

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P242188

Luminaire Tested: **S121RDR-S685D830-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242188  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-23)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S121RDR-S685D830-X4F0-XX-UDD-F-W  
Description: DEFINE 1 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2108.0 lumens  
Efficiency: N/A  
Efficacy: 79.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 0.92 / 1.09  
Luminous Opening: Rectangular (W 0.09' x L: 3.88' x H: 0')  
CIE Type: Direct

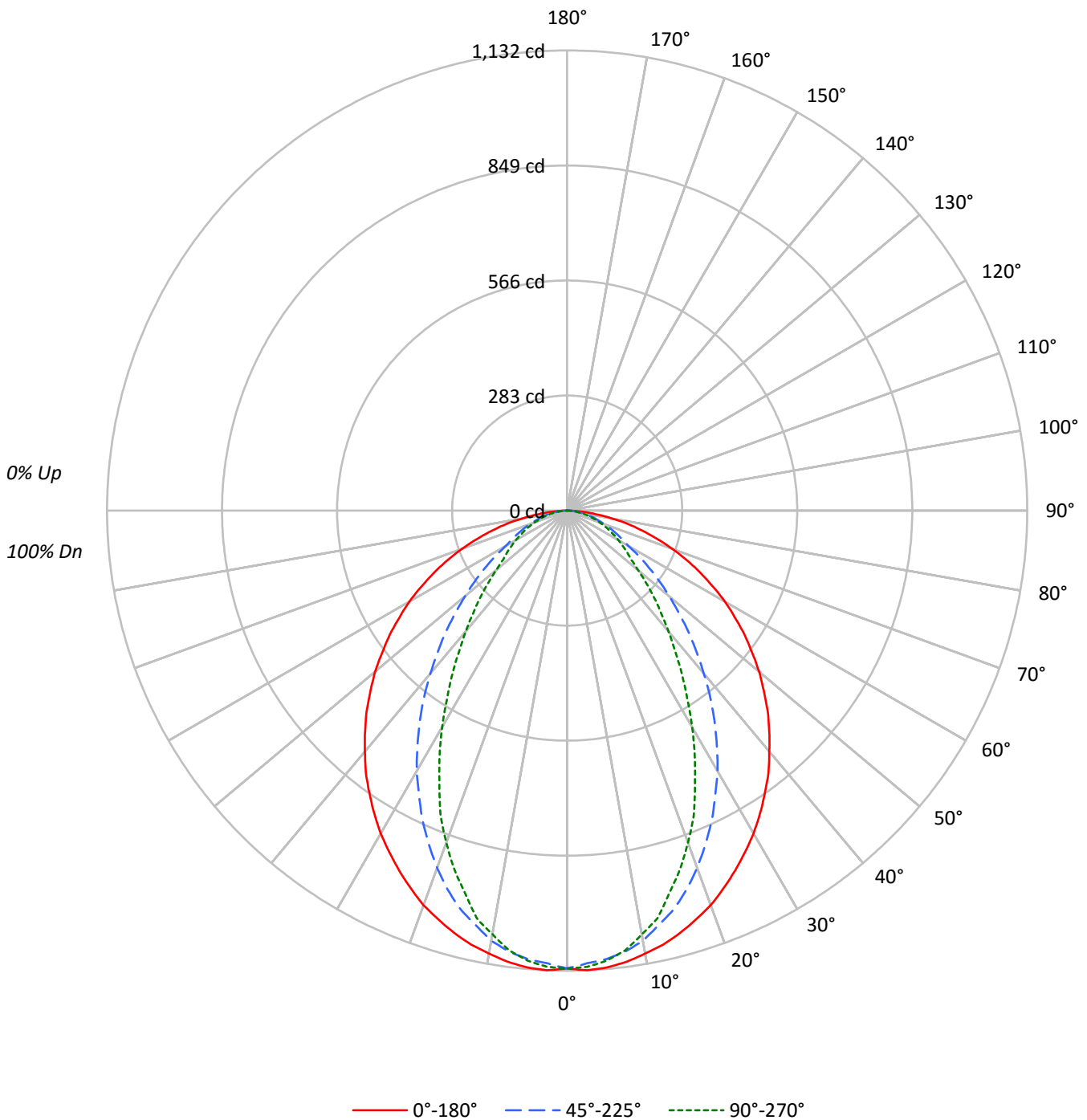
Input Watts (W): 26.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	75
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	75	70	67	65
4	86	76	68	62	84	74	67	61	72	65	60	70	64	60	68	63	59	57
5	80	68	60	54	78	67	60	54	65	59	53	63	57	53	62	56	52	50
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42	40
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	38	37
9	61	49	41	36	60	48	41	36	47	40	35	46	40	35	45	39	35	33
10	58	45	38	33	56	45	37	33	44	37	33	43	37	32	42	36	32	31

