

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: P243292

Luminaire Tested: S123DRP-H340D835-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243292
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-H340D835-X4F0-XX-UDD-F-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

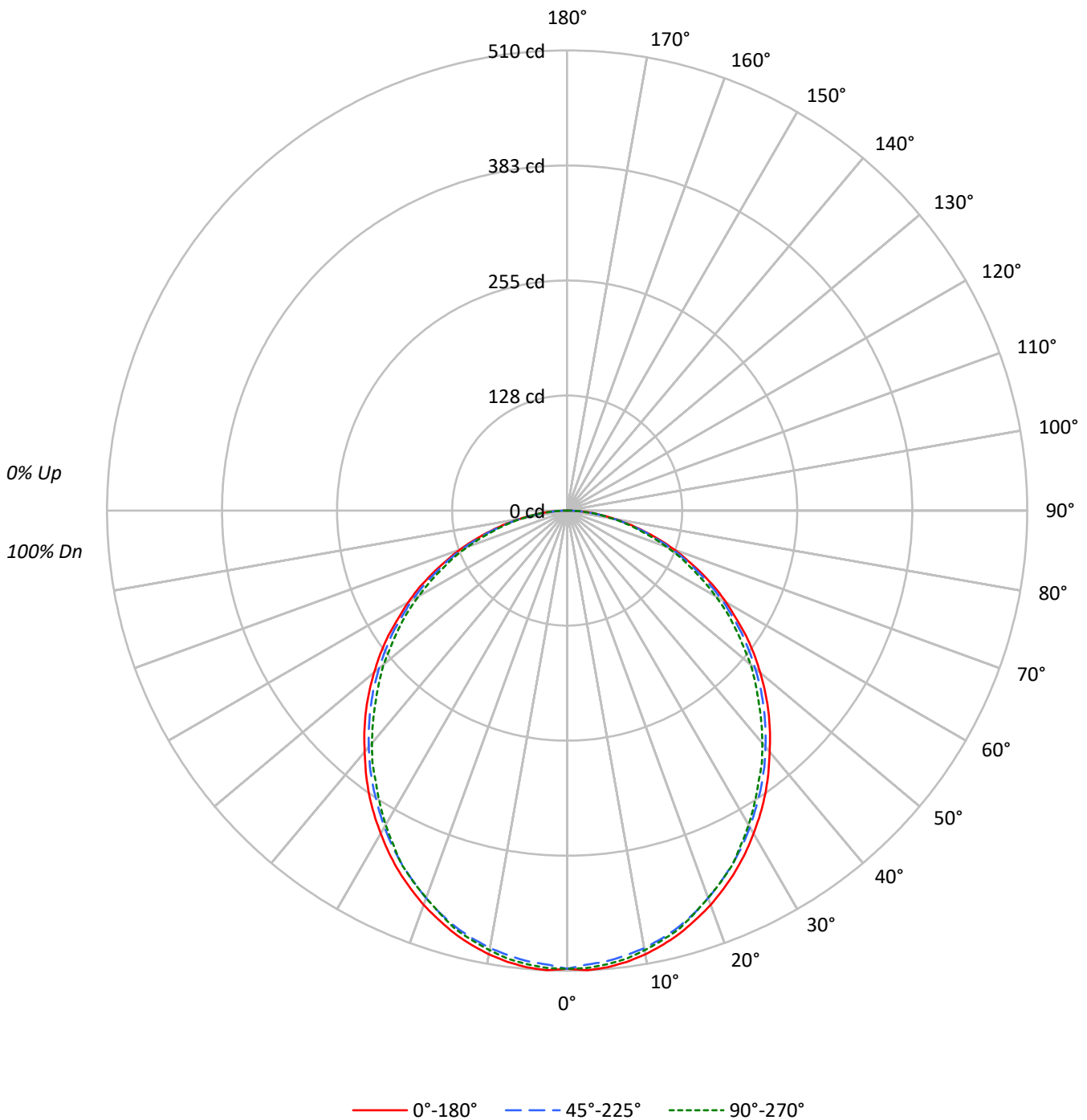
Lumens per Lamp: N/A
Luminaire Lumens: 1343.3 lumens
Efficiency: N/A
Efficacy: 119.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.23' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 11.2
Input Voltage (V): 120
Input Current (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	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°	6155	6155	6155
5°	6184	6102	6143
10°	6147	6059	6090
15°	6084	5995	6021
20°	5999	5896	5891
25°	5901	5790	5795
30°	5783	5671	5631
35°	5667	5545	5463
40°	5524	5412	5326
45°	5410	5281	5146
50°	5265	5131	5005
55°	5114	4981	4812
60°	4933	4800	4608
65°	4718	4575	4382
70°	4480	4331	4154
75°	4154	4037	3822
80°	3741	3651	3539
85°	3491	3324	3199

