

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: P243135

Luminaire Tested: S122DRP-H485D935-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243135
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-48)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122DRP-H485D935-X4F0-XX-UDD-F-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

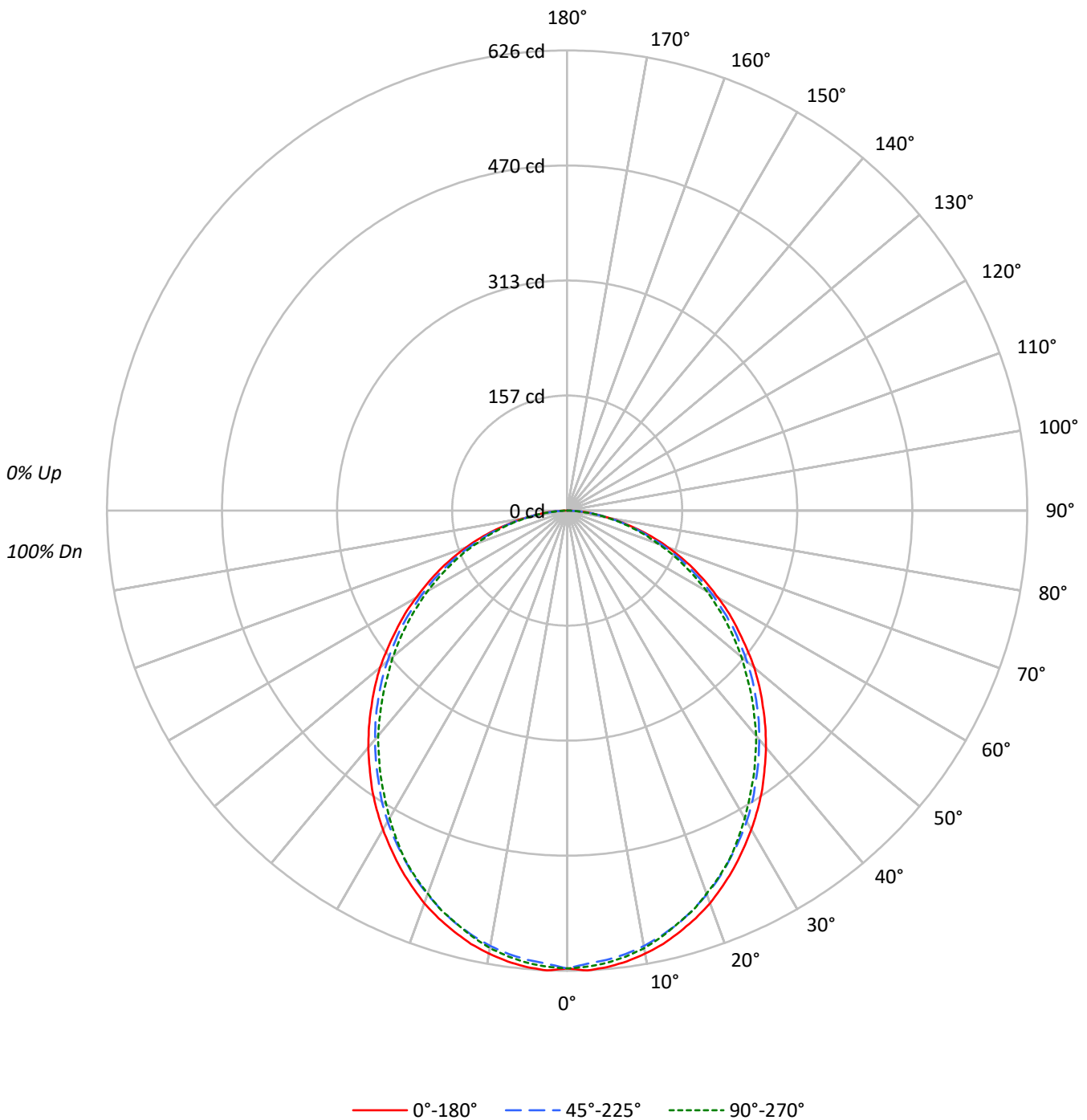
Lumens per Lamp: N/A
Luminaire Lumens: 1584.8 lumens
Efficiency: N/A
Efficacy: 92.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 17.2
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	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	44	36	30	42	35	30	41	35	30	40	34	30	28
10	54	41	33	28	53	40	33	28	39	32	28	38	32	27	37	32	27	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11863	11863	11863
5°	11920	11732	11809
10°	11835	11636	11690
15°	11694	11477	11467
20°	11520	11262	11240
25°	11280	11002	10990
30°	11021	10744	10630
35°	10759	10410	10278
40°	10463	10105	9948
45°	10145	9789	9541
50°	9850	9459	9168
55°	9435	9112	8767
60°	9032	8682	8354
65°	8640	8225	7865
70°	8120	7702	7318
75°	7396	7095	6756
80°	6417	6230	5978
85°	5529	4895	4524