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	33372	33372	33372
5°	33556	32940	33053
10°	33291	32328	31847
15°	32988	31138	29837
20°	32572	29482	27401
25°	31954	27517	24314
30°	31377	25315	21058
35°	30684	22842	17829
40°	29930	20233	15019
45°	29227	17654	12680
50°	28413	15119	10473
55°	27508	12754	9350
60°	26584	10335	8658
65°	25310	9318	7993
70°	23841	8412	7346
75°	21900	7659	6800
80°	19145	6757	6109
85°	15706	5779	5133



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	105.4	5.0
10°-20°	286.8	13.6
20°-30°	391.5	18.6
30°-40°	406.9	19.3
40°-50°	355.5	16.9
50°-60°	268.7	12.7
60°-70°	177.5	8.4
70°-80°	91.5	4.3
80°-90°	24.3	1.2
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°	783.7	37.2
0°-40°	1190.5	56.5
0°-60°	1814.7	86.1
0°-90°	2108.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2108.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1126	1126	1126	1126	1126	
5°	1128	1122	1108	1116	1111	107
15°	1075	1059	1015	989	973	303
25°	977	939	842	772	744	450
35°	848	773	632	528	493	531
45°	698	593	421	327	303	537
55°	532	404	247	188	181	476
65°	361	225	133	117	114	357
75°	191	89	67	61	59	204
85°	46	19	17	16	15	54
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1126.3	1126.3	1126.3	1126.3	1126.3
2.5°	1132.0	1126.3	1115.0	1125.4	1123.5
5°	1128.2	1121.6	1107.5	1116.0	1111.3
7.5°	1119.7	1112.2	1094.3	1097.1	1091.5
10°	1106.5	1098.1	1074.5	1069.8	1058.5
12.5°	1093.3	1080.2	1043.4	1034.0	1027.4
15°	1075.4	1059.4	1015.1	988.7	972.7
17.5°	1054.7	1033.0	977.4	941.6	924.6
20°	1033.0	1004.7	935.0	886.0	869.0
22.5°	1005.7	972.7	888.8	830.4	813.4
25°	977.4	938.8	841.7	771.9	743.7
27.5°	947.3	900.1	788.9	710.7	679.6
30°	917.1	859.6	739.9	645.6	615.5
32.5°	883.2	819.1	685.2	586.3	550.4
35°	848.3	772.9	631.5	527.8	492.9
37.5°	813.4	730.5	577.8	473.2	436.4
40°	773.8	686.2	523.1	415.7	388.3
42.5°	736.1	640.0	471.3	371.4	342.1
45°	697.5	592.9	421.3	327.1	302.6
47.5°	656.0	546.7	372.3	288.4	263.9
50°	616.4	497.7	328.0	250.7	227.2
52.5°	573.1	451.5	286.5	212.1	198.9
55°	532.5	404.4	246.9	187.6	181.0
57.5°	489.2	359.1	210.2	169.7	162.1
60°	448.6	313.9	174.4	150.8	146.1
62.5°	403.4	270.5	151.7	133.8	129.1
65°	361.0	225.3	132.9	116.9	114.0
67.5°	318.6	186.6	115.0	101.8	99.0
70°	275.2	148.0	97.1	87.7	84.8
72.5°	232.8	113.1	81.1	73.5	71.6
75°	191.3	88.6	66.9	61.3	59.4
77.5°	154.6	67.9	52.8	48.1	47.1
80°	112.2	50.0	39.6	36.8	35.8
82.5°	76.3	33.9	28.3	26.4	24.5
85°	46.2	18.9	17.0	16.0	15.1
87.5°	18.9	8.5	7.5	6.6	6.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)