

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: P243140

Luminaire Tested: S122DRP-H485D940-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243140
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-H485D940-X4F0-XX-UDD-F-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

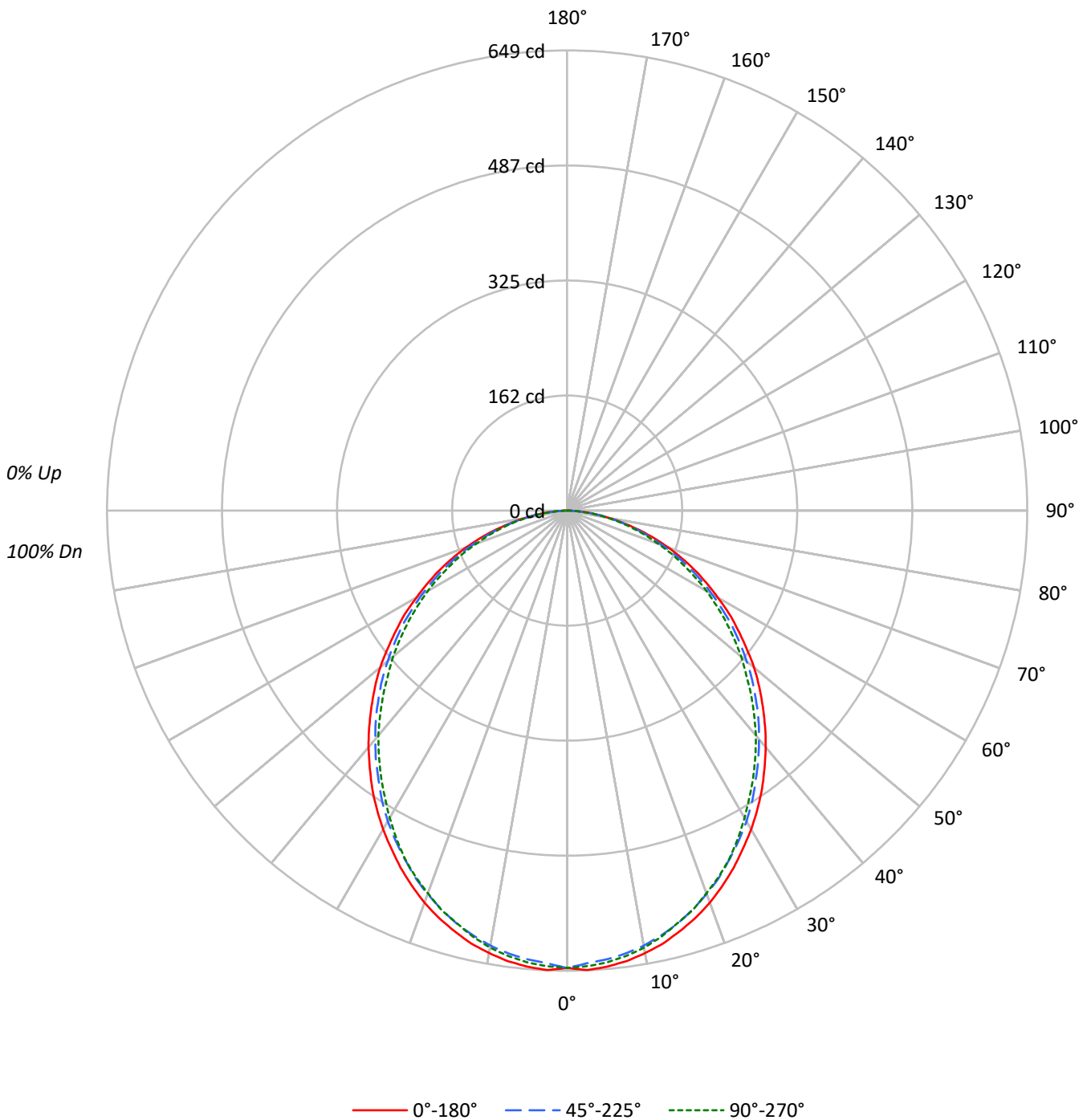
Lumens per Lamp: N/A
Luminaire Lumens: 1641.3 lumens
Efficiency: N/A
Efficacy: 95.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 17.2
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																		
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	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°	12286	12286	12286
5°	12344	12151	12231
10°	12257	12050	12108
15°	12110	11887	11875
20°	11929	11665	11641
25°	11681	11395	11383
30°	11415	11127	11010
35°	11143	10782	10645
40°	10836	10466	10304
45°	10506	10137	9881
50°	10200	9794	9494
55°	9773	9438	9083
60°	9352	8991	8651
65°	8951	8518	8144
70°	8409	7981	7580
75°	7654	7352	6999
80°	6647	6461	6198
85°	5726	5070	4677

