

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: P243301

Luminaire Tested: S123DRP-H340D930-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243301
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-H340D930-X4F0-XX-UDD-F-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

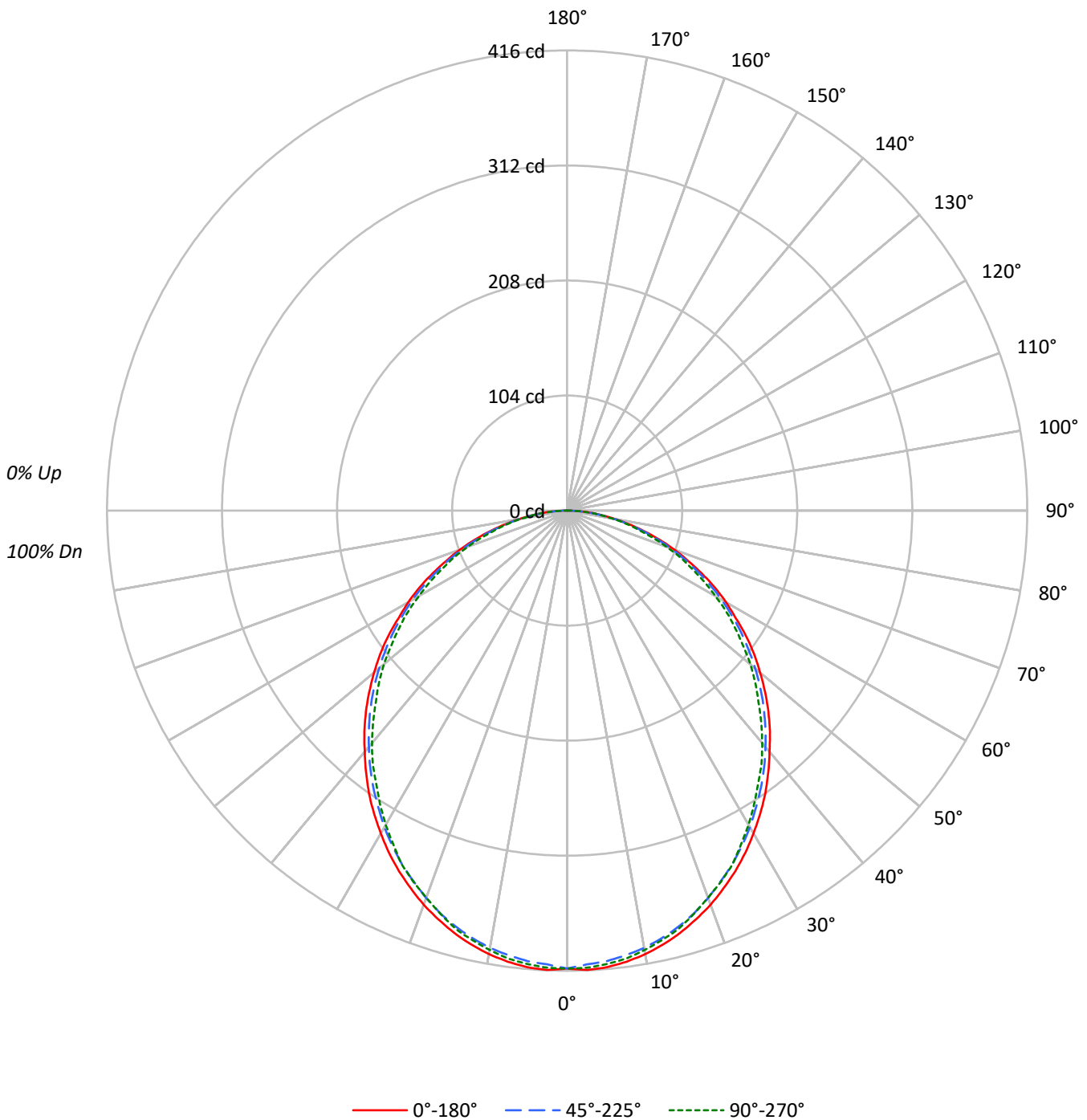
Lumens per Lamp: N/A
Luminaire Lumens: 1095.3 lumens
Efficiency: N/A
Efficacy: 97.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.23' x L: 3.88' x H: 0')
CIE Type: Direct

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

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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	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°	5018	5018	5018
5°	5042	4975	5008
10°	5012	4941	4965
15°	4959	4887	4908
20°	4891	4808	4804
25°	4811	4720	4725
30°	4715	4624	4591
35°	4621	4521	4454
40°	4505	4413	4342
45°	4411	4306	4195
50°	4294	4184	4081
55°	4169	4062	3924
60°	4022	3913	3758
65°	3846	3729	3574
70°	3654	3533	3388
75°	3391	3292	3119
80°	3050	2981	2883
85°	2851	2712	2615

