

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: P1439680

Luminaire Tested: S122DR-S290D835-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439680
TEST IS SCALED FROM IESNA LM-79-24 TEST DATA (G2-2602-702-1)
Test Lab: INNOVATION CENTER
Issue Date: 4/2/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122DR-S290D835-X4F0-XX-UDD-FLB-W
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC
CORE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

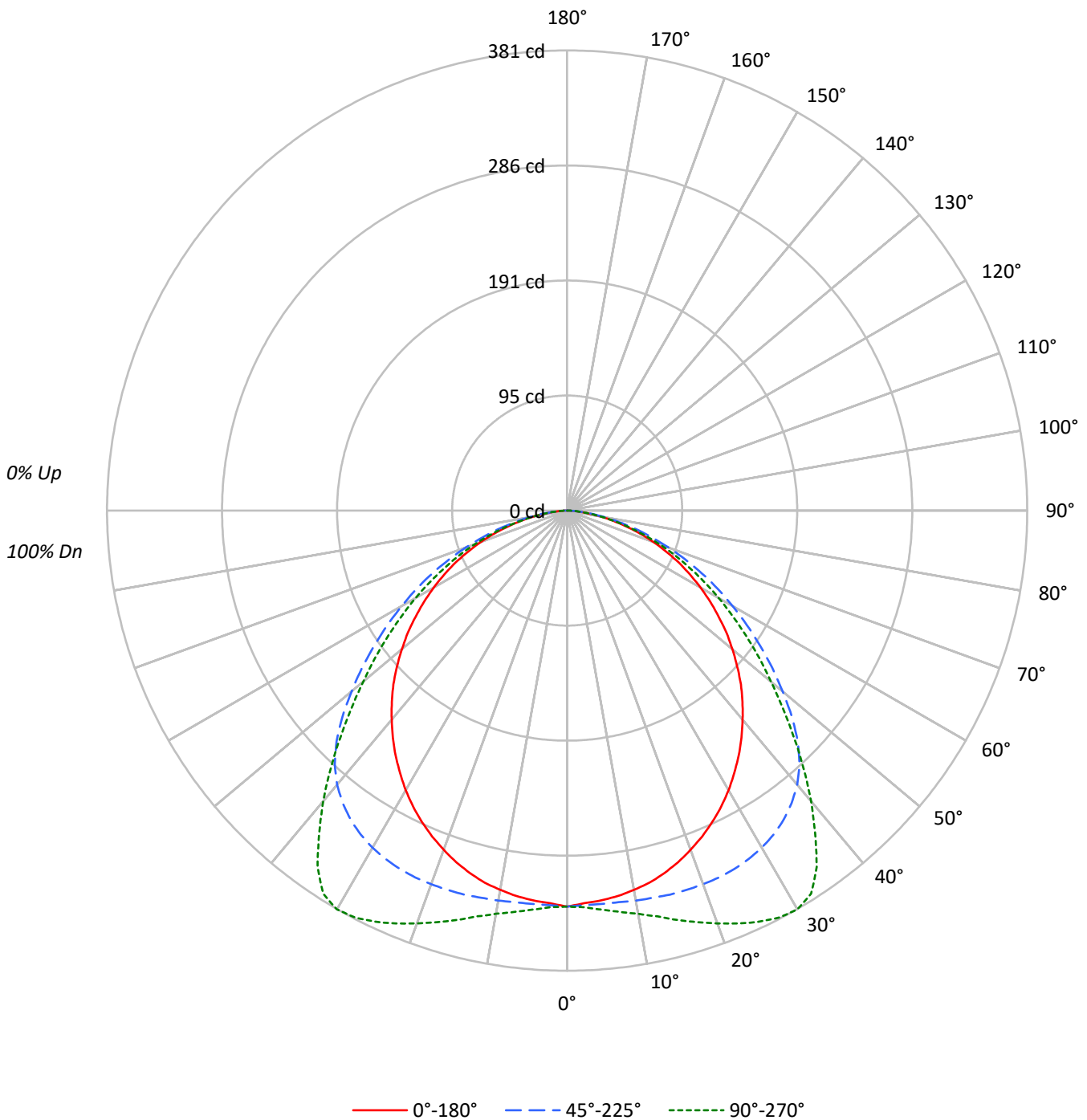
Lumens per Lamp: N/A
Luminaire Lumens: 1008.4 lumens
Efficiency: N/A
Efficacy: 80.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 12.6
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	109	105	101	97	107	102	99	95	98	95	92	94	92	89	91	89	87	85
2	100	91	85	79	97	90	84	78	86	81	76	83	79	75	80	76	73	71
3	91	80	72	66	88	79	71	66	76	70	64	73	68	63	71	66	62	60
4	83	71	63	56	81	70	62	56	68	60	55	65	59	54	63	58	53	51
5	76	64	55	48	74	63	54	48	61	53	47	59	52	47	57	51	46	44
6	71	57	48	42	69	56	48	42	55	47	42	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30
9	57	43	35	30	55	43	35	30	42	34	29	41	34	29	40	34	29	27
10	53	40	32	27	52	39	32	27	38	31	27	38	31	26	37	31	26	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6212	6212	6212
5°	6162	6219	6308
10°	6135	6308	6522
15°	6096	6457	6883
20°	6026	6637	7333
25°	5945	6846	7852
30°	5848	7051	8339
35°	5729	7228	8333
40°	5589	7328	7771
45°	5450	7232	7116
50°	5264	6862	6496
55°	5057	6438	5972
60°	4831	5994	5494
65°	4568	5523	5007
70°	4204	4936	4487
75°	3711	4275	3872
80°	3066	3393	3066
85°	2043	2217	2130

