

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: P242367

Luminaire Tested: S122RDRP-S290D840-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242367
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-S290D840-X4F0-XX-UDD-F-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

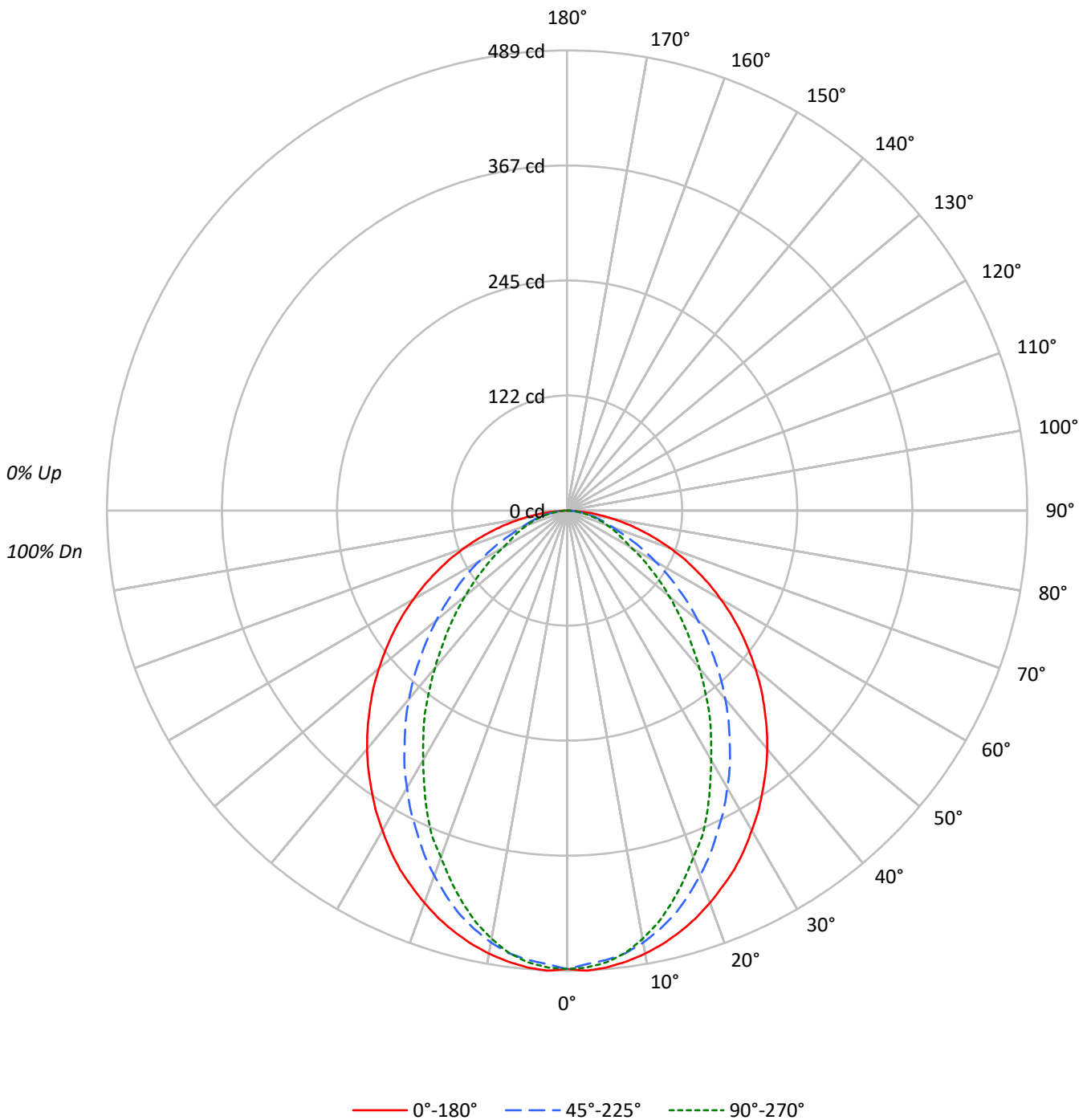
Lumens per Lamp: N/A
Luminaire Lumens: 1002.0 lumens
Efficiency: N/A
Efficacy: 86.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86				86
2	101	94	87	82	98	92	86	81	88	83	79	85	81	78	82	79	76	74				74
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	74	69	66	64				64
4	86	75	66	60	83	73	66	60	71	64	59	69	63	58	66	62	57	55				55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49				49
6	74	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43				43
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	39				39
8	64	51	43	38	62	51	43	37	49	42	37	48	42	37	47	41	37	35				35
9	60	47	39	34	59	47	39	34	46	39	34	44	38	34	44	38	34	32				32
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29				29

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9280	9280	9280
5°	9315	9164	9214
10°	9245	9015	8938
15°	9138	8748	8495
20°	8992	8365	7946
25°	8840	7932	7413
30°	8631	7487	6730
35°	8427	7004	6132
40°	8223	6502	5438
45°	7982	5940	4811
50°	7734	5369	4193
55°	7482	4759	3603
60°	7189	4114	2990
65°	6855	3457	2722
70°	6460	2846	2506
75°	5969	2598	2333
80°	5276	2325	2128
85°	4152	1836	1836