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4411 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.1	3.6
10°-20°	110.5	10.1
20°-30°	163.5	14.9
30°-40°	191.8	17.5
40°-50°	193.9	17.7
50°-60°	171.5	15.7
60°-70°	128.8	11.8
70°-80°	74.2	6.8
80°-90°	22.0	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°	313.1	28.6
0°-40°	504.8	46.1
0°-60°	870.2	79.5
0°-90°	1095.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1095.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	414	414	414	414	414	
5°	414	413	409	412	412	39
15°	395	393	389	392	391	111
25°	360	357	353	355	353	166
35°	312	310	306	304	301	195
45°	257	255	251	248	245	198
55°	197	196	192	188	186	176
65°	134	133	130	127	125	133
75°	72	72	70	68	67	77
85°	20	20	20	19	19	23
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	414.0	414.0	414.0	414.0	414.0
2.5°	415.7	414.4	410.6	414.4	413.7
5°	414.4	412.6	408.9	412.3	411.6
7.5°	411.3	409.6	405.5	409.2	408.5
10°	407.2	405.5	401.4	404.5	403.4
12.5°	401.7	400.0	395.9	398.3	397.6
15°	395.2	393.2	389.4	392.2	391.1
17.5°	387.4	385.7	381.6	385.0	381.9
20°	379.2	377.5	372.7	375.8	372.4
22.5°	369.6	367.6	362.8	364.9	363.2
25°	359.7	357.0	352.9	354.6	353.3
27.5°	348.8	346.1	342.0	342.7	340.3
30°	336.9	334.5	330.4	331.1	328.0
32.5°	324.9	322.9	317.8	317.8	314.7
35°	312.3	309.6	305.5	304.4	301.0
37.5°	298.6	296.3	292.5	290.8	288.7
40°	284.7	283.3	278.9	276.8	274.4
42.5°	271.3	269.0	265.2	262.5	259.7
45°	257.3	255.3	251.2	247.8	244.7
47.5°	242.7	241.0	236.9	233.1	230.7
50°	227.7	226.3	221.9	217.8	216.4
52.5°	213.0	211.3	206.8	203.1	200.3
55°	197.3	195.9	192.2	188.4	185.7
57.5°	180.6	180.6	176.5	173.0	171.0
60°	165.9	164.2	161.4	157.7	155.0
62.5°	150.5	149.5	145.7	142.0	139.9
65°	134.1	133.1	130.0	126.6	124.6
67.5°	118.1	117.8	115.0	112.3	110.9
70°	103.1	102.4	99.7	96.9	95.6
72.5°	87.7	87.0	84.6	82.3	80.5
75°	72.4	71.7	70.3	68.3	66.6
77.5°	57.3	57.3	55.6	55.0	54.3
80°	43.7	43.3	42.7	42.0	41.3
82.5°	31.4	31.1	30.4	30.0	30.0
85°	20.5	20.1	19.5	19.1	18.8
87.5°	10.6	9.9	9.6	8.9	8.5
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	17.06	18.68	17.42	19.00	19.31	16.74	18.37	17.11	18.68	19.00
	3H	18.85	20.32	19.23	20.65	21.01	18.50	19.97	18.88	20.30	20.66
	4H	19.53	20.92	19.93	21.26	21.64	19.15	20.53	19.55	20.88	21.26
	6H	20.03	21.31	20.44	21.68	22.07	19.65	20.93	20.06	21.30	21.69
	8H	20.20	21.42	20.62	21.81	22.21	19.82	21.05	20.25	21.44	21.83
	12H	20.32	21.49	20.75	21.88	22.30	19.94	21.12	20.37	21.50	21.93
4H	2H	17.65	19.03	18.04	19.38	19.75	17.40	18.78	17.80	19.13	19.51
	3H	19.67	20.83	20.08	21.23	21.63	19.37	20.54	19.78	20.93	21.33
	4H	20.48	21.53	20.91	21.95	22.38	20.15	21.21	20.59	21.62	22.05
	6H	21.11	22.03	21.56	22.47	22.93	20.78	21.70	21.24	22.14	22.60
	8H	21.33	22.19	21.79	22.63	23.10	21.00	21.86	21.46	22.31	22.77
	12H	21.50	22.28	21.98	22.75	23.22	21.17	21.95	21.65	22.42	22.89
8H	4H	20.78	21.64	21.24	22.08	22.54	20.49	21.35	20.95	21.79	22.26
	6H	21.53	22.25	22.02	22.73	23.21	21.24	21.96	21.74	22.45	22.92
	8H	21.83	22.47	22.34	22.98	23.46	21.54	22.18	22.05	22.69	23.18
	12H	22.09	22.65	22.59	23.14	23.70	21.79	22.36	22.30	22.85	23.41
12H	4H	20.81	21.58	21.29	22.06	22.53	20.53	21.30	21.01	21.78	22.24
	6H	21.58	22.23	22.09	22.73	23.22	21.31	21.95	21.82	22.46	22.95
	8H	21.94	22.51	22.45	23.00	23.56	21.67	22.24	22.17	22.73	23.29