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10145 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.6	3.7
10°-20°	165.1	10.4
20°-30°	242.7	15.3
30°-40°	281.8	17.8
40°-50°	281.4	17.8
50°-60°	245.1	15.5
60°-70°	181.3	11.4
70°-80°	102.2	6.4
80°-90°	26.6	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°	466.4	29.4
0°-40°	748.2	47.2
0°-60°	1274.7	80.4
0°-90°	1584.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1584.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	623	623	623	623	623	
5°	623	620	614	619	618	59
15°	593	590	582	584	582	167
25°	537	532	524	523	523	247
35°	463	458	448	444	442	289
45°	377	372	363	358	354	291
55°	284	282	274	267	264	254
65°	192	189	182	177	174	190
75°	100	100	96	93	92	107
85°	25	24	22	21	21	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	622.8	622.8	622.8	622.8	622.8
2.5°	626.2	623.4	617.1	622.2	621.1
5°	623.4	620.5	613.6	618.8	617.6
7.5°	618.8	615.9	608.5	613.6	611.9
10°	611.9	608.5	601.6	605.0	604.4
12.5°	603.9	600.4	592.4	595.3	594.1
15°	593.0	590.1	582.0	584.3	581.5
17.5°	581.5	576.9	569.4	571.7	570.0
20°	568.3	563.7	555.6	556.8	554.5
22.5°	552.8	548.2	540.7	540.7	539.6
25°	536.7	532.1	523.5	522.9	522.9
27.5°	518.9	514.9	506.3	504.6	503.4
30°	501.1	497.7	488.5	485.0	483.3
32.5°	482.2	477.6	469.0	465.0	462.1
35°	462.7	457.5	447.7	443.7	442.0
37.5°	441.4	436.2	427.6	424.2	420.8
40°	420.8	416.2	406.4	401.2	400.1
42.5°	398.9	394.3	385.7	380.0	376.6
45°	376.6	372.5	363.4	357.6	354.2
47.5°	354.7	350.1	342.1	335.2	330.6
50°	332.4	327.8	319.2	311.1	309.4
52.5°	307.7	304.8	296.2	288.7	286.4
55°	284.1	281.8	274.4	266.9	264.0
57.5°	261.7	258.9	250.3	244.5	241.1
60°	237.1	235.3	227.9	221.6	219.3
62.5°	214.1	211.8	205.5	199.2	196.3
65°	191.7	188.9	182.5	176.8	174.5
67.5°	168.8	165.9	160.7	156.1	153.8
70°	145.8	143.5	138.3	134.3	131.4
72.5°	123.4	121.1	116.5	112.5	111.9
75°	100.5	99.9	96.4	93.0	91.8
77.5°	79.2	78.6	76.3	74.6	73.5
80°	58.5	58.5	56.8	55.1	54.5
82.5°	40.2	40.8	39.0	37.9	37.9
85°	25.3	24.1	22.4	21.2	20.7
87.5°	10.3	8.6	8.0	6.3	5.7
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	19.88	21.49	20.24	21.80	22.12	19.45	21.06	19.81	21.37	21.69
	3H	21.63	23.09	22.01	23.41	23.77	21.15	22.60	21.53	22.93	23.29
	4H	22.28	23.65	22.68	23.99	24.37	21.78	23.14	22.17	23.49	23.87
	6H	22.74	24.00	23.15	24.37	24.76	22.24	23.50	22.65	23.87	24.26
	8H	22.87	24.08	23.30	24.47	24.87	22.38	23.59	22.80	23.98	24.38
	12H	22.97	24.13	23.40	24.51	24.94	22.46	23.62	22.89	24.00	24.43
4H	2H	20.44	21.81	20.84	22.15	22.53	20.10	21.46	20.49	21.81	22.19
	3H	22.41	23.56	22.82	23.96	24.36	22.01	23.16	22.42	23.55	23.95
	4H	23.19	24.23	23.62	24.64	25.08	22.76	23.79	23.19	24.21	24.64
	6H	23.78	24.68	24.23	25.12	25.58	23.34	24.25	23.80	24.69	25.14
	8H	23.96	24.81	24.42	25.25	25.72	23.53	24.37	23.99	24.81	25.28
	12H	24.10	24.86	24.58	25.33	25.80	23.64	24.40	24.12	24.88	25.35
8H	4H	23.46	24.31	23.92	24.75	25.22	23.08	23.93	23.54	24.37	24.83
	6H	24.16	24.87	24.66	25.36	25.83	23.78	24.48	24.27	24.97	25.44
	8H	24.42	25.05	24.93	25.56	26.04	24.03	24.66	24.54	25.16	25.65
	12H	24.62	25.18	25.13	25.67	26.23	24.20	24.76	24.71	25.25	25.81
12H	4H	23.49	24.25	23.97	24.72	25.19	23.12	23.87	23.60	24.35	24.82
	6H	24.21	24.84	24.72	25.34	25.83	23.83	24.46	24.34	24.97	25.46
	8H	24.52	25.07	25.02	25.56	26.12	24.14	24.69	24.64	25.18	25.74