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 7288 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.4	3.1
10°-20°	93.7	9.3
20°-30°	152.0	15.1
30°-40°	192.3	19.1
40°-50°	192.6	19.1
50°-60°	161.3	16.0
60°-70°	113.7	11.3
70°-80°	58.6	5.8
80°-90°	13.0	1.3
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°	277.0	27.5
0°-40°	469.3	46.5
0°-60°	823.1	81.6
0°-90°	1008.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1008.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	328	328	328	328	328	
5°	324	330	327	329	332	31
15°	311	320	329	342	351	88
25°	284	300	328	359	376	131
35°	248	268	312	353	360	155
45°	203	225	270	272	266	157
55°	153	172	195	187	181	137
65°	102	113	123	116	112	101
75°	51	56	58	54	53	54
85°	9	10	10	10	10	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	327.9	327.9	327.9	327.9	327.9
2.5°	325.3	330.4	327.0	327.5	328.7
5°	324.0	329.6	327.0	328.7	331.7
7.5°	321.9	327.9	327.0	330.4	335.1
10°	318.9	325.7	327.9	333.8	339.0
12.5°	315.5	322.8	328.3	337.7	344.1
15°	310.8	319.8	329.2	342.4	350.9
17.5°	305.3	315.9	329.2	347.5	357.3
20°	298.9	311.2	329.2	351.8	363.7
22.5°	292.1	305.7	328.7	355.6	370.1
25°	284.4	299.7	327.5	359.4	375.6
27.5°	276.3	292.9	325.3	362.4	379.9
30°	267.3	285.2	322.3	363.7	381.2
32.5°	257.5	277.1	318.1	361.1	376.1
35°	247.7	267.8	312.5	353.0	360.3
37.5°	237.1	258.0	305.3	337.3	337.3
40°	226.0	247.3	296.3	315.5	314.2
42.5°	214.9	236.2	284.8	294.2	289.9
45°	203.4	224.7	269.9	272.0	265.6
47.5°	191.0	211.9	252.4	249.4	242.2
50°	178.6	199.1	232.8	227.7	220.4
52.5°	166.3	185.9	214.0	206.8	200.4
55°	153.1	171.8	194.9	186.7	180.8
57.5°	140.3	157.8	176.5	167.6	162.4
60°	127.5	143.3	158.2	149.7	145.0
62.5°	114.7	128.3	140.7	132.2	127.9
65°	101.9	113.4	123.2	115.5	111.7
67.5°	88.7	98.9	105.7	98.9	96.4
70°	75.9	84.0	89.1	83.1	81.0
72.5°	63.1	69.9	73.3	68.6	66.5
75°	50.7	55.9	58.4	54.1	52.9
77.5°	38.8	42.6	43.9	40.9	39.2
80°	28.1	30.3	31.1	29.0	28.1
82.5°	17.5	19.2	20.0	18.3	17.9
85°	9.4	10.2	10.2	10.2	9.8
87.5°	3.4	4.3	4.3	4.3	3.8
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	17.83	19.44	18.20	19.76	20.07	18.34	19.96	18.71	20.27	20.59
	3H	19.40	20.86	19.78	21.18	21.54	19.81	21.27	20.19	21.59	21.95
	4H	19.94	21.30	20.34	21.65	22.03	20.30	21.67	20.70	22.02	22.40
	6H	20.28	21.55	20.69	21.91	22.30	20.60	21.87	21.02	22.23	22.63
	8H	20.36	21.57	20.79	21.96	22.36	20.68	21.88	21.10	22.27	22.67
	12H	20.40	21.56	20.83	21.94	22.37	20.71	21.87	21.14	22.25	22.68
4H	2H	18.59	19.95	18.98	20.30	20.68	18.98	20.35	19.38	20.70	21.07
	3H	20.36	21.50	20.77	21.89	22.29	20.65	21.79	21.06	22.19	22.59
	4H	21.00	22.03	21.44	22.45	22.88	21.24	22.27	21.67	22.68	23.12
	6H	21.45	22.34	21.90	22.78	23.24	21.64	22.53	22.09	22.98	23.43
	8H	21.56	22.39	22.02	22.84	23.30	21.74	22.58	22.20	23.02	23.48
	12H	21.62	22.37	22.10	22.84	23.31	21.80	22.55	22.28	23.03	23.50
8H	4H	21.29	22.12	21.75	22.57	23.03	21.50	22.34	21.96	22.78	23.25
	6H	21.82	22.52	22.32	23.01	23.48	21.98	22.68	22.48	23.17	23.64
	8H	21.98	22.61	22.49	23.11	23.60	22.13	22.75	22.64	23.26	23.74
	12H	22.09	22.64	22.60	23.13	23.69	22.23	22.78	22.74	23.27	23.83
12H	4H	21.30	22.05	21.78	22.53	23.00	21.52	22.27	22.00	22.74	23.21
	6H	21.85	22.48	22.36	22.98	23.47	22.01	22.63	22.52	23.14	23.63
	8H	22.06	22.61	22.57	23.10	23.66	22.20	22.75	22.71	23.24	23.80