

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: G3-1802-639-62

Luminaire Tested: **S121RDR-H685D835-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: G3-1802-639-62  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S121RDR-H685D835-X4F0-XX-UDD-F-W  
Description: DEFINE 1 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2194.5 lumens  
Efficiency: N/A  
Efficacy: 85.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 0.92 / 1.09  
Luminous Opening: Rectangular (W 0.1' x L: 3.92' x H: 0')  
CIE Type: Direct

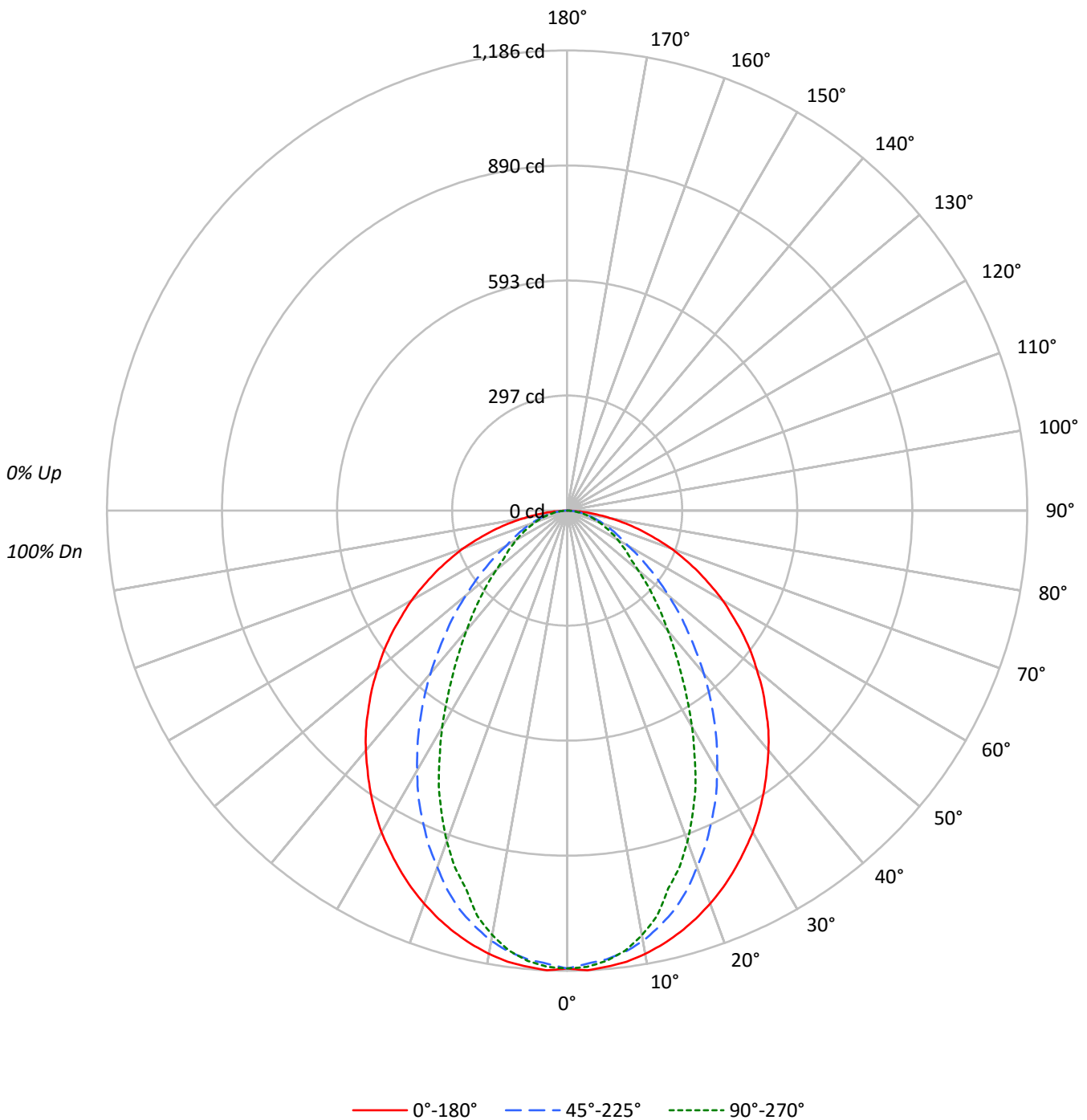
Input Watts (W): 25.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: G3-1802-639-62

