

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: P242265

Luminaire Tested: S122DRP-S485D840-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242265
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-10)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122DRP-S485D840-X4F0-XX-UDD-F-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

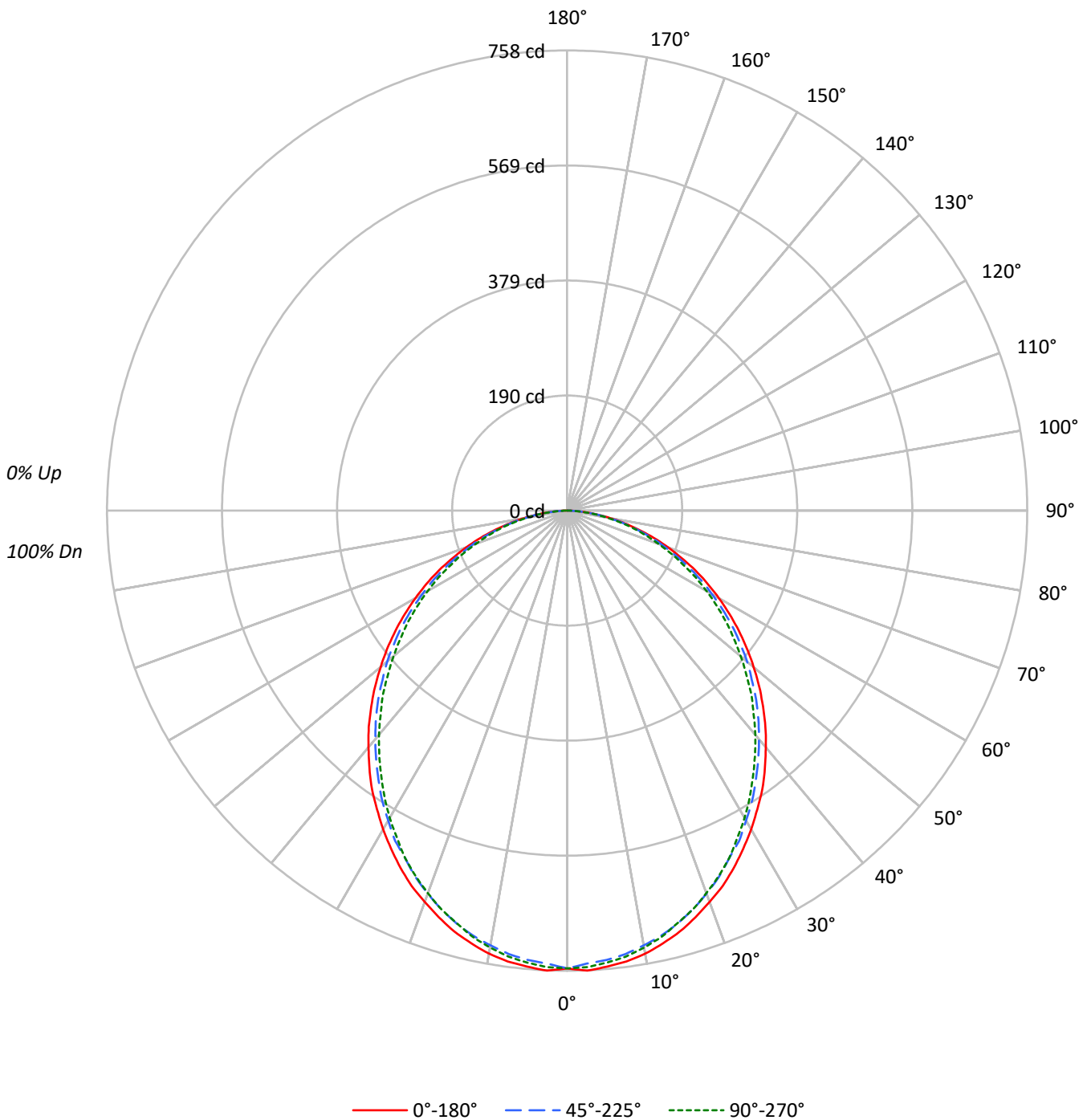
Lumens per Lamp: N/A
Luminaire Lumens: 1918.6 lumens
Efficiency: N/A
Efficacy: 102.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 18.8
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	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	27	38	32	27	37	32	27	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14364	14364	14364
5°	14419	14210	14294
10°	14334	14067	14137
15°	14157	13885	13871
20°	13905	13611	13595
25°	13655	13274	13274
30°	13333	12966	12854
35°	13033	12596	12410
40°	12656	12224	11990
45°	12286	11855	11564
50°	11883	11474	11065
55°	11464	11029	10620
60°	10994	10495	10111
65°	10492	9970	9510
70°	9852	9328	8883
75°	8964	8589	8375
80°	7953	7711	7316
85°	6491	6185	5551

