

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: P242427

Luminaire Tested: S123DRP-S340D830-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242427
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-11)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DRP-S340D830-X4F0-XX-UDD-F-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

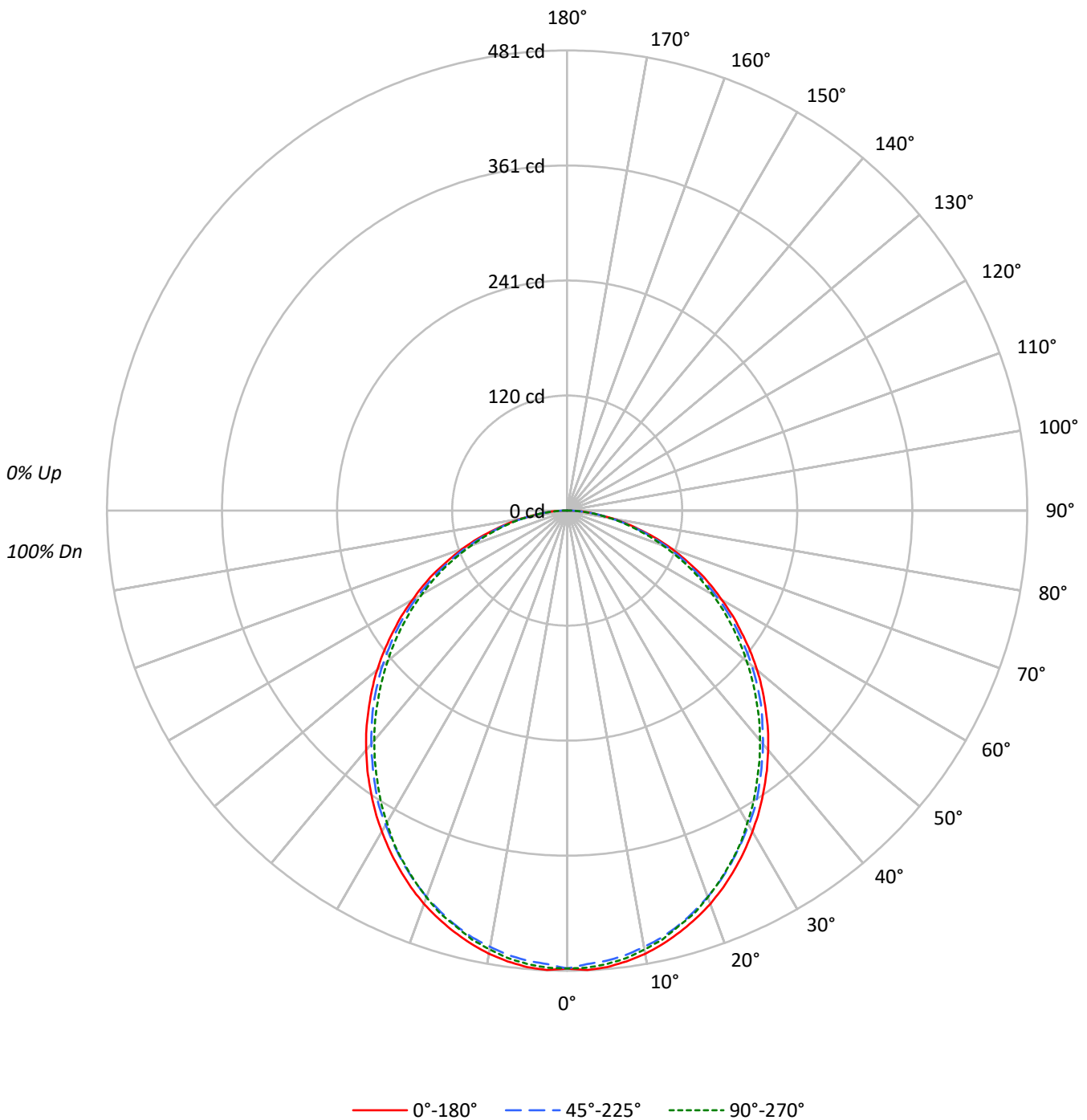
Lumens per Lamp: N/A
Luminaire Lumens: 1245.6 lumens
Efficiency: N/A
Efficacy: 107.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.3
Luminous Opening: Rectangular (W 0.23' x L: 3.88' x H: 0')
CIE Type: Direct

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	109	104	100	96	106	102	98	95	98	94	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	72	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	59
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	51
5	76	64	55	48	74	63	54	48	60	53	47	58	52	47	57	51	46	44
6	71	57	49	42	69	56	48	42	55	47	42	53	46	41	51	46	41	39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	48	39	33	60	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28
10	54	40	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5801	5801	5801
5°	5828	5748	5788
10°	5790	5699	5734
15°	5722	5634	5644
20°	5643	5541	5548
25°	5537	5433	5422
30°	5421	5310	5271
35°	5297	5182	5115
40°	5171	5040	4962
45°	5029	4909	4789
50°	4890	4750	4618
55°	4704	4584	4444
60°	4519	4390	4250
65°	4357	4179	4050
70°	4115	3937	3764
75°	3756	3625	3470
80°	3392	3246	3218
85°	2976	2865	2754

