

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: P243120

Luminaire Tested: S122DRP-H290D835-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243120
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-48)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122DRP-H290D835-X4F0-XX-UDD-F-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

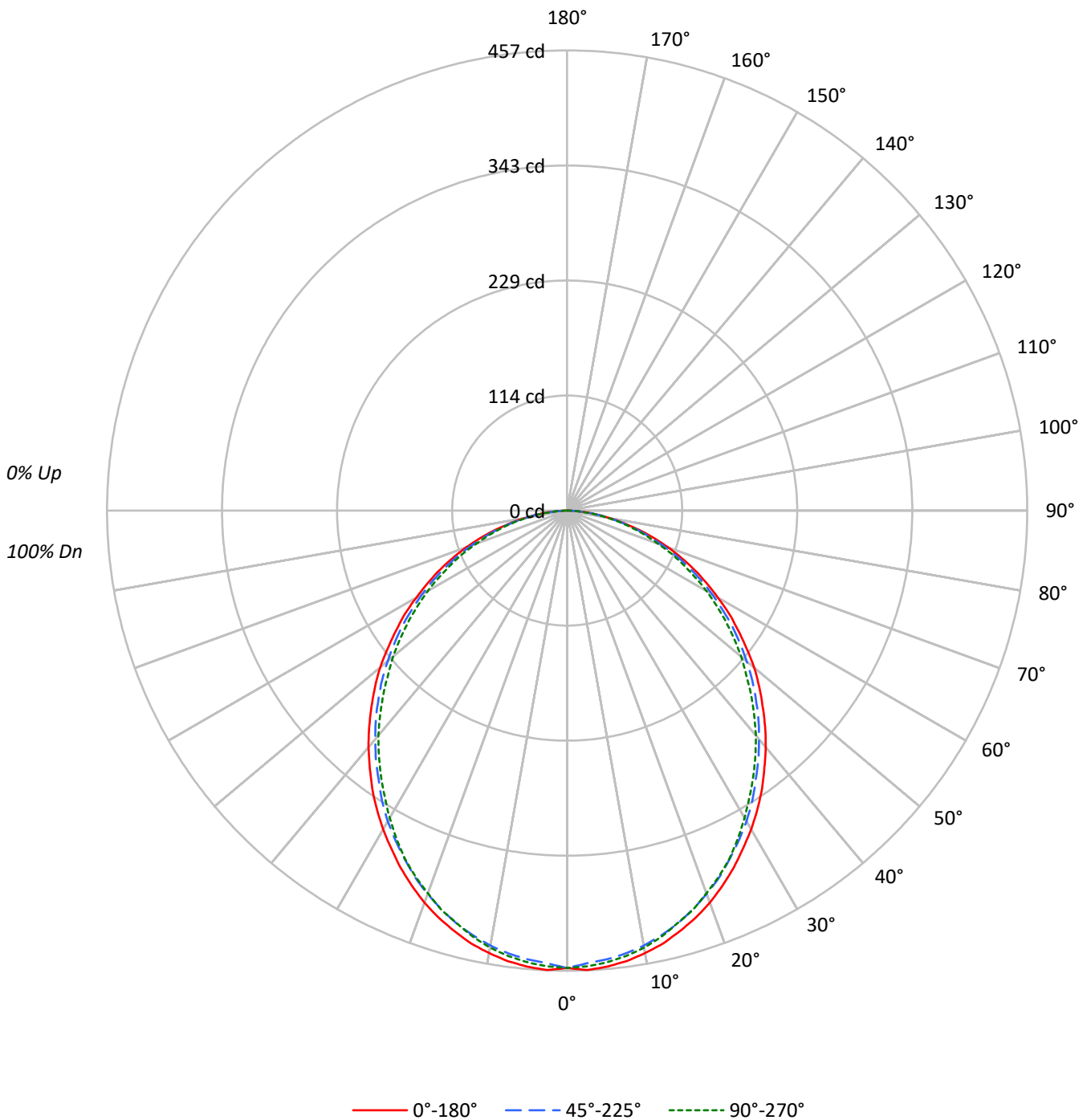
Lumens per Lamp: N/A
Luminaire Lumens: 1155.8 lumens
Efficiency: N/A
Efficacy: 103.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 11.2
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	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	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84																												
2	99	91	85	79	97	89	83	78	86	81	76	83	78	74	80	76	73	71																												
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	71	66	62	60																												
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51																												
5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	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	38	50	43	37	49	42	37	47	41	37	35																												
8	61	48	40	34	60	47	39	34	46	39	33	45	38	33	44	38	33	31																												
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28																												
10	54	41	33	28	53	40	33	28	39	32	28	38	32	27	37	32	27	26																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8651	8651	8651
5°	8692	8556	8612
10°	8632	8485	8526
15°	8527	8371	8363
20°	8400	8213	8197
25°	8226	8024	8016
30°	8039	7837	7753
35°	7846	7592	7494
40°	7631	7370	7256
45°	7397	7138	6958
50°	7183	6899	6685
55°	6881	6645	6396
60°	6587	6331	6091
65°	6301	5999	5738
70°	5920	5619	5341
75°	5394	5174	4931
80°	4684	4541	4366
85°	4021	3562	3300

