

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: P243287

Luminaire Tested: S123DRP-H340D830-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243287
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-49)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DRP-H340D830-X4F0-XX-UDD-F-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

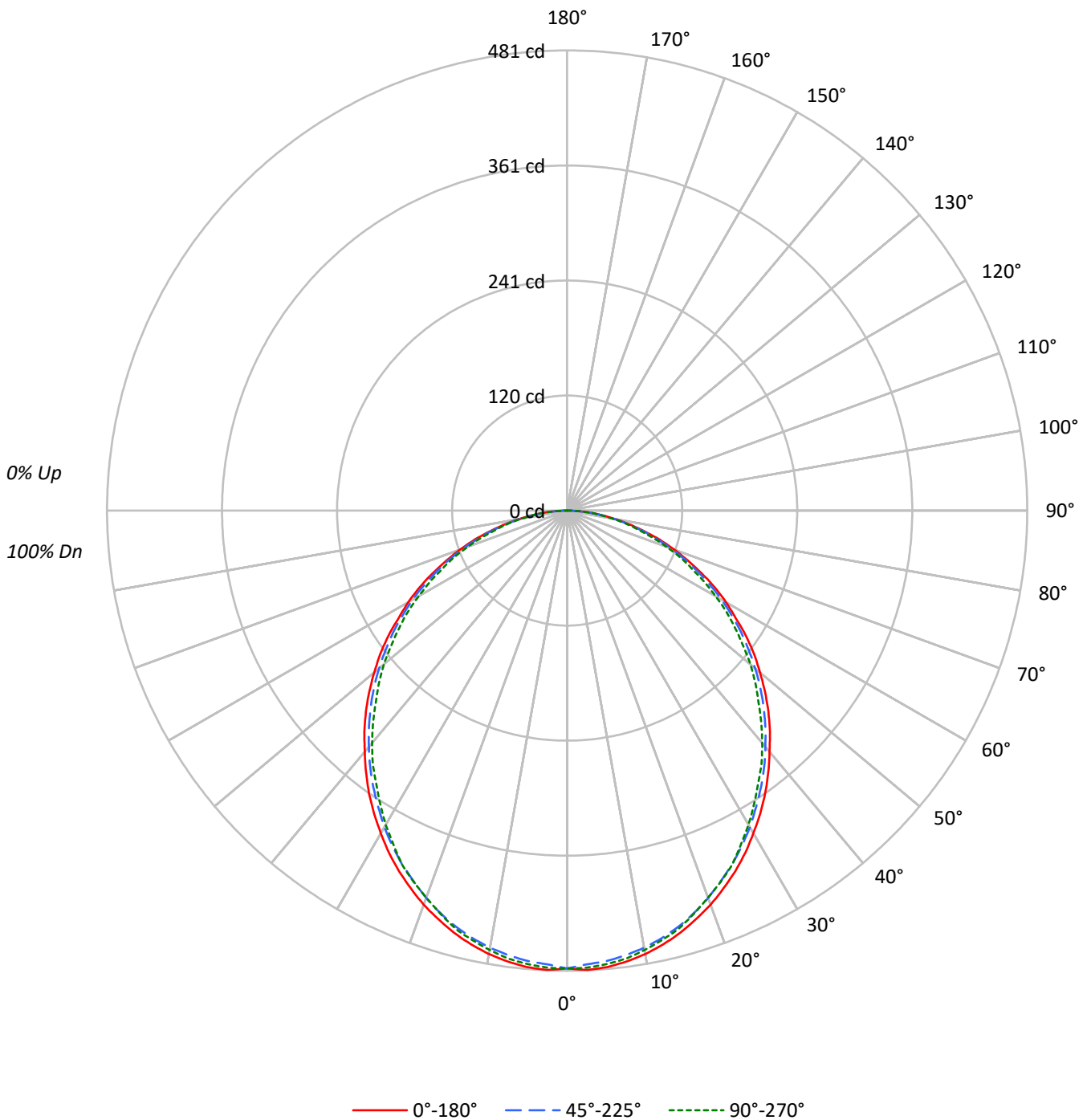
Lumens per Lamp: N/A
Luminaire Lumens: 1266.1 lumens
Efficiency: N/A
Efficacy: 113.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.23' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 11.2
Input Voltage (V): 120
Input Current (Ain): 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

TEST NUMBER: P243287

CATALOG NUMBER: S123DRP-H340D830-X4F0-XX-UDD-F-W

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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	109	104	100	96	106	102	98	94	97	94	91	94	91	89	90	88	86	84					84			
2	99	91	84	78	96	89	83	77	85	80	76	82	78	74	79	75	72	70					70			
3	90	80	72	65	88	78	71	65	75	69	64	73	67	62	70	65	61	59					59			
4	83	71	62	55	80	70	61	55	67	60	54	65	59	54	63	57	53	51					51			
5	76	63	54	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44					44			
6	70	57	48	42	69	56	48	42	54	47	41	53	46	41	51	45	41	39					39			
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34					34			
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30					30			
9	57	44	35	30	56	43	35	30	42	35	30	41	34	29	40	34	29	27					27			
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25					25			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5801	5801	5801
5°	5828	5752	5791
10°	5793	5711	5741
15°	5734	5649	5675
20°	5655	5558	5553
25°	5562	5457	5462
30°	5450	5347	5307
35°	5342	5225	5149
40°	5207	5101	5019
45°	5100	4978	4849
50°	4963	4837	4718
55°	4820	4694	4537
60°	4650	4524	4342
65°	4448	4311	4130
70°	4224	4083	3916
75°	3920	3808	3601
80°	3525	3441	3330
85°	3296	3129	3018