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10506 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.7	3.7
10°-20°	171.0	10.4
20°-30°	251.4	15.3
30°-40°	291.8	17.8
40°-50°	291.5	17.8
50°-60°	253.8	15.5
60°-70°	187.7	11.4
70°-80°	105.8	6.4
80°-90°	27.6	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°	483.0	29.4
0°-40°	774.9	47.2
0°-60°	1320.2	80.4
0°-90°	1641.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1641.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	645	645	645	645	645	
5°	646	643	636	641	640	61
15°	614	611	603	605	602	173
25°	556	551	542	542	542	256
35°	479	474	464	460	458	299
45°	390	386	376	370	367	301
55°	294	292	284	276	274	264
65°	199	196	189	183	181	196
75°	104	103	100	96	95	111
85°	26	25	23	22	21	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	645.0	645.0	645.0	645.0	645.0
2.5°	648.6	645.6	639.1	644.4	643.2
5°	645.6	642.6	635.5	640.9	639.7
7.5°	640.9	637.9	630.2	635.5	633.7
10°	633.7	630.2	623.0	626.6	626.0
12.5°	625.4	621.8	613.5	616.5	615.3
15°	614.1	611.1	602.8	605.2	602.2
17.5°	602.2	597.5	589.7	592.1	590.3
20°	588.5	583.8	575.5	576.7	574.3
22.5°	572.5	567.7	560.0	560.0	558.8
25°	555.8	551.1	542.2	541.6	541.6
27.5°	537.4	533.3	524.3	522.6	521.4
30°	519.0	515.4	505.9	502.3	500.6
32.5°	499.4	494.6	485.7	481.5	478.6
35°	479.2	473.8	463.7	459.5	457.8
37.5°	457.2	451.8	442.9	439.3	435.8
40°	435.8	431.0	420.9	415.5	414.4
42.5°	413.2	408.4	399.5	393.6	390.0
45°	390.0	385.8	376.3	370.4	366.8
47.5°	367.4	362.6	354.3	347.2	342.4
50°	344.2	339.5	330.5	322.2	320.4
52.5°	318.6	315.7	306.8	299.0	296.6
55°	294.3	291.9	284.2	276.4	273.5
57.5°	271.1	268.1	259.2	253.3	249.7
60°	245.5	243.7	236.0	229.5	227.1
62.5°	221.7	219.4	212.8	206.3	203.3
65°	198.6	195.6	189.0	183.1	180.7
67.5°	174.8	171.8	166.5	161.7	159.3
70°	151.0	148.6	143.3	139.1	136.1
72.5°	127.8	125.4	120.7	116.5	115.9
75°	104.0	103.4	99.9	96.3	95.1
77.5°	82.0	81.4	79.1	77.3	76.1
80°	60.6	60.6	58.9	57.1	56.5
82.5°	41.6	42.2	40.4	39.2	39.2
85°	26.2	25.0	23.2	22.0	21.4
87.5°	10.7	8.9	8.3	6.5	5.9
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	20.00	21.61	20.36	21.92	22.24	19.57	21.18	19.94	21.50	21.81
	3H	21.75	23.21	22.13	23.53	23.89	21.27	22.73	21.65	23.05	23.41
	4H	22.40	23.77	22.80	24.11	24.49	21.90	23.27	22.30	23.61	23.99
	6H	22.86	24.12	23.27	24.49	24.88	22.36	23.63	22.77	23.99	24.38
	8H	22.99	24.20	23.42	24.59	24.99	22.50	23.71	22.92	24.10	24.50
	12H	23.09	24.25	23.52	24.63	25.06	22.58	23.74	23.01	24.12	24.55
4H	2H	20.56	21.93	20.96	22.27	22.65	20.22	21.59	20.62	21.94	22.31
	3H	22.53	23.68	22.94	24.08	24.48	22.13	23.28	22.54	23.68	24.08
	4H	23.31	24.35	23.75	24.76	25.20	22.88	23.92	23.31	24.33	24.77
	6H	23.90	24.80	24.35	25.24	25.70	23.47	24.37	23.92	24.81	25.27
	8H	24.08	24.93	24.54	25.37	25.84	23.65	24.49	24.11	24.94	25.40
	12H	24.22	24.98	24.70	25.45	25.92	23.76	24.52	24.25	25.00	25.47
8H	4H	23.59	24.43	24.05	24.87	25.34	23.20	24.05	23.66	24.49	24.96
	6H	24.29	24.99	24.78	25.48	25.95	23.90	24.60	24.39	25.09	25.57
	8H	24.54	25.17	25.05	25.68	26.16	24.15	24.78	24.66	25.29	25.77
	12H	24.74	25.30	25.25	25.79	26.35	24.33	24.88	24.83	25.37	25.93
12H	4H	23.61	24.37	24.09	24.84	25.31	23.24	24.00	23.72	24.47	24.94
	6H	24.33	24.96	24.84	25.47	25.95	23.96	24.59	24.47	25.09	25.58
	8H	24.64	25.19	25.14	25.68	26.25	24.26	24.82	24.77	25.31	25.87