

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: P242353

Luminaire Tested: S122RDRP-S290D927-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242353
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-24)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDRP-S290D927-X4F0-XX-UDD-F-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

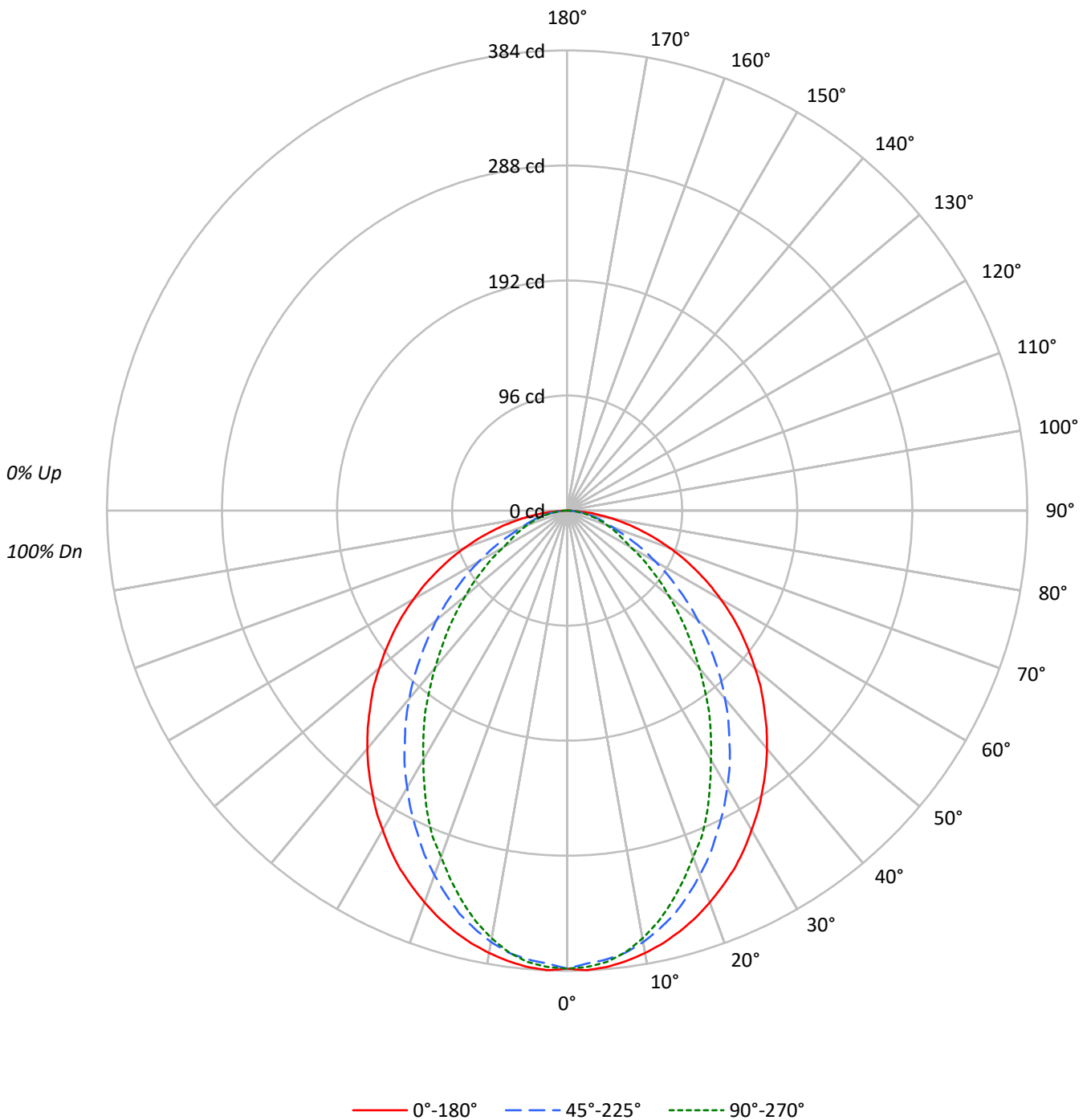
Lumens per Lamp: N/A
Luminaire Lumens: 786.0 lumens
Efficiency: N/A
Efficacy: 67.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 11.6
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	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86
2	101	94	87	82	98	92	86	81	88	83	79	85	81	78	82	79	76	74
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	74	69	66	64
4	86	75	66	60	83	73	66	60	71	64	59	69	63	58	66	62	57	55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49
6	74	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	39
8	64	51	43	38	62	51	43	37	49	42	37	48	42	37	47	41	37	35
9	60	47	39	34	59	47	39	34	46	39	34	44	38	34	44	38	34	32
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7280	7280	7280
5°	7308	7189	7229
10°	7251	7071	7011
15°	7168	6862	6663
20°	7054	6561	6233
25°	6936	6223	5815
30°	6770	5873	5279
35°	6611	5492	4809
40°	6450	5100	4267
45°	6260	4657	3774
50°	6069	4214	3289
55°	5868	3733	2826
60°	5638	3227	2347
65°	5377	2713	2136
70°	5068	2233	1966
75°	4681	2039	1833
80°	4135	1821	1667
85°	3256	1442	1442