CATALOG NUMBER: S121RDR-H685D835-X4F0-XX-UDD-F-W

### Luminous Intensity Polar Plot





TEST NUMBER: G3-1802-639-62

CATALOG NUMBER: S121RDR-H685D835-X4F0-XX-UDD-F-W

**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	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87					87			
2	102	94	88	83	99	92	87	82	89	84	80	86	82	79	83	80	77	75					75			
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65					65			
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57					57			
5	80	69	60	54	78	67	60	54	65	59	54	64	58	53	62	57	52	50					50			
6	75	62	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	45					45			
7	70	57	49	43	68	56	49	43	55	48	43	54	47	43	52	47	42	41					41			
8	65	53	45	39	64	52	44	39	51	44	39	50	43	39	48	43	39	37					37			
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34					34			
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	36	32	31					31			

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

	0°	45°	90°
0°	31132	31132	31132
5°	31251	30748	30854
10°	31076	30165	29764
15°	30728	29116	27532
20°	30266	27458	25465
25°	29722	25646	22793
30°	29154	23549	19619
35°	28472	21289	16490
40°	27793	18873	13880
45°	27013	16380	11753
50°	26186	13955	9769
55°	25390	11775	8693
60°	24431	9551	7968
65°	23223	8553	7304
70°	21985	7714	6711
75°	20081	6932	6116
80°	17168	6077	5470
85°	13319	5146	4541



TEST NUMBER: G3-1802-639-62

CATALOG NUMBER: S121RDR-H685D835-X4F0-XX-UDD-F-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	110.5	5.0
10°-20°	300.3	13.7
20°-30°	409.7	18.7
30°-40°	424.7	19.4
40°-50°	370.6	16.9
50°-60°	278.9	12.7
60°-70°	182.9	8.3
70°-80°	93.2	4.2
80°-90°	23.7	1.1
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°	820.5	37.4
0°-40°	1245.2	56.7
0°-60°	1894.7	86.3
0°-90°	2194.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2194.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1180	1180	1180	1180	1180	
5°	1180	1174	1161	1168	1165	112
15°	1125	1109	1066	1036	1008	317
25°	1021	979	881	807	783	470
35°	884	808	661	550	512	553
45°	724	619	439	341	315	559
55°	552	420	256	194	189	493
65°	372	232	137	121	117	369
75°	197	90	68	62	60	208
85°	44	18	17	15	15	53
90°	0	0	0	0	0	



TEST NUMBER: G3-1802-639-62

CATALOG NUMBER: S121RDR-H685D835-X4F0-XX-UDD-F-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1180	1180	1180	1180	1180
2.5°	1186	1181	1169	1179	1177
5°	1180	1174	1161	1168	1165
7.5°	1173	1165	1147	1150	1144
10°	1160	1150	1126	1120	1111
12.5°	1144	1133	1098	1084	1070
15°	1125	1109	1066	1036	1008
17.5°	1103	1083	1026	984	963
20°	1078	1052	978	929	907
22.5°	1051	1018	933	871	845
25°	1021	979	881	807	783
27.5°	989	941	831	746	711
30°	957	897	773	678	644
32.5°	921	853	718	613	575
35°	884	808	661	550	512
37.5°	845	763	604	492	455
40°	807	714	548	436	403
42.5°	768	665	492	387	359
45°	724	619	439	341	315
47.5°	683	569	391	300	276
50°	638	520	340	262	238
52.5°	596	470	298	222	207
55°	552	420	256	194	189
57.5°	505	371	219	174	168
60°	463	324	181	156	151
62.5°	416	277	157	139	134
65°	372	232	137	121	117
67.5°	328	191	118	105	101
70°	285	152	100	90	87
72.5°	238	115	84	76	74
75°	197	90	68	62	60
77.5°	154	68	53	49	48
80°	113	49	40	37	36
82.5°	77	33	28	26	25
85°	44	18	17	15	15
87.5°	17	7	6	6	6
90°	0	0	0	0	0

(END OF REPORT)