

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: P1439926

Luminaire Tested: S124DR-H675D927-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439926
TEST IS SCALED FROM IESNA LM-79-24 TEST DATA (G2-2509-563-1)
Test Lab: INNOVATION CENTER
Issue Date: 4/2/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124DR-H675D927-X4F0-XX-UDD-FLB-W
Description: DEFINE 4, DIRECT RECESSED WITH BATWING FLUSH OPTIC
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

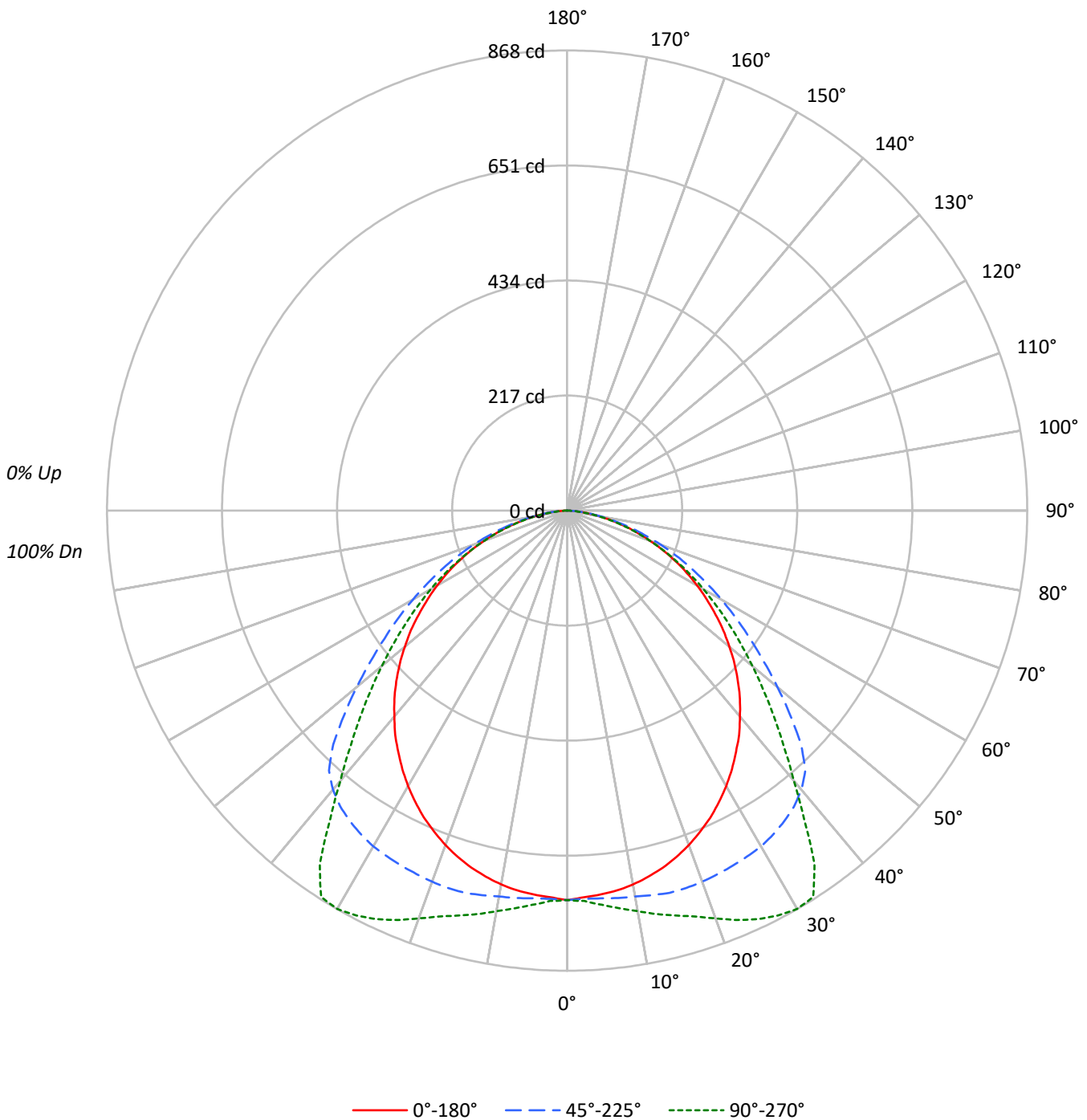
Lumens per Lamp: N/A
Luminaire Lumens: 2233.5 lumens
Efficiency: N/A
Efficacy: 93.8 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.53 / 1.51
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
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																		
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	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	103	99	95	98	95	92	94	92	90	91	89	87	85																												
2	100	92	85	80	97	90	84	79	86	81	77	83	79	75	80	77	73	71																												
3	91	81	73	67	89	79	72	66	76	70	65	74	68	64	71	67	63	60																												
4	83	72	63	57	81	70	62	56	68	61	55	66	60	55	63	58	54	52																												
5	77	64	55	49	75	63	55	49	61	54	48	59	53	47	57	52	47	45																												
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39																												
7	66	52	44	38	64	52	43	37	50	43	37	49	42	37	47	41	37	35																												
8	61	48	39	34	60	47	39	33	46	38	33	44	38	33	43	37	33	31																												
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28																												
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6498	6498	6498
5°	6452	6516	6625
10°	6430	6636	6890
15°	6383	6833	7236
20°	6318	7010	7702
25°	6234	7211	8295
30°	6127	7466	8857
35°	5994	7714	8780
40°	5852	7933	7683
45°	5699	7801	6908
50°	5496	7122	6279
55°	5270	6482	5736
60°	5011	5943	5254
65°	4707	5416	4797
70°	4307	4847	4289
75°	3795	4164	3720
80°	3121	3340	3009
85°	2191	2272	2049