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6260 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	35.8	4.6
10°-20°	98.3	12.5
20°-30°	138.1	17.6
30°-40°	150.5	19.1
40°-50°	138.3	17.6
50°-60°	108.6	13.8
60°-70°	70.7	9.0
70°-80°	36.4	4.6
80°-90°	9.3	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°	272.2	34.6
0°-40°	422.7	53.8
0°-60°	669.7	85.2
0°-90°	786.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	786.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	382	382	382	382	382	
5°	382	380	376	379	378	36
15°	364	360	348	341	338	102
25°	330	319	296	282	277	152
35°	284	267	236	214	207	178
45°	232	209	173	148	140	180
55°	177	150	112	92	85	158
65°	119	91	60	48	47	118
75°	64	39	28	25	25	67
85°	15	8	7	7	7	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	382.2	382.2	382.2	382.2	382.2
2.5°	383.9	382.2	378.4	381.9	381.2
5°	382.2	380.5	376.0	379.1	378.1
7.5°	379.1	377.0	372.2	373.6	371.8
10°	374.9	372.5	365.6	364.6	362.5
12.5°	369.8	366.6	357.3	355.2	351.4
15°	363.5	359.7	348.0	341.4	337.9
17.5°	356.3	350.7	336.2	328.6	323.1
20°	348.0	341.0	323.7	315.1	307.5
22.5°	339.0	331.0	311.0	299.2	294.0
25°	330.0	318.9	296.1	281.9	276.7
27.5°	319.3	307.5	282.2	266.0	258.0
30°	307.8	294.7	267.0	249.4	240.0
32.5°	296.8	280.9	252.5	231.7	223.1
35°	284.3	266.7	236.2	214.4	206.8
37.5°	272.2	253.2	221.0	197.2	188.5
40°	259.4	238.7	205.1	180.6	171.6
42.5°	246.3	224.1	189.2	163.6	155.0
45°	232.4	209.3	172.9	148.4	140.1
47.5°	219.3	194.7	157.4	132.8	125.2
50°	204.8	180.2	142.2	118.3	111.0
52.5°	190.6	164.6	127.6	104.8	98.2
55°	176.7	149.8	112.4	91.7	85.1
57.5°	162.6	134.9	98.9	79.6	74.0
60°	148.0	120.4	84.7	67.1	61.6
62.5°	133.9	106.2	72.6	56.0	53.3
65°	119.3	91.3	60.2	48.4	47.4
67.5°	105.5	77.5	48.4	42.5	41.5
70°	91.0	64.0	40.1	36.7	35.3
72.5°	77.1	51.5	33.6	30.8	30.1
75°	63.6	39.4	27.7	25.2	24.9
77.5°	50.2	28.0	21.8	20.4	19.7
80°	37.7	20.1	16.6	15.2	15.2
82.5°	26.3	13.5	11.4	10.7	10.7
85°	14.9	7.6	6.6	6.6	6.6
87.5°	5.5	2.8	2.8	2.4	2.4
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	18.13	19.65	18.50	19.97	20.28	14.09	15.62	14.46	15.93	16.24
	3H	19.90	21.26	20.28	21.59	21.95	15.36	16.72	15.74	17.05	17.41
	4H	20.56	21.84	20.96	22.19	22.57	15.86	17.14	16.26	17.49	17.87
	6H	21.05	22.24	21.46	22.60	22.99	16.24	17.42	16.65	17.79	18.18
	8H	21.22	22.34	21.64	22.73	23.14	16.36	17.49	16.79	17.88	18.28
	12H	21.32	22.40	21.75	22.78	23.21	16.45	17.52	16.88	17.91	18.34
4H	2H	18.24	19.52	18.64	19.87	20.24	14.79	16.07	15.19	16.42	16.80
	3H	20.17	21.23	20.58	21.63	22.03	16.23	17.30	16.64	17.70	18.10
	4H	20.92	21.87	21.35	22.29	22.73	16.83	17.79	17.26	18.20	18.64
	6H	21.51	22.34	21.97	22.79	23.25	17.32	18.15	17.78	18.59	19.05
	8H	21.73	22.50	22.19	22.95	23.41	17.48	18.26	17.94	18.70	19.17
	12H	21.88	22.57	22.36	23.05	23.52	17.60	18.29	18.08	18.77	19.24
8H	4H	20.94	21.72	21.41	22.16	22.63	17.18	17.96	17.65	18.41	18.87
	6H	21.58	22.22	22.08	22.71	23.19	17.77	18.41	18.27	18.90	19.38
	8H	21.83	22.41	22.35	22.92	23.41	17.99	18.57	18.50	19.08	19.57
	12H	22.04	22.55	22.55	23.04	23.60	18.17	18.68	18.68	19.17	19.74
12H	4H	20.93	21.62	21.41	22.10	22.57	17.23	17.92	17.71	18.40	18.87
	6H	21.56	22.14	22.08	22.65	23.14	17.83	18.41	18.35	18.92	19.41
	8H	21.85	22.36	22.36	22.85	23.41	18.11	18.62	18.62	19.11	19.67