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5100 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.2	3.6
10°-20°	127.7	10.1
20°-30°	189.1	14.9
30°-40°	221.7	17.5
40°-50°	224.1	17.7
50°-60°	198.2	15.7
60°-70°	148.9	11.8
70°-80°	85.8	6.8
80°-90°	25.4	2.0
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°	361.9	28.6
0°-40°	583.6	46.1
0°-60°	1006.0	79.5
0°-90°	1266.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1266.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	479	479	479	479	479	
5°	479	477	473	477	476	45
15°	457	455	450	453	452	129
25°	416	413	408	410	408	191
35°	361	358	353	352	348	226
45°	298	295	290	286	283	229
55°	228	226	222	218	215	204
65°	155	154	150	146	144	154
75°	84	83	81	79	77	89
85°	24	23	22	22	22	27
90°	0	0	0	0	0	

TEST NUMBER: P243287

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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°	480.6	479.0	474.7	479.0	478.2
5°	479.0	477.0	472.7	476.7	475.9
7.5°	475.5	473.5	468.8	473.1	472.3
10°	470.7	468.8	464.0	467.6	466.4
12.5°	464.4	462.4	457.7	460.5	459.7
15°	456.9	454.6	450.2	453.4	452.2
17.5°	447.8	445.9	441.1	445.1	441.5
20°	438.4	436.4	430.9	434.4	430.5
22.5°	427.3	425.0	419.4	421.8	419.8
25°	415.9	412.7	408.0	410.0	408.4
27.5°	403.3	400.1	395.4	396.2	393.4
30°	389.4	386.7	382.0	382.7	379.2
32.5°	375.6	373.3	367.4	367.4	363.8
35°	361.0	357.9	353.1	352.0	348.0
37.5°	345.3	342.5	338.2	336.2	333.8
40°	329.1	327.5	322.4	320.0	317.2
42.5°	313.7	310.9	306.6	303.4	300.3
45°	297.5	295.1	290.4	286.5	282.9
47.5°	280.5	278.6	273.8	269.5	266.7
50°	263.2	261.6	256.5	251.7	250.2
52.5°	246.2	244.2	239.1	234.8	231.6
55°	228.1	226.5	222.1	217.8	214.7
57.5°	208.7	208.7	204.0	200.1	197.7
60°	191.8	189.8	186.6	182.3	179.1
62.5°	174.0	172.8	168.5	164.1	161.8
65°	155.1	153.9	150.3	146.4	144.0
67.5°	136.5	136.1	133.0	129.8	128.2
70°	119.2	118.4	115.2	112.1	110.5
72.5°	101.4	100.6	97.9	95.1	93.1
75°	83.7	82.9	81.3	78.9	76.9
77.5°	66.3	66.3	64.3	63.5	62.7
80°	50.5	50.1	49.3	48.5	47.7
82.5°	36.3	35.9	35.1	34.7	34.7
85°	23.7	23.3	22.5	22.1	21.7
87.5°	12.2	11.4	11.0	10.3	9.9
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	17.56	19.18	17.92	19.50	19.81	17.25	18.88	17.61	19.19	19.50
	3H	19.36	20.83	19.73	21.15	21.51	19.01	20.47	19.38	20.80	21.16
	4H	20.03	21.42	20.43	21.77	22.14	19.65	21.04	20.05	21.39	21.76
	6H	20.53	21.81	20.94	22.18	22.57	20.15	21.44	20.56	21.80	22.19
	8H	20.70	21.92	21.12	22.31	22.71	20.32	21.55	20.75	21.94	22.34
	12H	20.82	22.00	21.25	22.38	22.81	20.44	21.62	20.87	22.00	22.43
4H	2H	18.15	19.53	18.55	19.88	20.26	17.91	19.29	18.30	19.64	20.01
	3H	20.17	21.34	20.58	21.73	22.13	19.88	21.04	20.29	21.44	21.84
	4H	20.98	22.04	21.42	22.45	22.88	20.66	21.71	21.09	22.12	22.56
	6H	21.62	22.53	22.07	22.97	23.43	21.29	22.21	21.74	22.65	23.10
	8H	21.83	22.69	22.29	23.14	23.60	21.51	22.37	21.97	22.81	23.27
	12H	22.01	22.78	22.49	23.26	23.73	21.68	22.45	22.16	22.92	23.39
8H	4H	21.28	22.14	21.74	22.58	23.05	20.99	21.85	21.45	22.29	22.76
	6H	22.03	22.75	22.53	23.24	23.71	21.75	22.46	22.24	22.95	23.43
	8H	22.33	22.97	22.84	23.48	23.97	22.04	22.69	22.55	23.19	23.68
	12H	22.59	23.16	23.10	23.65	24.21	22.29	22.86	22.80	23.35	23.91
12H	4H	21.31	22.08	21.79	22.56	23.03	21.03	21.80	21.51	22.28	22.75
	6H	22.09	22.73	22.60	23.24	23.72	21.81	22.46	22.32	22.96	23.45
	8H	22.45	23.01	22.95	23.50	24.06	22.17	22.74	22.68	23.23	23.79