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7397 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.8	3.7
10°-20°	120.4	10.4
20°-30°	177.0	15.3
30°-40°	205.5	17.8
40°-50°	205.2	17.8
50°-60°	178.7	15.5
60°-70°	132.2	11.4
70°-80°	74.5	6.4
80°-90°	19.4	1.7
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°	340.1	29.4
0°-40°	545.7	47.2
0°-60°	929.6	80.4
0°-90°	1155.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1155.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	454	454	454	454	454	
5°	455	452	448	451	450	43
15°	432	430	424	426	424	122
25°	391	388	382	381	381	180
35°	337	334	326	324	322	211
45°	275	272	265	261	258	212
55°	207	206	200	195	193	186
65°	140	138	133	129	127	138
75°	73	73	70	68	67	78
85°	18	18	16	16	15	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	454.2	454.2	454.2	454.2	454.2
2.5°	456.7	454.6	450.0	453.8	453.0
5°	454.6	452.5	447.5	451.3	450.4
7.5°	451.3	449.2	443.7	447.5	446.3
10°	446.3	443.7	438.7	441.2	440.8
12.5°	440.4	437.9	432.0	434.1	433.3
15°	432.4	430.4	424.5	426.2	424.1
17.5°	424.1	420.7	415.3	417.0	415.7
20°	414.4	411.1	405.2	406.1	404.4
22.5°	403.1	399.8	394.4	394.4	393.5
25°	391.4	388.1	381.8	381.4	381.4
27.5°	378.4	375.5	369.2	368.0	367.1
30°	365.5	363.0	356.3	353.7	352.5
32.5°	351.7	348.3	342.0	339.1	337.0
35°	337.4	333.6	326.5	323.6	322.3
37.5°	321.9	318.2	311.9	309.4	306.9
40°	306.9	303.5	296.4	292.6	291.8
42.5°	290.9	287.6	281.3	277.1	274.6
45°	274.6	271.7	265.0	260.8	258.3
47.5°	258.7	255.4	249.5	244.5	241.1
50°	242.4	239.0	232.8	226.9	225.6
52.5°	224.4	222.3	216.0	210.6	208.9
55°	207.2	205.5	200.1	194.7	192.6
57.5°	190.9	188.8	182.5	178.3	175.8
60°	172.9	171.6	166.2	161.6	159.9
62.5°	156.1	154.5	149.9	145.3	143.2
65°	139.8	137.7	133.1	128.9	127.3
67.5°	123.1	121.0	117.2	113.9	112.2
70°	106.3	104.7	100.9	98.0	95.9
72.5°	90.0	88.3	85.0	82.1	81.6
75°	73.3	72.8	70.3	67.8	67.0
77.5°	57.8	57.4	55.7	54.4	53.6
80°	42.7	42.7	41.4	40.2	39.8
82.5°	29.3	29.7	28.5	27.6	27.6
85°	18.4	17.6	16.3	15.5	15.1
87.5°	7.5	6.3	5.9	4.6	4.2
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	18.78	20.39	19.15	20.71	21.02	18.35	19.96	18.72	20.28	20.59
	3H	20.53	21.99	20.91	22.31	22.68	20.05	21.51	20.43	21.83	22.19
	4H	21.18	22.55	21.58	22.90	23.27	20.68	22.05	21.08	22.40	22.77
	6H	21.64	22.91	22.05	23.27	23.66	21.14	22.41	21.55	22.77	23.16
	8H	21.78	22.99	22.20	23.38	23.78	21.28	22.49	21.71	22.88	23.28
	12H	21.87	23.03	22.30	23.41	23.84	21.36	22.52	21.79	22.90	23.33
4H	2H	19.34	20.71	19.74	21.06	21.43	19.00	20.37	19.40	20.71	21.09
	3H	21.32	22.46	21.73	22.86	23.26	20.92	22.06	21.32	22.46	22.86
	4H	22.10	23.13	22.53	23.54	23.98	21.66	22.70	22.10	23.11	23.55
	6H	22.68	23.59	23.14	24.03	24.48	22.25	23.15	22.70	23.59	24.05
	8H	22.87	23.71	23.33	24.15	24.62	22.43	23.28	22.89	23.72	24.18
	12H	23.00	23.76	23.48	24.24	24.71	22.55	23.31	23.03	23.78	24.25
8H	4H	22.37	23.21	22.83	23.66	24.12	21.99	22.83	22.45	23.27	23.74
	6H	23.07	23.77	23.56	24.26	24.73	22.68	23.38	23.18	23.87	24.35
	8H	23.32	23.95	23.83	24.46	24.95	22.93	23.56	23.44	24.07	24.55
	12H	23.53	24.08	24.03	24.57	25.14	23.11	23.66	23.61	24.15	24.72
12H	4H	22.39	23.15	22.87	23.63	24.10	22.02	22.78	22.50	23.25	23.72
	6H	23.11	23.74	23.62	24.25	24.73	22.74	23.37	23.25	23.87	24.36
	8H	23.42	23.98	23.93	24.47	25.03	23.04	23.60	23.55	24.09	24.65