

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: P242261

Luminaire Tested: S122DRP-S485D835-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242261
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-S485D835-X4F0-XX-UDD-F-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

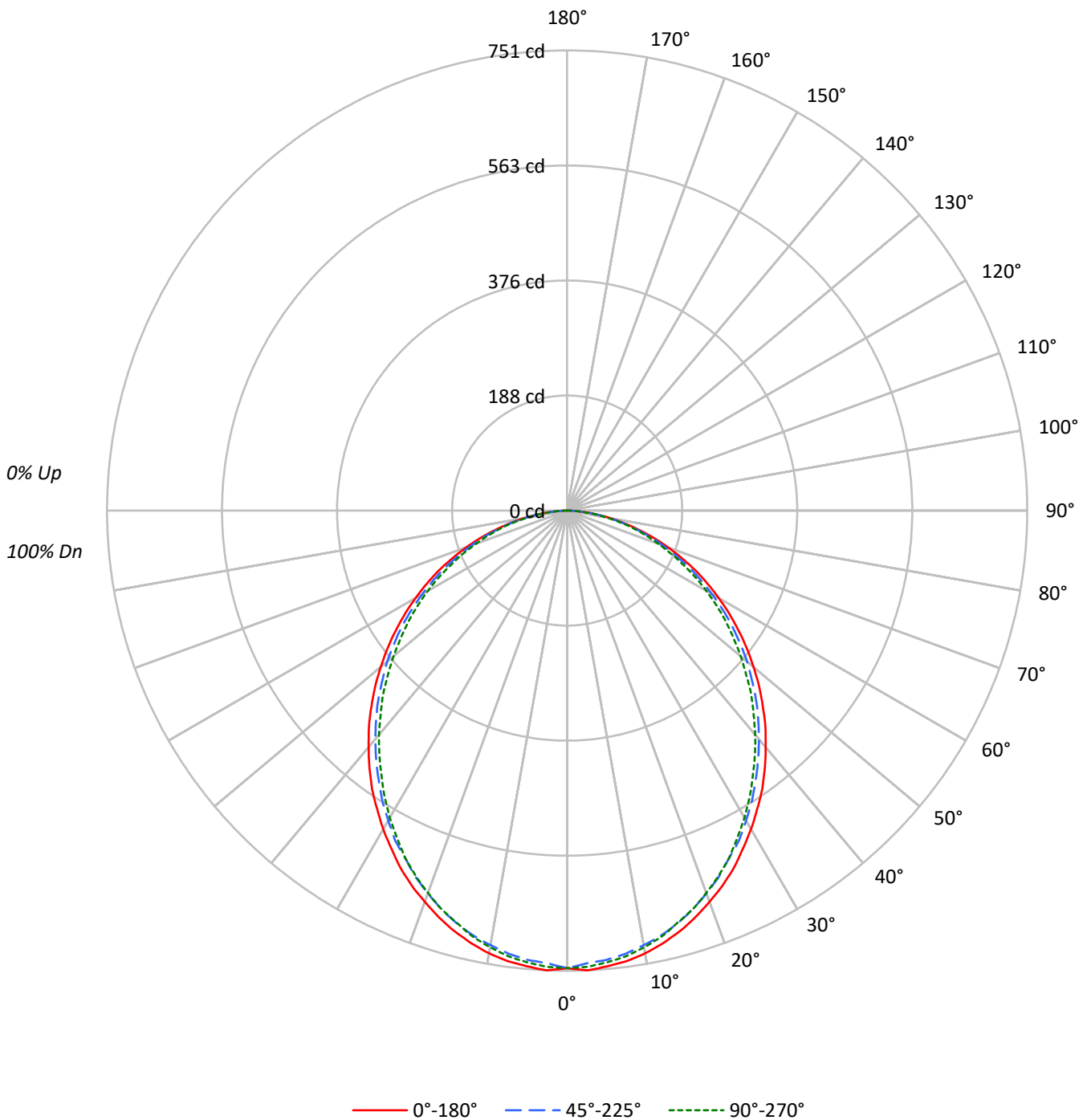
Lumens per Lamp: N/A
Luminaire Lumens: 1899.8 lumens
Efficiency: N/A
Efficacy: 101.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 18.8
Input Voltage (V): 120
Input Current (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	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	95	98	95	92	94	91	89	90	88	86	84					84			
2	99	91	85	79	97	89	83	78	86	81	76	83	78	74	80	76	73	71					71			
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	71	66	62	60					60			
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51					51			
5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	47	45					45			
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39					39			
7	66	52	44	38	64	52	43	38	50	43	37	49	42	37	47	41	37	35					35			
8	61	48	40	34	60	47	39	34	46	39	33	45	38	33	44	38	33	31					31			
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28					28			
10	54	41	33	28	53	40	33	28	39	32	27	38	32	27	37	32	27	26					26			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14223	14223	14223
5°	14277	14073	14155
10°	14193	13930	13999
15°	14017	13749	13735
20°	13770	13478	13463
25°	13522	13144	13144
30°	13203	12840	12728
35°	12905	12473	12289
40°	12534	12104	11873
45°	12165	11739	11451
50°	11767	11361	10958
55°	11351	10922	10514
60°	10888	10396	10011
65°	10389	9870	9415
70°	9757	9239	8799
75°	8876	8508	8294
80°	7876	7635	7251
85°	6425	6119	5486