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12286 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.0	3.7
10°-20°	199.7	10.4
20°-30°	293.5	15.3
30°-40°	340.8	17.8
40°-50°	340.4	17.7
50°-60°	296.8	15.5
60°-70°	219.4	11.4
70°-80°	124.2	6.5
80°-90°	32.8	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°	564.1	29.4
0°-40°	905.0	47.2
0°-60°	1542.2	80.4
0°-90°	1918.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1918.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	754	754	754	754	754	
5°	754	751	743	749	748	72
15°	718	714	704	707	703	202
25°	650	644	632	633	632	299
35°	560	553	542	537	534	350
45°	456	451	440	432	429	352
55°	345	341	332	323	320	309
65°	233	228	221	215	211	230
75°	122	120	117	112	114	130
85°	30	29	28	26	25	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	754.1	754.1	754.1	754.1	754.1
2.5°	758.5	754.8	746.9	754.1	752.7
5°	754.1	751.2	743.2	749.0	747.6
7.5°	749.0	744.7	736.7	742.5	741.1
10°	741.1	736.0	727.3	733.1	730.9
12.5°	730.2	725.8	717.1	720.8	719.3
15°	717.9	713.5	704.1	707.0	703.4
17.5°	702.6	698.3	688.9	692.5	688.9
20°	686.0	681.6	671.5	673.6	670.7
22.5°	669.3	662.8	653.3	653.3	651.9
25°	649.7	643.9	631.6	633.0	631.6
27.5°	627.9	622.9	613.4	611.3	607.6
30°	606.2	600.4	589.5	587.3	584.4
32.5°	583.0	578.6	567.0	562.7	559.8
35°	560.5	553.3	541.7	537.3	533.7
37.5°	535.1	528.6	517.0	511.9	508.3
40°	509.0	503.2	491.6	485.1	482.2
42.5°	483.6	477.8	466.2	459.0	454.6
45°	456.1	451.0	440.1	432.2	429.3
47.5°	429.3	424.2	412.6	404.6	400.3
50°	401.0	397.4	387.2	377.1	373.4
52.5°	373.4	368.4	358.9	351.0	345.9
55°	345.2	340.8	332.1	323.4	319.8
57.5°	316.9	313.2	303.8	295.1	292.2
60°	288.6	285.7	275.5	267.6	265.4
62.5°	261.0	256.0	248.7	241.5	238.6
65°	232.8	228.4	221.2	214.6	211.0
67.5°	203.8	200.1	193.6	188.5	185.6
70°	176.9	174.0	167.5	162.4	159.5
72.5°	149.4	146.5	142.8	137.8	135.6
75°	121.8	120.4	116.7	112.4	113.8
77.5°	97.2	94.3	92.8	90.6	88.5
80°	72.5	71.8	70.3	68.2	66.7
82.5°	49.3	49.3	48.6	45.7	45.7
85°	29.7	29.0	28.3	26.1	25.4
87.5°	13.1	11.6	10.2	8.0	7.3
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	20.54	22.15	20.90	22.46	22.78	20.10	21.71	20.46	22.02	22.34
	3H	22.29	23.74	22.67	24.07	24.43	21.80	23.25	22.18	23.58	23.94
	4H	22.94	24.31	23.33	24.65	25.03	22.44	23.81	22.84	24.16	24.53
	6H	23.41	24.67	23.82	25.04	25.43	22.90	24.17	23.32	24.54	24.93
	8H	23.55	24.76	23.97	25.15	25.55	23.05	24.26	23.47	24.65	25.04
	12H	23.64	24.80	24.07	25.18	25.61	23.13	24.29	23.56	24.67	25.10
4H	2H	21.10	22.47	21.50	22.82	23.19	20.75	22.12	21.15	22.47	22.84
	3H	23.08	24.22	23.49	24.62	25.02	22.67	23.82	23.08	24.21	24.61
	4H	23.85	24.89	24.28	25.30	25.74	23.43	24.46	23.86	24.88	25.31
	6H	24.45	25.35	24.90	25.79	26.25	24.02	24.92	24.47	25.36	25.82
	8H	24.64	25.49	25.10	25.93	26.39	24.20	25.05	24.66	25.49	25.95
	12H	24.77	25.53	25.25	26.01	26.48	24.32	25.08	24.80	25.55	26.02
8H	4H	24.13	24.97	24.59	25.41	25.88	23.75	24.60	24.21	25.04	25.51
	6H	24.84	25.54	25.33	26.03	26.51	24.46	25.16	24.95	25.65	26.13
	8H	25.10	25.73	25.61	26.24	26.72	24.71	25.34	25.22	25.85	26.33
	12H	25.30	25.86	25.81	26.35	26.91	24.89	25.44	25.39	25.93	26.50
12H	4H	24.15	24.91	24.63	25.39	25.86	23.79	24.55	24.27	25.02	25.49
	6H	24.89	25.52	25.40	26.02	26.51	24.52	25.15	25.03	25.66	26.14
	8H	25.20	25.76	25.71	26.25	26.81	24.82	25.38	25.33	25.87	26.43