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7982 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.7	4.6
10°-20°	125.4	12.5
20°-30°	176.0	17.6
30°-40°	191.8	19.1
40°-50°	176.3	17.6
50°-60°	138.5	13.8
60°-70°	90.1	9.0
70°-80°	46.4	4.6
80°-90°	11.9	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°	347.0	34.6
0°-40°	538.9	53.8
0°-60°	853.7	85.2
0°-90°	1002.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1002.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	487	487	487	487	487	
5°	487	485	479	483	482	46
15°	463	459	444	435	431	131
25°	421	406	377	359	353	193
35°	362	340	301	273	264	227
45°	296	267	220	189	179	229
55°	225	191	143	117	108	201
65°	152	116	77	62	60	151
75°	81	50	35	32	32	86
85°	19	10	8	8	8	23
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	487.2	487.2	487.2	487.2	487.2
2.5°	489.4	487.2	482.4	486.8	485.9
5°	487.2	485.0	479.3	483.3	481.9
7.5°	483.3	480.6	474.4	476.2	474.0
10°	478.0	474.9	466.1	464.7	462.1
12.5°	471.4	467.4	455.5	452.8	448.0
15°	463.4	458.6	443.6	435.2	430.8
17.5°	454.2	447.1	428.6	418.9	411.8
20°	443.6	434.8	412.7	401.7	392.0
22.5°	432.1	422.0	396.4	381.4	374.8
25°	420.6	406.5	377.4	359.4	352.7
27.5°	407.0	392.0	359.8	339.1	328.9
30°	392.4	375.7	340.4	317.9	306.0
32.5°	378.3	358.0	321.9	295.4	284.4
35°	362.4	340.0	301.2	273.4	263.7
37.5°	347.0	322.8	281.8	251.3	240.3
40°	330.7	304.2	261.5	230.2	218.7
42.5°	313.9	285.7	241.2	208.6	197.5
45°	296.3	266.8	220.5	189.2	178.6
47.5°	279.5	248.2	200.6	169.3	159.6
50°	261.0	229.7	181.2	150.8	141.5
52.5°	243.0	209.9	162.7	133.6	125.2
55°	225.3	190.9	143.3	116.8	108.5
57.5°	207.2	172.0	126.1	101.4	94.4
60°	188.7	153.4	108.0	85.5	78.5
62.5°	170.6	135.4	92.6	71.4	67.9
65°	152.1	116.4	76.7	61.7	60.4
67.5°	134.5	98.8	61.7	54.2	52.9
70°	116.0	81.6	51.1	46.7	45.0
72.5°	98.3	65.7	42.8	39.2	38.4
75°	81.1	50.3	35.3	32.2	31.7
77.5°	63.9	35.7	27.8	26.0	25.1
80°	48.1	25.6	21.2	19.4	19.4
82.5°	33.5	17.2	14.6	13.7	13.7
85°	19.0	9.7	8.4	8.4	8.4
87.5°	7.1	3.5	3.5	3.1	3.1
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	18.98	20.50	19.34	20.81	21.13	14.93	16.46	15.30	16.77	17.08
	3H	20.74	22.11	21.12	22.43	22.80	16.20	17.57	16.58	17.89	18.25
	4H	21.41	22.69	21.81	23.04	23.42	16.70	17.98	17.10	18.33	18.71
	6H	21.90	23.08	22.31	23.45	23.84	17.08	18.26	17.49	18.63	19.02
	8H	22.06	23.19	22.49	23.58	23.98	17.21	18.33	17.63	18.72	19.12
	12H	22.17	23.24	22.60	23.63	24.05	17.29	18.37	17.72	18.75	19.18
4H	2H	19.08	20.36	19.48	20.71	21.09	15.63	16.91	16.03	17.26	17.64
	3H	21.01	22.08	21.42	22.48	22.88	17.07	18.14	17.48	18.54	18.94
	4H	21.76	22.72	22.20	23.14	23.57	17.67	18.63	18.10	19.04	19.48
	6H	22.35	23.19	22.81	23.63	24.09	18.16	18.99	18.62	19.43	19.89
	8H	22.57	23.35	23.03	23.79	24.26	18.32	19.10	18.79	19.54	20.01
	12H	22.72	23.42	23.21	23.90	24.37	18.44	19.14	18.92	19.61	20.08
8H	4H	21.79	22.56	22.25	23.01	23.48	18.03	18.80	18.49	19.25	19.72
	6H	22.42	23.07	22.92	23.56	24.04	18.61	19.26	19.11	19.75	20.22
	8H	22.68	23.25	23.19	23.76	24.25	18.84	19.41	19.35	19.92	20.41
	12H	22.88	23.39	23.39	23.88	24.45	19.02	19.53	19.53	20.02	20.58
12H	4H	21.77	22.47	22.25	22.94	23.42	18.07	18.76	18.55	19.24	19.71
	6H	22.41	22.98	22.92	23.49	23.98	18.68	19.25	19.19	19.76	20.25
	8H	22.69	23.20	23.20	23.69	24.26	18.95	19.46	19.46	19.95	20.52