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12165 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.3	3.7
10°-20°	197.7	10.4
20°-30°	290.6	15.3
30°-40°	337.5	17.8
40°-50°	337.1	17.7
50°-60°	293.9	15.5
60°-70°	217.3	11.4
70°-80°	122.9	6.5
80°-90°	32.4	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°	558.6	29.4
0°-40°	896.1	47.2
0°-60°	1527.2	80.4
0°-90°	1899.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1899.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	747	747	747	747	747	
5°	747	744	736	742	740	71
15°	711	706	697	700	696	200
25°	643	638	625	627	625	296
35°	555	548	536	532	528	347
45°	452	447	436	428	425	349
55°	342	338	329	320	317	306
65°	230	226	219	212	209	228
75°	121	119	116	111	113	129
85°	29	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°	746.7	746.7	746.7	746.7	746.7
2.5°	751.1	747.5	739.6	746.7	745.3
5°	746.7	743.9	736.0	741.7	740.3
7.5°	741.7	737.4	729.5	735.3	733.8
10°	733.8	728.8	720.2	725.9	723.8
12.5°	723.1	718.7	710.1	713.7	712.3
15°	710.8	706.5	697.2	700.1	696.5
17.5°	695.8	691.5	682.1	685.7	682.1
20°	679.3	674.9	664.9	667.0	664.2
22.5°	662.7	656.3	646.9	646.9	645.5
25°	643.4	637.6	625.4	626.8	625.4
27.5°	621.8	616.8	607.5	605.3	601.7
30°	600.3	594.5	583.8	581.6	578.7
32.5°	577.3	573.0	561.5	557.2	554.3
35°	555.0	547.9	536.4	532.1	528.5
37.5°	529.9	523.4	512.0	506.9	503.3
40°	504.1	498.3	486.8	480.4	477.5
42.5°	478.9	473.2	461.7	454.5	450.2
45°	451.6	446.6	435.8	427.9	425.1
47.5°	425.1	420.0	408.6	400.7	396.4
50°	397.1	393.5	383.4	373.4	369.8
52.5°	369.8	364.8	355.4	347.5	342.5
55°	341.8	337.5	328.9	320.2	316.6
57.5°	313.8	310.2	300.9	292.2	289.4
60°	285.8	282.9	272.9	265.0	262.8
62.5°	258.5	253.5	246.3	239.1	236.2
65°	230.5	226.2	219.0	212.5	208.9
67.5°	201.8	198.2	191.7	186.7	183.8
70°	175.2	172.3	165.9	160.8	158.0
72.5°	147.9	145.0	141.5	136.4	134.3
75°	120.6	119.2	115.6	111.3	112.7
77.5°	96.2	93.3	91.9	89.8	87.6
80°	71.8	71.1	69.6	67.5	66.1
82.5°	48.8	48.8	48.1	45.2	45.2
85°	29.4	28.7	28.0	25.8	25.1
87.5°	12.9	11.5	10.1	7.9	7.2
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	20.51	22.12	20.87	22.43	22.75	20.06	21.67	20.43	21.99	22.30
	3H	22.26	23.71	22.63	24.04	24.40	21.77	23.22	22.14	23.55	23.91
	4H	22.90	24.27	23.30	24.62	25.00	22.41	23.78	22.81	24.12	24.50
	6H	23.37	24.64	23.78	25.01	25.40	22.87	24.14	23.28	24.50	24.89
	8H	23.51	24.73	23.94	25.11	25.51	23.01	24.22	23.44	24.61	25.01
	12H	23.60	24.76	24.03	25.15	25.58	23.09	24.25	23.52	24.63	25.06
4H	2H	21.07	22.44	21.47	22.78	23.16	20.71	22.08	21.11	22.43	22.81
	3H	23.04	24.19	23.45	24.59	24.99	22.64	23.78	23.04	24.18	24.58
	4H	23.82	24.85	24.25	25.27	25.70	23.39	24.43	23.83	24.84	25.28
	6H	24.41	25.32	24.87	25.76	26.22	23.98	24.89	24.44	25.33	25.78
	8H	24.60	25.45	25.06	25.89	26.36	24.17	25.01	24.63	25.46	25.92
	12H	24.74	25.50	25.22	25.97	26.44	24.28	25.04	24.76	25.52	25.99
8H	4H	24.09	24.94	24.55	25.38	25.85	23.72	24.56	24.18	25.01	25.47
	6H	24.81	25.51	25.30	26.00	26.47	24.42	25.13	24.92	25.62	26.09
	8H	25.07	25.70	25.57	26.20	26.69	24.67	25.30	25.18	25.81	26.30
	12H	25.26	25.82	25.77	26.31	26.87	24.85	25.41	25.36	25.90	26.46
12H	4H	24.12	24.88	24.60	25.35	25.82	23.75	24.51	24.23	24.99	25.46
	6H	24.85	25.48	25.36	25.99	26.48	24.48	25.12	24.99	25.62	26.11
	8H	25.16	25.72	25.67	26.21	26.77	24.79	25.34	25.29	25.84	26.40