

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: P1055661

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055661
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-4)
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-W
Description: DEFINE 3, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

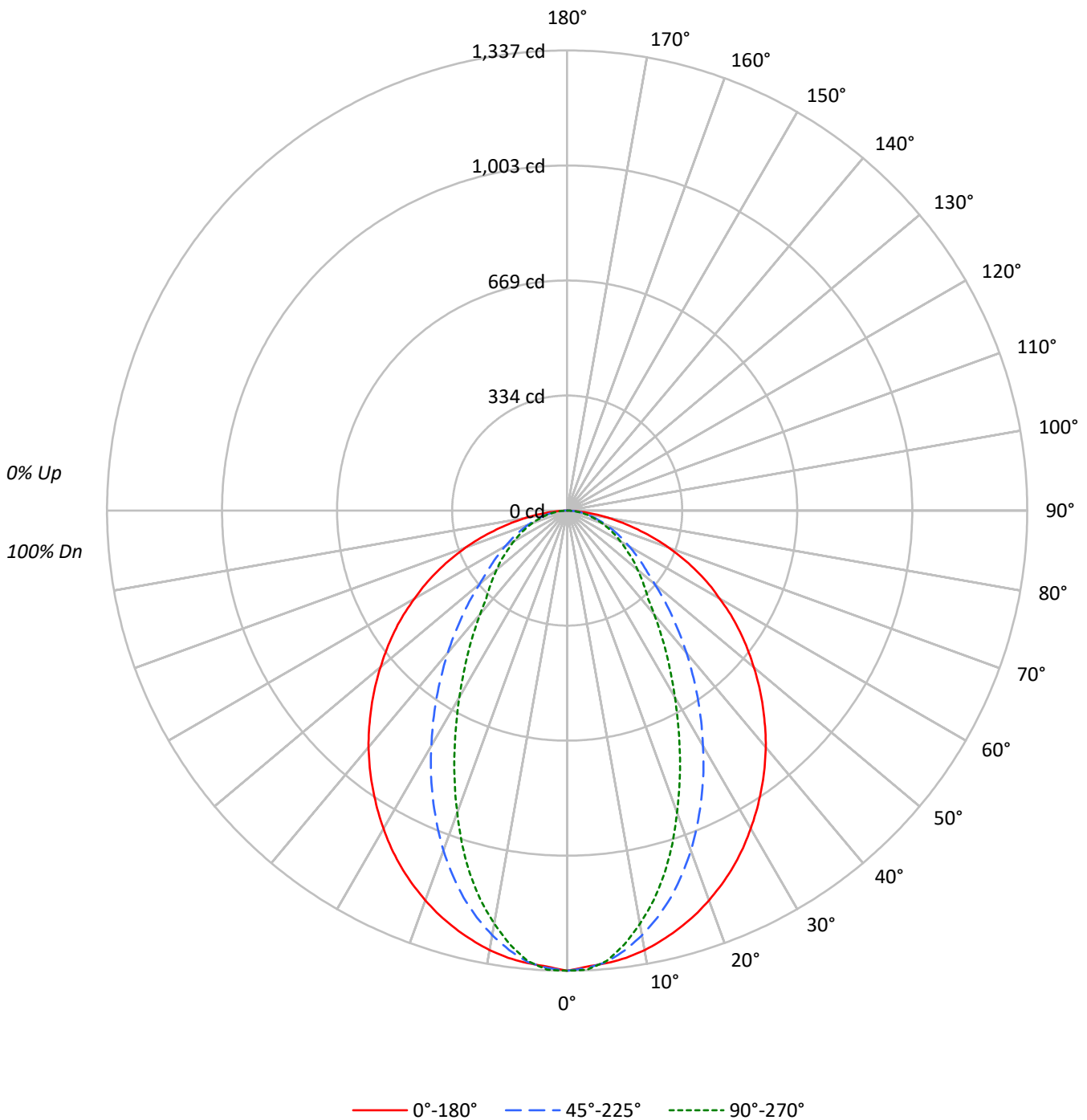
Lumens per Lamp: N/A
Luminaire Lumens: 2344.9 lumens
Efficiency: N/A
Efficacy: 88.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.83 / 1.02
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 26.4
Input Voltage (V): 120
Input Current (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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88	86
2	101	94	88	83	99	92	87	82	89	84	80	85	82	78	83	79	76	74
3	93	84	77	71	91	82	76	70	80	74	69	77	72	68	74	70	67	65
4	86	75	68	61	84	74	67	61	72	65	60	70	64	59	67	63	59	57
5	80	68	60	54	78	67	60	54	65	58	53	63	57	53	62	56	52	50
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42	40
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	39	37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16119	16119	16119
5°	15975	15939	15903
10°	15878	15340	14923
15°	15690	14529	13630
20°	15460	13484	11983
25°	15192	12278	10310
30°	14854	10984	8715
35°	14497	9714	7359
40°	14133	8483	6185
45°	13708	7315	5456
50°	13280	6227	5008
55°	12885	5549	4624
60°	12346	5015	4316
65°	11839	4593	4051
70°	11033	4230	3807
75°	9875	3913	3587
80°	8470	3610	3333
85°	5948	3320	3182