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5029 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.1	3.6
10°-20°	127.4	10.2
20°-30°	188.2	15.1
30°-40°	219.8	17.6
40°-50°	220.9	17.7
50°-60°	194.1	15.6
60°-70°	144.5	11.6
70°-80°	82.3	6.6
80°-90°	23.4	1.9
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°	360.7	29.0
0°-40°	580.5	46.6
0°-60°	995.5	79.9
0°-90°	1245.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1245.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	479	479	479	479	479	
5°	479	477	472	477	476	45
15°	456	454	449	452	450	129
25°	414	412	406	407	405	191
35°	358	356	350	348	346	224
45°	293	292	286	282	279	227
55°	223	222	217	212	210	199
65°	152	150	146	142	141	150
75°	80	79	77	75	74	86
85°	21	21	21	20	20	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	478.6	478.6	478.6	478.6	478.6
2.5°	480.7	479.0	474.5	478.6	478.2
5°	479.0	477.0	472.4	476.6	475.7
7.5°	475.3	473.3	468.7	472.4	472.0
10°	470.4	468.3	463.0	466.7	465.9
12.5°	463.8	462.2	457.2	459.7	459.3
15°	456.0	454.3	449.0	452.3	449.8
17.5°	447.3	445.3	439.9	442.4	441.6
20°	437.5	435.0	429.6	431.3	430.1
22.5°	426.4	423.9	418.5	419.8	418.1
25°	414.0	411.5	406.2	406.6	405.4
27.5°	401.2	398.8	393.0	393.4	392.2
30°	387.3	385.2	379.4	379.4	376.6
32.5°	373.3	370.4	366.3	363.4	362.2
35°	358.0	355.6	350.2	347.7	345.7
37.5°	342.8	339.5	334.2	331.3	330.1
40°	326.8	324.3	318.5	315.2	313.6
42.5°	310.7	307.8	302.1	298.8	297.1
45°	293.4	291.8	286.4	281.5	279.4
47.5°	276.6	274.1	269.1	264.2	262.6
50°	259.3	257.2	251.9	247.3	244.9
52.5°	241.2	239.9	234.2	230.5	228.0
55°	222.6	222.2	216.9	212.4	210.3
57.5°	205.4	203.7	199.6	195.5	193.0
60°	186.4	186.0	181.1	177.4	175.3
62.5°	169.6	168.3	163.4	159.7	158.4
65°	151.9	149.8	145.7	142.4	141.2
67.5°	132.9	131.3	128.0	125.1	123.5
70°	116.1	113.6	111.1	108.2	106.2
72.5°	98.4	96.7	93.8	91.4	90.5
75°	80.2	78.6	77.4	75.3	74.1
77.5°	64.2	63.4	61.7	60.1	60.1
80°	48.6	47.3	46.5	46.1	46.1
82.5°	33.3	33.3	33.3	32.5	32.1
85°	21.4	20.6	20.6	19.8	19.8
87.5°	10.7	9.5	9.1	8.6	8.6
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	17.47	19.08	17.83	19.40	19.71	17.15	18.77	17.52	19.08	19.40
	3H	19.24	20.70	19.61	21.03	21.39	18.87	20.33	19.24	20.66	21.02
	4H	19.89	21.27	20.29	21.62	21.99	19.50	20.88	19.90	21.23	21.61
	6H	20.38	21.66	20.79	22.02	22.41	19.99	21.27	20.40	21.63	22.02
	8H	20.54	21.75	20.96	22.14	22.54	20.15	21.37	20.58	21.76	22.16
	12H	20.64	21.81	21.07	22.19	22.62	20.26	21.43	20.69	21.81	22.24
4H	2H	18.05	19.42	18.44	19.77	20.15	17.80	19.17	18.19	19.52	19.90
	3H	20.04	21.19	20.45	21.59	21.99	19.73	20.89	20.14	21.28	21.68
	4H	20.82	21.87	21.25	22.28	22.72	20.49	21.54	20.93	21.95	22.39
	6H	21.44	22.35	21.89	22.79	23.25	21.11	22.02	21.56	22.46	22.92
	8H	21.64	22.50	22.10	22.94	23.40	21.31	22.17	21.77	22.61	23.07
	12H	21.79	22.56	22.27	23.04	23.51	21.46	22.23	21.94	22.71	23.18
8H	4H	21.11	21.96	21.57	22.40	22.87	20.82	21.67	21.28	22.11	22.58
	6H	21.84	22.55	22.34	23.04	23.52	21.55	22.26	22.04	22.75	23.22
	8H	22.12	22.76	22.63	23.26	23.75	21.83	22.47	22.34	22.98	23.46
	12H	22.35	22.91	22.85	23.40	23.96	22.06	22.62	22.56	23.11	23.67
12H	4H	21.14	21.90	21.62	22.38	22.85	20.85	21.62	21.33	22.10	22.56
	6H	21.89	22.53	22.40	23.04	23.53	21.61	22.25	22.12	22.76	23.24
	8H	22.23	22.79	22.73	23.28	23.84	21.95	22.52	22.46	23.01	23.57