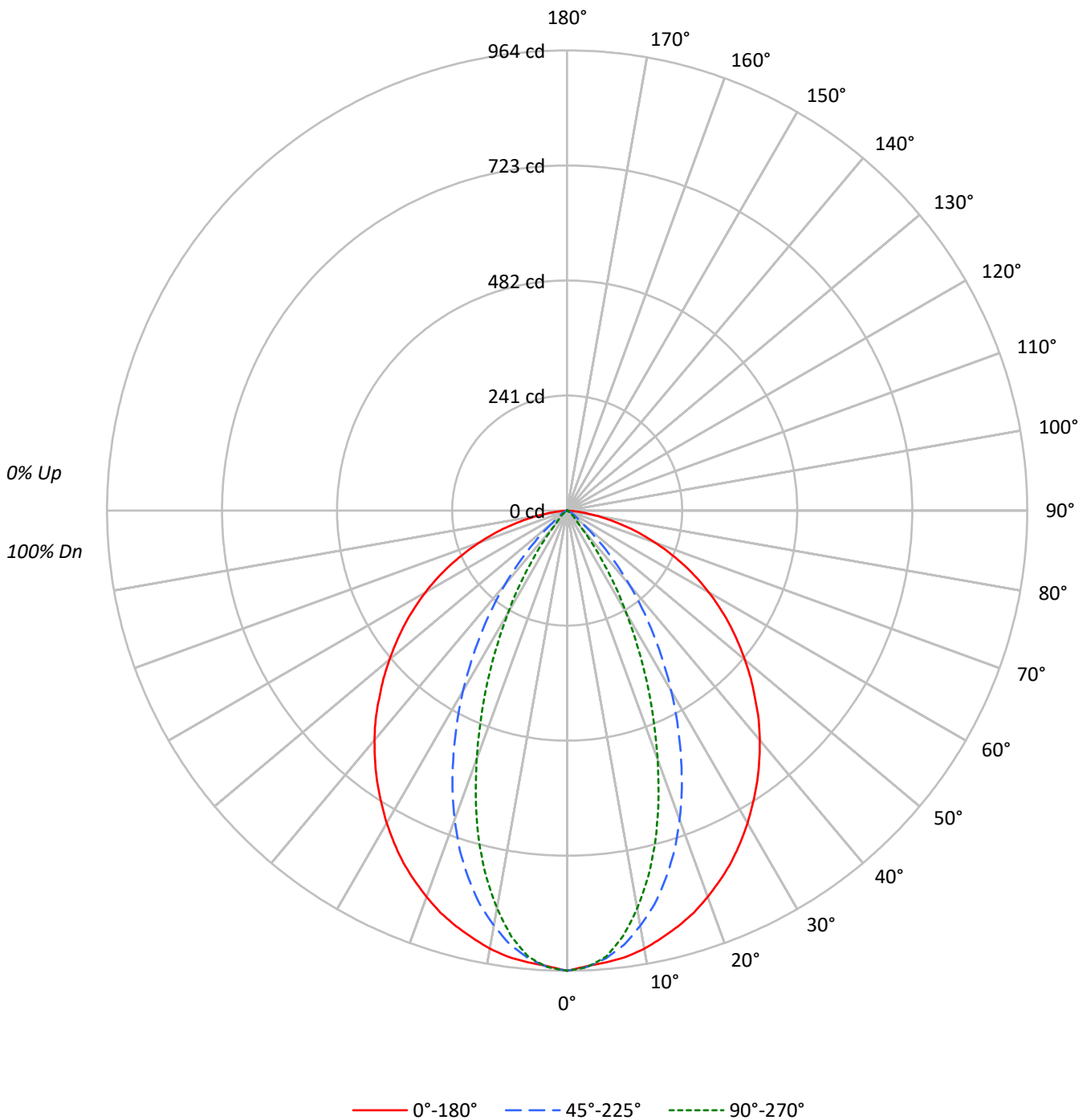
Lumens per Lamp: N/A
Luminaire Lumens: 1128.3 lumens
Efficiency: N/A
Efficacy: 42.7 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.7 / 0.86
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

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	112	108	105	103	109	106	104	101	102	100	98	98	97	95	95	93	92	90
2	105	99	94	89	102	97	92	88	93	90	86	90	87	84	87	85	83	81
3	98	90	84	79	96	88	83	78	86	81	77	83	79	76	81	77	74	73
4	92	82	75	70	90	81	75	70	79	73	69	77	72	68	75	71	67	65
5	86	76	69	63	84	75	68	63	73	67	62	71	66	62	69	65	61	59
6	81	70	63	58	79	69	62	57	67	61	57	66	61	56	64	60	56	54
7	76	65	58	53	74	64	57	52	63	57	52	61	56	52	60	55	52	50
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	48	46
9	68	56	49	45	66	56	49	45	55	49	45	54	48	44	53	48	44	43
10	64	53	46	42	63	52	46	42	51	46	41	51	45	41	50	45	41	40

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11622	11622	11622
5°	11497	11388	11352
10°	11410	10810	10357
15°	11246	9960	8924
20°	11047	8840	7108
25°	10815	7489	5241
30°	10525	6070	3439
35°	10214	4622	1884
40°	9884	3195	645
45°	9497	1858	375
50°	9116	732	225
55°	8723	462	105
60°	8271	289	48
65°	7703	143	29
70°	6909	71	35
75°	5869	47	47
80°	4374	69	0
85°	1660	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9497 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.4	7.8
10°-20°	224.3	19.9
20°-30°	267.6	23.7
30°-40°	226.9	20.1
40°-50°	154.3	13.7
50°-60°	95.6	8.5
60°-70°	48.4	4.3
70°-80°	19.7	1.8
80°-90°	3.0	0.3
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°	580.2	51.4
0°-40°	807.2	71.5
0°-60°	1057.0	93.7
0°-90°	1128.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1128.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	964	964	964	964	964	
5°	950	959	941	934	938	90
15°	901	878	798	735	715	254
25°	813	737	563	435	394	374
35°	694	557	314	169	128	434
45°	557	365	109	27	22	430
55°	415	184	22	8	5	371
65°	270	45	5	1	1	267
75°	126	8	1	1	1	134