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 13708 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.9	5.3
10°-20°	327.9	14.0
20°-30°	432.0	18.4
30°-40°	438.4	18.7
40°-50°	381.1	16.3
50°-60°	298.6	12.7
60°-70°	202.8	8.7
70°-80°	109.9	4.7
80°-90°	30.3	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°	883.8	37.7
0°-40°	1322.2	56.4
0°-60°	2001.8	85.4
0°-90°	2344.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2344.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1337	1337	1337	1337	1337	
5°	1320	1336	1317	1305	1314	125
15°	1257	1239	1164	1107	1092	354
25°	1142	1073	923	808	775	526
35°	985	868	660	534	500	616
45°	804	645	429	331	320	620
55°	613	426	264	225	220	547
65°	415	230	161	144	142	410
75°	212	106	84	78	77	226
85°	43	26	24	22	23	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1337	1337	1337	1337	1337
2.5°	1326	1343	1330	1331	1335
5°	1320	1336	1317	1305	1314
7.5°	1311	1323	1288	1269	1272
10°	1297	1301	1253	1223	1219
12.5°	1278	1271	1211	1167	1160
15°	1257	1239	1164	1107	1092
17.5°	1233	1203	1109	1039	1016
20°	1205	1163	1051	962	934
22.5°	1175	1121	988	883	854
25°	1142	1073	923	808	775
27.5°	1106	1025	857	734	697
30°	1067	975	789	662	626
32.5°	1027	922	724	595	560
35°	985	868	660	534	500
37.5°	942	813	598	476	444
40°	898	757	539	422	393
42.5°	851	701	482	371	349
45°	804	645	429	331	320
47.5°	757	588	379	303	293
50°	708	533	332	277	267
52.5°	660	479	293	252	245
55°	613	426	264	225	220
57.5°	564	374	235	204	198
60°	512	324	208	182	179
62.5°	465	277	184	163	160
65°	415	230	161	144	142
67.5°	364	191	140	126	125
70°	313	161	120	109	108
72.5°	263	133	101	94	92
75°	212	106	84	78	77
77.5°	166	82	67	63	62
80°	122	61	52	49	48
82.5°	80	42	37	35	35
85°	43	26	24	22	23
87.5°	15	11	11	10	11
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	20.22	21.71	20.58	22.02	22.34	15.37	16.86	15.73	17.17	17.49
	3H	22.10	23.44	22.48	23.77	24.13	16.99	18.33	17.37	18.66	19.02
	4H	22.86	24.12	23.26	24.46	24.84	17.63	18.89	18.03	19.24	19.61
	6H	23.42	24.58	23.84	24.95	25.34	18.12	19.28	18.53	19.65	20.04
	8H	23.60	24.70	24.02	25.09	25.49	18.29	19.39	18.72	19.78	20.19
	12H	23.69	24.75	24.12	25.13	25.56	18.41	19.47	18.85	19.85	20.28
4H	2H	20.26	21.52	20.66	21.87	22.25	16.09	17.35	16.49	17.70	18.08
	3H	22.28	23.32	22.69	23.72	24.13	17.92	18.96	18.33	19.36	19.76
	4H	23.10	24.04	23.53	24.45	24.89	18.66	19.60	19.09	20.02	20.46
	6H	23.78	24.60	24.24	25.04	25.50	19.27	20.09	19.73	20.53	20.99
	8H	24.01	24.77	24.47	25.22	25.69	19.49	20.25	19.95	20.69	21.16
	12H	24.16	24.84	24.65	25.32	25.79	19.65	20.34	20.14	20.81	21.29
8H	4H	23.12	23.89	23.59	24.33	24.80	19.04	19.81	19.51	20.25	20.72
	6H	23.85	24.48	24.35	24.97	25.45	19.77	20.40	20.27	20.90	21.37
	8H	24.12	24.69	24.63	25.20	25.68	20.06	20.63	20.58	21.14	21.63
	12H	24.33	24.83	24.84	25.32	25.89	20.31	20.81	20.82	21.30	21.86
12H	4H	23.11	23.79	23.59	24.27	24.74	19.10	19.78	19.58	20.26	20.73
	6H	23.83	24.40	24.35	24.91	25.40	19.86	20.42	20.37	20.93	21.42
	8H	24.14	24.64	24.65	25.13	25.70	20.20	20.70	20.71	21.19	21.76