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5410 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.9	3.6
10°-20°	135.5	10.1
20°-30°	200.6	14.9
30°-40°	235.2	17.5
40°-50°	237.8	17.7
50°-60°	210.3	15.7
60°-70°	158.0	11.8
70°-80°	91.0	6.8
80°-90°	27.0	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°	384.0	28.6
0°-40°	619.2	46.1
0°-60°	1067.3	79.5
0°-90°	1343.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1343.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	508	508	508	508	508	
5°	508	506	502	506	505	48
15°	485	482	478	481	480	137
25°	441	438	433	435	433	203
35°	383	380	375	373	369	239
45°	316	313	308	304	300	243
55°	242	240	236	231	228	216
65°	164	163	160	155	153	163
75°	89	88	86	84	82	94
85°	25	25	24	23	23	28
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	507.8	507.8	507.8	507.8	507.8
2.5°	509.9	508.2	503.6	508.2	507.4
5°	508.2	506.1	501.5	505.7	504.9
7.5°	504.5	502.4	497.3	501.9	501.1
10°	499.4	497.3	492.3	496.1	494.8
12.5°	492.7	490.6	485.6	488.5	487.7
15°	484.8	482.3	477.7	481.0	479.8
17.5°	475.1	473.1	468.0	472.2	468.4
20°	465.1	463.0	457.1	460.9	456.7
22.5°	453.4	450.9	445.0	447.5	445.4
25°	441.2	437.9	432.9	435.0	433.3
27.5°	427.8	424.5	419.5	420.3	417.4
30°	413.2	410.3	405.2	406.1	402.3
32.5°	398.5	396.0	389.7	389.7	386.0
35°	383.0	379.7	374.7	373.4	369.2
37.5°	366.3	363.4	358.8	356.7	354.2
40°	349.1	347.5	342.0	339.5	336.6
42.5°	332.8	329.9	325.3	321.9	318.6
45°	315.6	313.1	308.1	303.9	300.2
47.5°	297.6	295.6	290.5	285.9	283.0
50°	279.2	277.6	272.1	267.1	265.4
52.5°	261.2	259.1	253.7	249.1	245.7
55°	242.0	240.3	235.7	231.1	227.7
57.5°	221.5	221.5	216.4	212.2	209.7
60°	203.5	201.4	198.0	193.4	190.1
62.5°	184.6	183.4	178.8	174.2	171.6
65°	164.5	163.3	159.5	155.3	152.8
67.5°	144.8	144.4	141.1	137.7	136.1
70°	126.4	125.6	122.2	118.9	117.2
72.5°	107.6	106.8	103.8	100.9	98.8
75°	88.7	87.9	86.2	83.7	81.6
77.5°	70.3	70.3	68.2	67.4	66.6
80°	53.6	53.2	52.3	51.5	50.7
82.5°	38.5	38.1	37.3	36.8	36.8
85°	25.1	24.7	23.9	23.4	23.0
87.5°	13.0	12.1	11.7	10.9	10.5
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	17.77	19.39	18.13	19.71	20.02	17.45	19.08	17.82	19.39	19.71
	3H	19.56	21.03	19.94	21.36	21.72	19.21	20.68	19.59	21.01	21.37
	4H	20.24	21.62	20.64	21.97	22.35	19.86	21.24	20.26	21.59	21.97
	6H	20.74	22.02	21.15	22.38	22.78	20.36	21.64	20.77	22.01	22.40
	8H	20.90	22.13	21.33	22.52	22.92	20.53	21.76	20.95	22.14	22.54
	12H	21.03	22.20	21.46	22.58	23.01	20.65	21.83	21.08	22.21	22.64
4H	2H	18.36	19.74	18.75	20.09	20.46	18.11	19.49	18.51	19.84	20.22
	3H	20.38	21.54	20.79	21.94	22.34	20.08	21.25	20.49	21.64	22.04
	4H	21.19	22.24	21.62	22.65	23.09	20.86	21.91	21.29	22.33	22.76
	6H	21.82	22.74	22.27	23.18	23.64	21.49	22.41	21.95	22.85	23.31
	8H	22.04	22.90	22.50	23.34	23.81	21.71	22.57	22.17	23.02	23.48
	12H	22.21	22.99	22.69	23.46	23.93	21.88	22.66	22.36	23.13	23.60
8H	4H	21.48	22.34	21.94	22.79	23.25	21.20	22.06	21.66	22.50	22.96
	6H	22.24	22.96	22.73	23.44	23.92	21.95	22.67	22.45	23.16	23.63
	8H	22.54	23.18	23.04	23.68	24.17	22.25	22.89	22.76	23.40	23.89
	12H	22.79	23.36	23.30	23.85	24.41	22.50	23.07	23.01	23.56	24.12
12H	4H	21.52	22.29	22.00	22.76	23.23	21.24	22.01	21.72	22.48	22.95
	6H	22.29	22.94	22.80	23.44	23.93	22.02	22.66	22.53	23.17	23.65
	8H	22.65	23.22	23.16	23.71	24.27	22.38	22.95	22.88	23.44	24.00