85°	12	0	0	1	0	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	964	964	964	964	964
2.5°	955	968	957	956	957
5°	950	959	941	934	938
7.5°	943	947	917	899	899
10°	932	929	883	853	846
12.5°	917	905	845	798	785
15°	901	878	798	735	715
17.5°	883	848	747	665	636
20°	861	814	689	589	554
22.5°	838	777	628	511	472
25°	813	737	563	435	394
27.5°	785	695	499	362	317
30°	756	651	436	292	247
32.5°	725	605	373	228	186
35°	694	557	314	169	128
37.5°	661	509	257	117	81
40°	628	462	203	74	41
42.5°	594	413	154	37	28
45°	557	365	109	27	22
47.5°	522	319	72	22	17
50°	486	273	39	16	12
52.5°	450	229	28	12	8
55°	415	184	22	8	5
57.5°	379	145	17	5	3
60°	343	107	12	3	2
62.5°	307	74	8	2	1
65°	270	45	5	1	1
67.5°	232	31	3	1	1
70°	196	22	2	1	1
72.5°	160	14	1	1	0
75°	126	8	1	1	1
77.5°	93	3	1	1	0
80°	63	1	1	1	0
82.5°	35	0	1	1	0
85°	12	0	0	1	0
87.5°	0	0	0	1	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	17.57	18.85	17.94	19.16	19.48	0.00	0.00	0.00	0.00	0.00
	3H	19.52	20.65	19.90	20.98	21.35	0.00	0.00	0.00	0.00	0.00
	4H	20.34	21.40	20.75	21.75	22.13	0.00	0.00	0.00	0.00	0.00
	6H	20.90	21.87	21.31	22.24	22.63	0.00	0.00	0.00	0.00	0.00
	8H	21.02	21.94	21.45	22.33	22.74	0.00	0.00	0.00	0.00	0.00
	12H	21.05	21.92	21.48	22.31	22.74	0.00	0.00	0.00	0.00	0.00
4H	2H	17.33	18.39	17.74	18.74	19.12	0.00	0.00	0.00	0.00	0.00
	3H	19.29	20.15	19.70	20.55	20.96	0.00	0.00	0.00	0.00	0.00
	4H	20.10	20.87	20.54	21.29	21.73	0.00	0.00	0.00	0.00	0.00
	6H	20.70	21.36	21.17	21.81	22.28	0.00	0.00	0.00	0.00	0.00
	8H	20.85	21.47	21.32	21.92	22.39	0.00	0.00	0.00	0.00	0.00
	12H	20.90	21.44	21.39	21.93	22.40	0.00	0.00	0.00	0.00	0.00
8H	4H	19.96	20.58	20.43	21.02	21.49	0.00	0.00	0.00	0.00	0.00
	6H	20.54	21.04	21.04	21.54	22.02	0.00	0.00	0.00	0.00	0.00
	8H	20.69	21.14	21.21	21.66	22.15	0.00	0.00	0.00	0.00	0.00
	12H	20.75	21.14	21.26	21.64	22.21	0.00	0.00	0.00	0.00	0.00
12H	4H	19.91	20.45	20.40	20.94	21.41	0.00	0.00	0.00	0.00	0.00
	6H	20.48	20.93	21.00	21.44	21.94	0.00	0.00	0.00	0.00	0.00
	8H	20.64	21.04	21.16	21.54	22.11	0.00	0.00	0.00	0.00	0.00