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 7801 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.5	3.2
10°-20°	211.3	9.5
20°-30°	344.0	15.4
30°-40°	436.8	19.6
40°-50°	425.7	19.1
50°-60°	349.0	15.6
60°-70°	243.5	10.9
70°-80°	125.0	5.6
80°-90°	27.7	1.2
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°	625.8	28.0
0°-40°	1062.6	47.6
0°-60°	1837.3	82.3
0°-90°	2233.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2233.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	735	735	735	735	735	
5°	727	738	734	739	746	69
15°	697	719	746	776	790	197
25°	639	680	739	816	850	294
35°	555	609	715	819	814	348
45°	456	512	624	572	552	351
55°	342	394	420	385	372	306
65°	225	258	259	238	229	223
75°	111	123	122	113	109	118
85°	22	22	22	21	20	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	734.9	734.9	734.9	734.9	734.9
2.5°	729.9	739.2	732.8	735.6	737.1
5°	727.0	737.8	734.2	739.2	746.5
7.5°	722.7	734.9	737.1	747.2	756.6
10°	716.2	730.6	739.2	756.6	767.4
12.5°	707.5	725.5	742.9	766.7	779.6
15°	697.4	719.1	746.5	776.0	790.5
17.5°	685.2	711.1	746.5	783.2	802.7
20°	671.5	701.7	745.0	792.6	818.6
22.5°	655.6	691.6	742.1	803.4	835.9
25°	639.0	680.1	739.2	815.7	850.3
27.5°	620.2	666.4	735.6	825.1	861.1
30°	600.1	649.8	731.3	829.4	867.6
32.5°	578.4	630.3	724.1	829.4	864.0
35°	555.3	609.4	714.7	818.6	813.5
37.5°	533.0	587.1	703.2	765.9	734.2
40°	507.0	563.3	687.3	691.6	665.7
42.5°	482.5	538.0	665.0	628.9	605.8
45°	455.8	512.1	623.9	571.9	552.5
47.5°	428.4	483.9	570.5	520.7	502.7
50°	399.6	455.8	517.8	472.4	456.5
52.5°	371.4	425.5	467.3	427.7	412.5
55°	341.9	394.5	420.5	385.1	372.1
57.5°	312.3	362.8	377.9	345.5	333.2
60°	283.4	328.9	336.1	308.0	297.1
62.5°	254.6	293.5	296.4	271.9	262.5
65°	225.0	257.5	258.9	238.0	229.3
67.5°	196.2	222.9	222.9	204.8	197.6
70°	166.6	189.0	187.5	173.1	165.9
72.5°	138.5	154.3	152.9	142.1	137.0
75°	111.1	123.3	121.9	113.2	108.9
77.5°	85.1	93.8	92.3	86.5	82.9
80°	61.3	66.4	65.6	61.3	59.1
82.5°	40.4	43.3	41.8	38.9	37.5
85°	21.6	22.4	22.4	20.9	20.2
87.5°	7.9	7.9	7.9	7.9	7.2
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	18.19	19.79	18.55	20.10	20.41	17.97	19.57	18.34	19.88	20.20
	3H	19.69	21.13	20.07	21.46	21.82	19.44	20.88	19.82	21.21	21.57
	4H	20.19	21.55	20.59	21.89	22.27	19.94	21.29	20.34	21.64	22.02
	6H	20.51	21.77	20.93	22.13	22.52	20.25	21.51	20.67	21.87	22.26
	8H	20.60	21.79	21.02	22.18	22.58	20.33	21.52	20.75	21.91	22.31
	12H	20.64	21.78	21.07	22.16	22.59	20.36	21.51	20.79	21.89	22.32
4H	2H	18.81	20.16	19.21	20.51	20.89	18.64	19.99	19.04	20.34	20.72
	3H	20.54	21.67	20.95	22.06	22.46	20.31	21.43	20.72	21.83	22.23
	4H	21.17	22.18	21.60	22.60	23.03	20.90	21.92	21.33	22.33	22.77
	6H	21.59	22.48	22.05	22.92	23.38	21.32	22.20	21.77	22.64	23.10
	8H	21.71	22.53	22.17	22.98	23.44	21.42	22.25	21.88	22.69	23.16
	12H	21.77	22.51	22.25	22.99	23.46	21.48	22.22	21.96	22.70	23.17
8H	4H	21.41	22.24	21.87	22.68	23.14	21.18	22.00	21.64	22.45	22.91
	6H	21.93	22.62	22.43	23.11	23.58	21.68	22.36	22.17	22.85	23.33
	8H	22.10	22.71	22.61	23.22	23.71	21.82	22.44	22.33	22.95	23.43
	12H	22.21	22.75	22.71	23.24	23.80	21.92	22.47	22.43	22.96	23.52
12H	4H	21.42	22.16	21.90	22.64	23.11	21.19	21.94	21.67	22.41	22.88
	6H	21.95	22.57	22.46	23.08	23.56	21.71	22.32	22.22	22.83	23.32
	8H	22.16	22.71	22.67	23.20	23.76	21.90	22.44	22.41	22.93	23.50